The Direct and Indirect Influences
of Human Values on Consumer Choices

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Abstract

The aim of the present thesis is to develop a conceptual framework of how consumers' choice of products may be influenced by the human values that they endorse. The framework combines a traditional model of human value influence based in expectancy-value theory (e.g., Scott and Lamont's (1973), Gutman's (1982) and Lindberg, Garling and Montgomery's (1989) attribute-mediation approach), with a new approach based on product meanings, judgements and psychological functions. From the union, a product meaning approach to value influence is suggested which outlines two structures of the value-attitude-behaviour system. Firstly, when consumers are evaluating a product's utilitarian meaning and making a piecemeal judgement, human values may influence the importance of the product's tangible attributes that in turn influence product preference. Secondly, when consumers are evaluating a product's symbolic meaning and making an affective judgement, human values may influence product preference directly.

The meaning and judgement elements of the conceptual framework and the traditional attribute-mediation approach were examined in three studies; Study 1 found that the attribute-mediation approach could not fully account for the influence of human values on product preference (Hypothesis 1) and that the inability was greatest for products, such as red meat and overseas holiday destinations, which are likely evaluated on their intangible attributes of symbolic meanings and aesthetics (Hypothesis 2). The second and third studies tested whether the two routes of value influence uncovered in Study 1, that is, the route proposed in the attribute-mediation approach and the alternative, direct route, result from consumers evaluating different product meanings and making different types of judgements. Study 2 developed scales that measure the general public's product meaning and judgement preferences, and Study 3 associated the meaning and judgement preference scales with the influences of human values on automobile and sunglasses ownerships; confirming the product meaning approach hypothesis that a consumer's preference for utilitarian meaning and for a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence on product preference (e.g., via the importance of the product's tangible attributes)

than when his or her human values have a direct influence.

Besides modelling the cognitive structure through which human values operate when consumers attend to utilitarian and symbolic meanings and make piecemeal and affective judgements, several propositions were made that consumers have a cross-product tendency to prefer the same meanings, judgements and routes of value influence, and that each route of value influence serves a specific psychological function. Concerning the latter, the propositions were made that when consumers attend to symbolic meaning and directly apply their human values, the application serves an expressive psychological function (e.g., self-consistency and social approval), and hence should be associated with greater psychological identification with the product, greater importance assigned to human values in general (e.g., value relevance), and a preference for terminal values to instrumental values. Conversely, when consumers attend to utilitarian meaning and indirectly apply their human values via tangible attribute importances, the application serves an instrumental psychological function (e.g., utility maximisation and control of the environment), and hence should be associated with a weaker psychological identification with the product, weaker value relevance, and a preference for instrumental values to terminal values. Study 4 assessed these propositions by examining the results of Studies 1-3 in detail and by analysing a fourth data set. Support was found for most of the propositions.

Qualifications and limitations of the product meaning approach to the influences of human values on consumer choices are discussed, as are the implications of the approach for human value theory and consumer research.

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Chapter I. Overview of Consumer Choices, Human Values and Course of Thesis

The aim of the present thesis is to develop a conceptual framework of how consumers' choice of products may be influenced by the human values that they endorse. An argument made throughout the thesis is that a comprehensive model of consumer choice should specify and integrate four elements: what criteria consumers use to evaluate products and where the criteria originate, the type of judgement that applies the criteria, the meaning that the product holds for consumers, and the psychological function the product serves. Many current approaches to consumer choices only specify one or at most two elements; a shortcoming that can be remedied through a variety of approaches, but the course chosen for the present thesis is the roles of human values because human values, even by themselves, encapsulate criteria, judgement, meaning, psychological function, and other features.

The richness of human values has not been sufficiently exploited in existing consumer research or human value theory, and therefore the modest contributions the present thesis seeks to make are two-fold; firstly, the development of a conceptual model of consumer choice that defines and integrates criteria, meaning, judgement and psychological function, and secondly, the expansion of current scientific thought about what human values comprise, how they are understood by their holders, and how they ultimately influence or do not influence behaviour.

The current chapter briefly outlines several current approaches to consumer choices, general concepts and processes of human values, and the course of the thesis.

CONSUMER CHOICESCHOICESCHOICESCHOICES

Whilst many conceptual models have been developed that detail how consumers

decide which products to purchase, the present thesis focuses on three primary approaches: expectancy-value theory and the multi-attribute model, the product meaning approach, and the functional approach. Each of the approaches is briefly reviewed, particularly in light of the argument that a conceptual model of consumer choices should specify and integrate criteria, meaning, judgement and psychological function.

The most common, almost paradigmatic, approach to consumer choice is expectancy-value theory and the multi-attribute model (e.g., Fishbein, 1967; Rosenberg, 1956). Expectancy-value theory and the multi-attribute model are discussed in depth in Part I, but briefly, the proponents of expectancy-value theory suggest that consumers determine their preferences for a product from their beliefs about what attributes the product contains and the importance of those attributes. For each attribute, consumers decide the importance of the attribute (e.g., an evaluation) and the extent the attribute is contained in the product (e.g., a belief). Consumers then summarise their beliefs and evaluations of all the product's attributes to calculate an overall product preference. Thus, for example, a consumer's overall preference for Brand A computer could be a multiplication of the degree to which he or she believes that Brand A computer has a Large Hard Drive with the importance he or she gives to a Large Hard Drive, and that product is added to the multiplication of the degree to which he or she believes that Brand A computer has Multi-media Capabilities with the importance he or she gives to Multi-media Capabilities, and so on through all salient product attributes. Consumers are suggested to use the formula to calculate an overall utility or preference for each brand and then select the one with the maximum utility.

Despite the extensive use of expectancy-value theory and the multi-attribute model in mapping out consumers' decision processes, a recurring criticism of expectancy-value theory is that it cannot explain that portion of product preference derived from an evaluation of the product's intangible attributes (e.g., Holbrook & Moore, 1981; Keaveney & Hunt, 1992; McCracken, 1988). Attributes that are subjectively imbued onto the product by consumers, rather than "arising" from the product via the five senses, are "intangible" (e.g., Hirschman, 1980). Intangible

attributes, such as symbolic meanings and aesthetics, can play a vital role in the evaluations of a wide range of goods; from clothing, to soft drinks, to furniture, and so on. Holbrook and Moore (1981), Keaveney and Hunt (1992), and McCracken (1988) suggest that expectancy-value theory is inappropriate for intangible attributes because the theory assumes consumers evaluate products attribute-by-attribute, when with intangible attributes, consumers probably evaluate products in a Gestalt-like, holistic fashion. Expectancy-value theory is more appropriate for tangible attributes because consumers probably do evaluate tangible attributes one at a time. For example, the tangible attributes of a vacuum cleaner are the power of the motor, durability of construction, and proximity to the carpet, and although the precise combination rule may vary, the separate evaluations of these attributes contribute to the assessment of the product's ability to clean. For intangible attributes, however, the product is likely to be evaluated in a Gestalt-like, holistic judgement because intangible attributes are tied to a specific configuration of tangible attributes, resulting in the instantaneous evaluation of the product.

A more recent approach to consumer preference, the “product meaning approach”, avoids the shortcomings of expectancy-value theory by shifting the investigation from how consumers decide to purchase a product to what meaning the product holds for them (e.g., Abelson & Prentice, 1989; Dittmar, 1992; Hirschman, 1980; Kilbourne, 1991; Levy, 1959; Richins, 1994). Most simply, meaning is the relation among mind, object and word (Odgen & Richards, 1923) and various theories have been offered to explain the relation, ranging from behaviourist to semiotics (e.g., Osgood, Suci & Tannenbaum, 1957; Saussure, 1974). These approaches are discussed at length in Part II, but what many of the theories have in common is the view that some meanings are suffused with affectivity, that some meanings are subjective, and that meaning can be either linguistic or non-linguistic. Meanings that are subjective and affectively charged are the focus of the product meaning approach, which attempts to qualify and classify such meanings. Richins (1994), for example, outlines four major categories of such product meanings: utilitarian, enjoyment, representation of interpersonal ties, and identity and self-expression. In contrast, several other researchers propose a simple utilitarian-symbolic distinction that is borne out empirically (e.g., Abelson, 1986; Abelson &

Prentice, 1989; Dittmar, 1992; Hirschman, 1980; Kilbourne, 1991). Utilitarian meaning is the overt function the product serves in allowing users to control their environments, such as vacuum cleaner is for cleaning the carpet, a car is for getting from point A to point B, or a cellular phone is for talking to a business associate. Symbolic meaning is the culturally shared yet subjective meaning which consumers imbue onto the product based social convention, such as Pepsi symbolises “youthfulness” or a Mercedes-Benz symbolises “prestige”.

Importantly, unlike expectancy-value theory and the multi-attribute model, the product meaning approach can manage both tangible and intangible attributes. As mentioned, symbolic meaning is an intangible attribute, and Sheth, Newman and Gross (1991) argue that utilitarian meaning tends to be located in tangible attributes for tangible attributes disclose the quality of the product's physical performance, degree of functionality and ability to control the environment. For example, the utilitarian meaning of a vacuum cleaner would be located in tangible attributes such as the power of the motor, durability of construction, and proximity to the carpet, all of which impact the product's ability to clean. Nevertheless, though the product meaning approach is an improvement on expectancy-value theory because it can include both tangible and intangible attributes, a serious limitation of the product meaning approach is that it fails to address what criteria, or standard, consumers measure the product against. Unlike expectancy-value theory and the multi-attribute model, mental structures such as attitudes, attribute importances, attribute beliefs, or any other criteria consumers may use to evaluate products are not of interest in the product meaning approach. Moreover, also unlike expectancy-value theory in which consumers are suggested to evaluate products in an attribute-by-attribute, piecemeal type of judgement, researchers taking a product meaning approach to consumer preferences are not concerned about how products are judged.

In contrast to both the product meaning approach and expectancy-value theory, in the functional approach to consumer choices the criteria consumers use to evaluate products is of interest as are both tangible and intangible attributes (e.g., Shavitt, 1990; Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). In the functional approach, the psychological functions underlying

consumers' attitudes towards different types of product meanings are examined and classified. The functional approach to consumer choices is based on the functional approach to attitudes in which attitudes are suggested to serve a variety of psychological functions depending on the psychological function the attitude object serves (e.g., Katz, 1960; Herek, 1987; Smith, Bruner & White, 1956). Katz (1960), for example, outlined four such psychological functions: instrumental (the need to maximise the rewards and minimise the costs from objects in the environment), knowledge (the need to organise and give meaning to the chaotic world), ego-defence (the need to protect oneself from acknowledging the most basic and difficult truths about themselves or about the world) and value-expressive (the need for self-esteem and a desire to facilitate self-definition by giving positive expression of one's self-concept and human values).

Researchers applying attitude function theory to the area of consumer choices generally investigate how the function that a consumer's attitude serves affects his or her ability to be persuaded by two types of advertisements; those that focus on the product's tangible attributes and utility versus those that focus on its image and symbolism (e.g., Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). Generally, the stream of research has found that those consumers holding a value-expressive attitude are more easily persuaded by symbolic advertisements whereas those consumers holding an instrumental attitude are more easily persuaded by utilitarian advertisements.

The strengths of the functional approach are that the criteria (e.g., attitudes) that consumers use to evaluate a product's meanings are defined, as are the psychological functions underpinning the attitudes. However, in contrast to the proposition in expectancy-value theory that consumers evaluate products in an attribute-by-attribute, piecemeal judgement, the kind of judgement consumers use to apply their attitude criteria is not enumerated in the functional approach, and perhaps more central to the current thesis, also not specified is where the criteria originate. The current thesis will argue that one source of attitude criteria may be the consumers' longer-term goals and more general standards such as their human values.

HUMAN VALUESVALUESVALUESVALUES

Singularly, each of the three primary approaches to understanding consumer choices has its unique strengths and limitations, but taken together the major limitation of all the approaches is their failure to specify and integrate four elements: what criteria consumers are using to evaluate products and where these criteria originate, the type of judgement that applies the criteria, the meaning that the product holds for consumers, and the psychological function the product serves. One way to rectify that failure is to investigate how consumers' choices of products are influenced by the human values that they endorse. Specific rationales for why investigating the roles of human values on consumer choices enables the consideration of criteria, meaning, judgement and psychological function, are offered in the course of the thesis, but presently some general concepts and processes of human values are laid out for foundation.

Schwartz (1994) defines human values as “desirable trans-situational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity” (p. 21). Human values promote the interests of individuals and social entities (e.g., institutions, groups and so on) by motivating action or serving as a standard with which individuals and groups can judge themselves and others. Schwartz (1994) continues;

“In order to cope with reality in a social context, groups and individuals cognitively transform the necessities inherent in human existence and express them in the language of specific values about which they can then communicate. Specifically, values represent, in the form of conscious goals, responses to three universal requirements; needs of individuals as biological organisms, requisites of co-ordinated social interaction, and requirements for the smooth functioning and survival of groups” (p. 21).

In Rokeach's (1973) seminal work, Understanding Human Values, he defines a human value 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” (p. 5). Beliefs about desired end-states are terminal values (e.g., Freedom, Comfortable Life, Mature Love), and beliefs about desired modes of action are instrumental values (e.g. being Independent, Ambitious or Honest). Rokeach suggested that instrumental values attempt to bring about the end-goals of terminal values, such as “being Independent” may lead to the end-state of “Freedom”. Rokeach also suggests that as human values refer to an individual’s preferred modes of action and end-states of existence, human values are “prescriptive”, and that as human values are a focal point around which other, less important beliefs are organised, human values are “centrally-held”.

Human values comprise three components: belief, affect and behaviour. Human values have a behavioural component “in the sense that it is an intervening variable that leads to action when activated” (Rokeach, 1973, p. 7). The belief component represents an idea or conception, and the affect component represents subjective preference for the idea. The affective component of human values is especially important because the abstractness of human values means that for many individuals values may connote little more than a ‘felt sense’ (c.f., Kilby, 1993). An individual’s preference for “Freedom”, for instance, may be more of an affective response than a careful consideration of its specific meaning. Nevertheless, as human values contain both an affective and a cognitive component, they can be applied in an affective judgement or in the kind of judgement outlined in expectancy-value theory (e.g., piecemeal, attribute-by-attribute analysis). Precisely how human values may be applied in either an affective or expectancy-value type of judgement is described in a later chapter, but presently of note is that unlike expectancy-value theory and the multi-attribute model that are limited to a piecemeal, attribute-by-attribute judgement, and the product meaning and functional approaches which do not specify any judgement type, investigating the roles of human values on consumer choices allows the researcher to consider various types of judgements through which human value criteria may be applied.

According to leading human value theorists (e.g., Feather, 1975, 1982; Kahle, 1983; Rokeach, 1968, 1973), two processes are central in the development of an

individual's human values preferences: abstraction and generalisation. The best known proponents of such processes are Rokeach and Feather who base their propositions in expectancy-value theory. Rokeach and Feather suggest that when an individual has a positive or negative experience with an object he or she forms evaluative beliefs about the part of the object thought to be the cause of the experience. For instance, if a business person felt tired and drained, and needed a boost he or she might drink a Pepsi and then credit the resulting feeling of alertness to Pepsi's caffeine content. Evaluative beliefs comprise a belief component (e.g., Pepsi has caffeine, or caffeine makes one feel alert) and an evaluation (e.g., feeling alert is good.). Rokeach and Feather suggest that the individual then summarise all his or her evaluative beliefs about the object to form a general attitude towards the object. Rokeach's and Feather's suggestion is the same process outlined in expectancy-value theory; each belief has an associated evaluation and together these belief-evaluation dyads additively combine with other belief-evaluation dyads to form the attitude. However, Rokeach and Feather take the abstraction process further than that taken in expectancy-value theory; Rokeach and Feather suggest that the individual then summarise his or her attitudes towards all objects that they perceive as similar. Thus, continuing the same example, the business person may summarise his or her attitudes towards all products that have made him or her feel alert in the past (e.g., coffee, Coca-Cola and Pepsi make one feel alert and are good). The process of abstraction continues to summarise even broader classes of objects, which makes the abstraction at the level of "instrumental values", and the abstraction process continues until it reaches the most abstract level of "terminal values". Thus, the business person might recognise that objects that make him or her stay alert (e.g., coffee, Coca-Cola and Pepsi) allow him or her to work hard and be ambitious (both instrumental values) and that working hard and being ambitious will bring about a sense of accomplishment (a terminal value).

Once the human value preferences are formed, they can then be generalised to new objects that were not the impetus for the abstraction process. Human values influence attitudes and evaluative beliefs towards new objects based on an assumption that the object will bring about or will reinforce the human values in the same way as the original object had. Thus, the business person might form a positive

attitude towards Jolt cola on the assumption that, like Pepsi, Jolt will make him or her feel alert and will enable him or her to work harder, be ambitious, and have a general sense of accomplishment. Besides human values preferences being generalised to new attitudes and evaluative beliefs, human values may also be generalised to other human values that are similar semantically. For instance, the business person's preference for value of accomplishment may influence his or her preference for the value of "achievement" because of their similar semantic meanings. Thus, whilst a process of abstraction created a hierarchical network between specific evaluative beliefs and specific human values, once formed, a process of generalisation expands the scope of the network at both the object end and at the human value end. Thus, Rokeach's (1968, 1973) description of human values as "centrally-held" means that human values are at the top of the abstraction and generalisation hierarchy and that other, less important, and more specific beliefs are organised around, and influenced by, human values. The hierarchical network is also known as the value-attitude-behaviour system and is discussed throughout the current thesis.

Concerning what compels individuals to abstract their specific experiences into the broader goals and standards of human values, Kahle (1983) suggests that human values are adaptive. Human values foster adaptation to the psychological and social environments, and because human values are the most abstract social cognition they represent the most basic form of adaptation. Kahle (1983) notes:

"Through experience, vicarious experience and thought, cognition serves to reduce the infinite number of stimuli, which constantly impinge on a person, to a manageable number of abstract generalisations. During formative or transformative stages in the history of an abstraction, the abstraction will be tested, refined and clarified... Adaptation abstractions emerge continuously from a process of assimilation, accommodation, organisation and integration of environmental information and thought, in order to promote interchanges between the individual and the environment that, from the individual's perspective, are favourable to preservation and optimal functioning" (p. 51).

Thus far, the review of some general concepts and processes of human values has illustrated that human value criteria may be applied in either an affective or a piecemeal, attribute-by-attribute type of judgement, and that human values are formed through a similar abstraction process outlined in expectancy-value theory. Thus, investigating the role of human values on consumer choices would enable the development of a conceptual model that includes judgement type and a wide range of criteria the product may be assessed against (e.g., attribute importance and belief, attitudes, and human values). Expectedly, human values can also encapsulate the two remaining elements suggested to be important to understanding consumer choices: psychological function and product meaning.

The readers may recall that the functional approach to consumer choice is based on Katz' (1960) and Smith, Bruner and White's (1956) functional approach to attitudes, and importantly, Rokeach (1973) suggested that a functional approach was applicable to human values as well. Rokeach and others (e.g., Epstein, 1989; Kristiansen, 1990; Williams, 1979) have described how human values serve various psychological functions such as knowledge, social-adjustment, value-expression, instrumentality, and ego-defence. How human values serve a knowledge psychological function is perhaps best outlined by Williams (1979), who suggests that although human values direct action by giving psychic energy to meet subjective preferences, the direction of the action is dependent on the systems of knowledge the human value contains, that is, action results from concrete motivation in specific situations, but both the motivation and the definition of the situation are partly determined by human values. As an example, Williams cites Lueptow's (1968) study that found that an individual's motivation for achievement per se was not an adequate predictor of occupational choice. However, achievement motivation in combination with the individual's value standard towards various occupational roles, that is, which occupation will provide achieving rewards, did predict occupational choice. Thus, Williams argues that human values both define the gratification that will reinforce motivations, and define the source of the gratification. Defining the source, or classification, is central to valuing.

The knowledge psychological function of human values has also been investigated by Kristiansen and Zanna (1994) and Kristiansen (1990), who offer a knowledge function interpretation of some well-established human value processes and their effects. One of these effects is brought about through Rokeach's (1973) value self-confrontation procedure in which participants are informed that two of their important values are logically inconsistent and are different from those of an important reference group. Rokeach argues that the information creates a state of self-dissatisfaction, and that consequently, participants will alter one of their values to make it consistent with the other value and similar to the values of the reference group. Moreover, participants will alter specific attitudes and behaviours to bring them in line with the new value importance. Such effects are usually interpreted based on Festinger's (1957) cognitive consistency theory, which posits that individuals need consistency between their beliefs and behaviours and that any inconsistency creates an aversive cognitive dissonance. Accordingly, individuals will alter their beliefs and behaviour to place any outlier more in line with the other elements in the system. Thus, Rokeach suggests that because human values are at the top of the abstraction and generalisation hierarchy, when an individual's human values preferences change their attitudes and behaviours will also change. Kristiansen and Zanna (1994), however, suggest that such change occurs because giving individuals information about the definition and meaning of human values serves a motivation for knowledge, which therefore reorganises their system of beliefs. Nevertheless, Kristiansen and Zanna's functional interpretation is concordant with Festinger's cognitive dissonance theory. A motivation for useful knowledge may be a driving force in the need for consistency.

Along with human values serving a knowledge psychological function, human values serve a social-adjustive function by mediating self-other relationships (Rokeach, 1973, Williams, 1979). Human values serve a social-adjustive function in two ways: by fostering social identity through the internalisation of group values, and by ensuring that an individual's action is normative (Williams, 1979). As an example of the former process, Feather (1984) found that the degree to which individuals were sex-typed was also the degree that they believed the values of their gender role were preferable. Thus, masculine males not only described themselves

as assertive and independent, but also believed those values were important.

Human values serve a value-expressive psychological function by giving positive expression to one's self-concept and human values (Rokeach, 1968, 1973). Similar to Katz' (1960) suggestion that a need for self-esteem underlies the value-expressive function of attitudes, Rokeach suggests that a need for self-esteem underlies the value-expressive function of human values. However, unlike Katz, Rokeach suggests that the value-expressive function of human values is super-ordinate to all other psychological functions because human values always seek expression and maintenance of self-sentiment. Nevertheless, Rokeach did concede that some human values are more closely tied to the self-concept than others are, and thus the value-expressive function could be separate and discrete. The discreteness of the value-expressive function of human values not only means that some values serve to express one's self-concept more than other values, but also that for some individuals human values in general serve an expressive function more so than for other individuals. For instance, Wojciszke (1989) argues that people vary in the extent they incorporate human values into their ideal self-concept. In particular, those whom he terms "idealists" are characterised by their claim that they use human values more frequently to judge themselves and others and make behavioural choices. Idealists tend to agree with such statements as "I will never abandon my ideals" or "I engage in activities even if it has a poor chance of succeeding". Evidence that idealists more closely tie human values into their ideal self-concept was shown by their highly differentiated value system, their greater number of self-referent thoughts when thinking about human values, and their stronger value-behaviour consistency.

Besides the knowledge, social adjustive and value-expressive psychological functions, human values serve an instrumental psychological function by directing behaviour towards specific goals that maximises goal attainment and minimise blockages, and human values serve an ego-defensive function by recasting personally and socially unacceptable needs and feelings into more acceptable terms. For instance, an individual's desire for vengeance through use of the death penalty might be recast into a more acceptable value such as "Justice".

The feature that all of the above psychological functions have in common, that is, the instrumental, ego-defensive, value-expressive, knowledge, and social-adjustive functions, is that any human value may serve any of the functions. In contrast, other psychological functions are tied to specific human values. The readers may recall that Schwartz (1992, 1994) suggested that human values are social responses to three universal requirements: needs of individuals as biological organisms, requisites of co-ordinated social interaction, and requirements for the smooth functioning and survival of groups. From these individual and group needs, Schwartz proposes ten functions which specific human values serve: security, power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity and tradition. For instance, the values of “Politeness” and “Obedience”, though different in their manifest meanings, each restrain action likely to harm others and thus each serve a conformity function. In a cross-cultural examination of the ten functional domains, Schwartz and Bilsky (1987, 1990) found that the domains reduce to two dimensions: Self-transcendence versus Self-enhancement and Openness to Change versus Conservation. The first dimension opposes the acceptance of others as equals and a concern for their welfare with a focus on one’s own success and dominance. The second dimension opposes the independence of thought and action and the favouring of change with a desire for stability, self-restraint and traditional practices.

Along with encapsulating criteria, psychological function and judgement type, human values also affect, and reflect, the meanings of products and other objects. How product meaning differs from attitudes and evaluative beliefs will be made clearer in the course of the thesis, as will how human values influence the evaluations of product meanings. Briefly, however, like product meanings, human values are subjective and affectively charged, but unlike product meanings, human values are positioned at the top of the abstraction and generalisation hierarchy, which means they are centrally-held. At lower positions in the hierarchy are beliefs and affectivity resulting from direct and indirect experiences with specific objects such as products. So, human values are super-ordinate to product meanings and should direct attention to product meanings based on the dominance and similarity of each.

Human values and product meanings that are dominant in the system and are subjectively perceived as similar in content should result in the affect for the human value being transferred to the evaluation of the product meaning. For example, an individual's preference for the human value Prestige would not only direct their attention to products that have meanings similar to prestige, such as a Mercedes-Benz, but would also contribute to his or her positive or negative evaluation of the automobile.

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The brief review of some current approaches to consumer choices and general human values processes, illustrates that a useful avenue for developing a conceptual model of consumer choices is to address how those choices are influenced by the human values consumers endorse. Essentially, the conceptual model developed in the present thesis attempts to combine the most successful features of current approaches to consumer choice (e.g., expectancy-value theory and the multi-attribute model, the product meaning approach, and the functional approach) with general human value features and processes (e.g., psychological function, relationships to object meanings, influence on attitudes and behaviours, and so on) to create a comprehensive conceptual model.

Several researchers have already made propositions about how consumer choices are influenced by human values (e.g., Corfman, Lehmann and Narayanan's (1991) Product Utility Theory, Scott and Lamont's (1973) Centrality of Beliefs Approach, Gutman's (1982) Means-end Chain Theory, Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Homer and Kahle's (1988) Attitude-mediation Approach and Prentice's (1987) Functional Approach). Most of these propositions can be classified under one of two general approaches. The models of Homer and Kahle (1988) and Prentice (1987) take one of these approaches, which is that human values influence product preference through general product attitudes.

However, of interest to Part I of the present thesis is a second approach, the attribute-mediation approach, of which Scott and Lamont's (1973) Centrality of

Beliefs Approach, Gutman's (1982) Means-end Chain Theory, and Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach are variations. As the attribute-mediation approach has the clearest rationale of current approaches to the influences of human values on consumer choices, it makes a good starting point. Part I reviews Scott and Lamont's (1973), Gutman's (1982), and Lindberg, Garling and Montgomery's (1989) variations of the attribute-mediation approach in depth, but briefly, all three variations are founded in expectancy-value theory, which, as discussed, is that preferences for products are formed from beliefs about what attributes the products contain and the importance of those attributes. On top of the expectancy-value proposition, the proponents of the attribute-mediation approach suggest that the importance of the attributes are based on the attributes' abilities to reinforce longer-term goals and meet standards that are more general. Thus, according to the attribute-mediation approach, human values do not influence product preference directly, but instead influence the importance of product attributes that in turn influence product preference.

However, as reviewed, a criticism of expectancy-value theory is that it offers only a partial explanation of product preference, specifically, expectancy-value theory cannot explain that portion of product preference that consumers derive from an evaluation of the product's intangible attributes such as symbolic meaning and aesthetics. The proponents of the attribute-mediation approach overlooked the fact that expectancy-value theory, and their own approach, cannot model intangible attributes. Nevertheless, such a limitation may not necessarily damage the validity of the attribute-mediation approach because human values could always mediate through tangible attributes given that intangible attributes are located on the agglomeration of tangible ones. Part I of the thesis, however, argues that the distinction between tangible and intangible attributes is of consequence to value influence, and hypothesises that 1) the attribute-mediation approach cannot fully account for the influence of human values on product preference, and 2) the inability increases as intangible attributes become more important to consumers' evaluation of the product.

Study 1 tests these hypotheses for three products in which a reasonable

assumption could be made of whether most consumers evaluate the product on its tangible or intangible attributes. The assumption was made that different makes and models of automobiles would be evaluated primarily on their tangible attributes, different overseas holiday destinations would be evaluated on an even mixture of their tangible and intangible attributes, and that different types of meat would be evaluated predominantly on their intangible attributes. In accordance with Hypothesis 2, the expectation was that the attribute-mediation approach would have the most success accounting for the influence of human values on consumer preferences for different classes of automobiles, a moderate success with preferences for different overseas holiday destinations, and the least success with preferences for different types of meat. Three-hundred and forty members of the general population were surveyed about their human values, the tangible attributes that were important to their evaluation of automobiles, overseas holiday destinations and red and white meat, and the extent they had purchased those products. A series of regression analyses showed that for nearly all of the products, the degree that human values predicted product purchase could not be fully accounted for by consumer's preferred tangible attributes. Moreover, the inability was greatest for the products that intangible attributes were assumed important to consumer evaluations (e.g., red meat and overseas holiday destinations). Thus, both hypotheses were supported.

Whilst Study 1 showed that the attribute-mediation approach could not fully account for the influence of human values on product purchase, Study 1 also showed that the approach accounted for a substantial share. Thus, to build on the success of the attribute-mediation approach while overcoming its inability to account for the influence of human values on intangible attributes, Part II of the thesis develops a "product meaning approach to value influence" (a schematic representation of the approach is presented in Figure 1 on page 21 and a more detailed tabular form in Table 1 on page 22). The product meaning approach to value influence combines the product meaning approach to consumer choice with the attribute-mediation approach to value influence, and takes a more comprehensive perspective of both human values and product meanings by specifying and integrating different types of judgements consumers may use to assess products, different psychological functions products may serve, and different routes through which values may influence product

preference.

Notwithstanding that important distinctions among different types of products and consumers are over-simplified, the product meaning approach to value influence is that the route of human value influence proposed in the attribute-mediation approach is generally only used when consumers are attending to products' utilitarian meaning because utilitarian meaning is located in tangible attributes and is evaluated through a piecemeal judgement (e.g., an expectancy-value type of judgement in which each attribute is evaluated one at a time). Thus, the influence of human values is indirect via the importance of the tangible attributes of the product. An alternative and more direct route of human value influence is suggested to be used when consumers are attending to the product's symbolic meaning because symbolic meaning has strong human value content and is evaluated through an affective judgement (e.g., Gestalt-like, holistic and subjective). The direct route as shown in Study 1, increased in strength as the product's intangible attributes, such as symbolic meaning and aesthetics, became more important to consumers' evaluation of the product. Besides these expectations, the suggestion was made that for many consumers the utility of the product would usually be more important than its symbolic meaning. Moreover, rather than making an assumption about how most consumers evaluate a particular product, as Study 1 did, examining each consumer's meaning and judgement preferences and then relating these preferences to his or her human value influence is preferable. Accordingly, the product meaning approach to value influence hypothesis was that a consumer's preference for utilitarian meaning and for a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence on product preference (e.g., via the importance of the product's tangible attributes) than when his or her human values have a direct influence.

To test predictions derived from the product meaning approach to value influence, Study 2 first developed and tested scales designed to measure each consumer's meaning and judgement preferences. The scales were tested on 106 members of the general public who used the scales to indicate what kind of meaning they preferred to attend to, and what kind of judgement they preferred to make, when

evaluating automobiles and sunglasses. Analyses showed that the factorial structures of the scales closely matched their conceptual structures, and that the scales were sensitive to the utilitarian and symbolic natures of the products. Moreover, the analyses also showed that a preference for making a piecemeal judgement was strongly associated with a preference for attending to utilitarian meaning, that a preference for making an affective judgement was strongly associated with a preference for attending to symbolic meaning, and that utilitarian meaning and a piecemeal judgement were preferred to symbolic meaning and an affective judgement.

Using the newly constructed meaning and judgement scales, Study 3 tested the product meaning approach to value influence hypothesis that a consumer's preference for utilitarian meaning and for a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence on product preference (e.g., via the importance of the product's tangible attributes) than when his or her human values have a direct influence. Two hundred and fifty-six members of the general public were surveyed about their meaning and judgement preferences, human values, the tangible attributes that were important to their evaluations of automobiles and sunglasses, and the extent they had purchased those products. Results showed that those respondents whose product purchases were more accurately predicted by the indirect influence of human values (e.g., via the importance of the product's tangible attributes) than by the direct influence, preferred utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement to a greater extent than those whose product purchases were more accurately predicted by their direct influence of human values than their indirect influence. The support for the product meaning approach to value influence hypothesis was found for each of the product purchases tested, that is, for Smaller Family Cars, Larger Family Cars and sunglasses.

Besides modelling the cognitive structure through which human values operate when consumers attend to utilitarian and symbolic meanings, several propositions were made concerning the psychological functions each type of meaning and route of human value influence may signify, and how those functions may manifest and be

measured. The propositions were that when consumers attend to symbolic meaning and directly apply their human values, the application serves an expressive psychological function and so should be associated with a greater psychological identification with the product, a greater importance assigned to human values in general (e.g., value relevance), and a preference for terminal values to instrumental values. Conversely, when consumers attend to utilitarian meaning and indirectly apply their human values via tangible attribute importances, the application serves an instrumental psychological function and so should be associated with a weaker psychological identification with the product, a weaker value relevance, and a preference for instrumental values to terminal values. Beyond these propositions concerning psychological function, one other proposition was made that individuals have a tendency to prefer the same meanings, judgements and routes of value influence across different types of products.

Study 4 assessed these propositions by examining the results of Studies 1-3 in greater detail, by re-analysing the data collected in Studies 1-3, by analysing data collected in Studies 1-3 but not previously used, or by analysing a fourth data set. The results showed that greater psychological identification with red meat was associated with a stronger direct route of value influence on red meat consumption, whereas weaker psychological identification with red meat was associated with a stronger indirect route of value influence. Moreover, the direct route was associated with terminal values and the indirect route with instrumental values, specifically, those individuals with a relative preference for terminal values tended to apply all their values (both instrumental and terminal combined) directly and those with a relative preference for instrumental values tended to apply all their values indirectly through tangible attribute importances. A preference for terminal values was also associated with an overarching importance of all human values (e.g., value relevance). Value relevance was also associated with a preference for symbolic meaning and an affective judgement to utilitarian meaning and a piecemeal judgement. Finally, Study 4 found that individuals tended to prefer the same meanings and judgements for both automobiles and sunglasses, and individuals tended to use the same value influence route for both products. Overall, Study 4 found support for most of the propositions.

The concluding chapter of the present thesis addresses methodological limitations of Studies 1-4, issues for conceptual and theoretical development of the product meaning approach to value influence, and implications that the approach may have for human value theory and consumer research.

Figure 1. The correspondence between the levels of prescriptive and evaluative beliefs and the levels of product meaning.

Table 1. Product meaning, type of judgement and psychological function associated with the direct and indirect influences of human values on product preference.

Routes of Human Value Influence on Product Preference		
	INDIRECT (via tangible attribute importances)	DIRECT
<u>Product Meaning</u>	Utilitarian	Symbolic
Content	Overt function and utility	Social categories and cultural principles (e.g., ideals, values, traits)
Location	Separate Tangible Attributes	Product Whole
Focus	Objective: product-focused	Subjective: self-focused
Breadth	Specific/Narrow	Abstract/Broad
Conceptual Clarity	Clear	Vague
<u>Judgement Type</u>	Piecemeal	Affective
Reasoning	Logical, comprehensive, and systematic attribute-by-attribute analysis	Holistic, intuitive and approximate goodness of fit to exemplar
Memory Representation	Uncertain-perhaps verbal	Visual: multi-sensory imagery
Affect Latency	Delayed	Immediate
Affect Intensity	Low: evaluative	High: emotional states
<u>Psychological Function</u>	Instrumental	Expressive
Source of Benefit	The product's intrinsic qualities, means to an end, and ability to control the environment.	The use of the product as a vehicle for self-expression.
Value Relevance	Low	High
Product Identification	Weak	Strong

PART ONE: THE INDIRECT INFLUENCE OF HUMAN VALUES ON PRODUCT PREFERENCE

CHAPTER II. THE ATTRIBUTE-MEDIATION APPROACH

As outlined in Chapter I, the proponents of the attribute-mediation approach suggest that human values have an indirect influence on product preference by influencing the importance of product attributes that in turn guide product evaluation and selection. Compared with other approaches, the attribute-mediation approach has the clearest rationale, which makes it a good starting point for the development of a broad conceptual model of how consumers' choice of products may be influenced by the human values that they endorse. Three variations of the attribute-mediation approach have been proposed: Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory and Scott and Lamont's (1973) Centrality of Beliefs Approach. As each of these attribute-mediation approaches is founded in expectancy-value theory, expectancy-value theory is reviewed in depth before the specific attribute-mediation approaches are discussed.

EXPECTANCY-VALUE THEORY

Developers of expectancy-value theory suggest that an attitude towards an object is a joint function of the subjective probability the object will yield positive or negative consequences and the importance of those consequences (Fishbein, 1967; Rosenberg, 1956). The conceptualisation includes the two major components of "evaluation" and "belief". Evaluations (or importances) are predispositions to respond favourably or unfavourably to objects and are learnt from experience both direct and vicarious in which the objects meet or block meaningful goals. Evaluations can vary in valence and intensity but variation is anchored to the content

of beliefs, which refer to the existence of certain characteristics of the attitude object (e.g., “God is omnipotent”) or the object’s relationship to other objects or goals (e.g., “Women are equal to men” or “Talking to women increases your life expectancy”). However, as Fishbein (1967) argues, these beliefs are subjective probabilities as they represent the certainty (or uncertainty) that the object comprises those features or is related to other objects and goals.

According to expectancy-value theory, attitudes are formed through an abstraction process that summarises specific evaluations and beliefs, as represented in the formula below (reprinted from Fishbein, 1967):

$$A_o = \sum_{i=1}^n B_i a_i$$

where A is the attitude towards object o , B_i is the strength of the belief (e.g., subjective probability) that the object is associated with concept i , a_i is the evaluation of concept i and n is the number of beliefs about the object. Thus, for example, an individual’s attitude towards the Navy could be a multiplication of the degree to which he or she believes that “the Navy protects us from harm” with the importance he or she gives to protection from harm, and that product is added to the multiplication of the degree to which he or she believes that “the Navy provides good job training” with the importance he or she assigns to good job training, and so on through all object concepts. Therefore, each belief has an associated evaluation and together these belief-evaluation dyads additively combine with other belief-evaluation dyads to form the attitude. Moreover, only salient beliefs determine the attitude as non-salient beliefs have low B_i weights. In early tests of expectancy-value theory, Anderson and Fishbein (1965) found that although the sum of object beliefs and the sum of object evaluations each yielded good predictions of overall attitudes, the best prediction was obtained from multiplying each belief with each evaluation and then summing the belief-evaluation dyads.

Consumer researchers applying expectancy-value theory suggest that consumers

determine their overall preferences for products from their beliefs about what attributes the product contains and the importance of those attributes, as represented in the formula (reprinted from Bagozzi, 1988):

$$A = \sum_{i=1}^n b_i e_i$$

where A is a consumer's attitude towards a product, b_i is the belief that the product contains attribute i , e_i is the importance assigned to attribute i , and n is the number of attributes. Thus, for example, a consumer's overall preference for Brand A computer could be a multiplication of the degree to which he or she believes that Brand A computer has a Large Hard Drive with the importance he or she gives to a Large Hard Drive, and that product is added to the multiplication of the degree to which he or she believes that Brand A computer has Multi-media Capabilities with the importance he or she gives to Multi-media Capabilities, and so on through all salient product attributes. Consumers are suggested to use the formula to calculate an overall utility or preference for each brand and then select the one with the maximum utility.

The application of expectancy-value theory to consumer choices is loosely termed the "multi-attribute model", of which several sub-types have been proposed (Kotler, 1991). In the ideal-point model, consumers are suggested to select the brand with attributes that most closely resemble the attributes of their ideal brand. In the conjunctive model, a brand's attributes must exceed minimum levels for the consumer to consider it. In the lexicographic model, consumers are assumed to order attributes by importance and then judge products on the most important attribute. If two or more products are equal on the attribute then the comparison shifts to the second most important attribute, and so on. Finally, in the determinance model, the recognition is made that although an attribute may be important to the consumer, if all brands contain that attribute then the attribute has no part in product preference. Thus, instead of concentrating on attributes that are important, the determinance model focuses on attributes that actually influence preference.

Regarding the roles of human values in expectancy-value theory and the multi-attribute model, Fishbein (1967) and Rosenberg (1956) presume that a consumer's human values, ideology and other general beliefs are either too far removed and abstract to influence the assessment of products and other objects, or that the influence is so minor that human values are not worthy of attention from researchers. Some human value theorists, however, dispute those assumptions and argue that whilst attribute importances and attribute beliefs combine to determine overall product preference (as suggested in expectancy-value theory), attribute importances are influenced by human values based on the attributes' abilities to reinforce longer-term goals and meet standards that are more general. As reviewed in Chapter I, these approaches to the influences of human values on consumer choices founded in expectancy-value theory are termed "attribute-mediation approaches" of which three variations have been proposed: Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory, and Scott and Lamont's (1973) Centrality of Beliefs Approach.

LINDBERG, GARLING AND MONTGOMERY'S MULTI-ATTRIBUTE APPROACH

Of the three variations of the attribute-mediation approach, Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach is the most direct integration of expectancy-value theory into the role of human values. Lindberg, Garling and Montgomery's main hypothesis was that consumers derive their overall preferences for products from their beliefs about what human values the product's attributes reinforce and the importance of those human values, as represented in Formula #1:

$$E_{Alt_i} = \frac{\sum_j \sum_k P_{ATTRijk} E_{vk}}{\sum_k E_{vk}}$$

where E_{alt_i} represents the overall preference for product i , P_{ATTR} is the extent to that attribute j will lead to the attainment of human value k , and E_v is the importance of human value k . Thus, for example, a consumer's preference for Brand A sports car

could be a multiplication of the degree to which he or she believes that the car's attribute of High Speed Engine will lead to the attainment of the human value of Social Power with the importance he or she gives to Social Power, and that product is added to the multiplication of the degree to which he or she believes that the car's attribute of Compact Size will lead to the attainment of the human value of Social Power with the importance he or she gives to Social Power, and so on through all permutations of human values and attributes.

Besides the main hypothesis, Lindberg, Garling and Montgomery tested two alternatives; the first was that human values did underlie attribute importances but not linearly nor additively and therefore no relationship to attributes could be inferred or modelled. Thus, that alternative ignored the role of attributes and planned that human values influence product preference at a holistic level such as brand, class or category, as represented in Formula #2:

$$E_{Alt_i} = \frac{\sum_k P_{ALT_{jk}} E_{vk}}{\sum_k E_{vk}}$$

where E_{alt_i} represents the overall preference for product i , P_{ALT} is the extent to that product i will lead to the attainment of human value k , and E_v is the importance of human value k . Thus, continuing the same example, a consumer's preference for Brand A sports car could be a multiplication of the degree to which he or she believes that the car (as a whole) will lead to the attainment of the human value of Social Power with the importance he or she gives to Social Power, and that product is added to the multiplication of the degree to which he or she believes that the car will lead to the attainment of the human value of A Sense of Accomplishment with the importance he or she gives to A Sense of Accomplishment, and so on through all human values. Thus, the difference between Lindberg, Garling and Montgomery's main hypothesis (Formula #1) and Formula #2 is the level of the product (attribute versus product whole) that is the focal point of the belief human values will be reinforced.

The second alternative Lindberg, Garling and Montgomery tested was that human values did not underlie attribute importance or overall product preference; product preference is simply a function of attribute importances, as represented in Formula #3:

$$E_{Alt_i} = \sum_j E_{ATTR_{ij}}$$

where E_{alt_i} represents the overall preference for product i , $E_{ATTR_{ij}}$ is the importance of attribute j . Thus, Formula #3 differs from expectancy-value theory and the multi-attribute model by omitting the belief component.

In a test of the three formulations, Lindberg, Garling and Montgomery found that all three significantly predicted consumer preferences for different classes of houses, but contrary to the main hypothesis (Formula #1) Lindberg, Garling and Montgomery found that Formula #2 provided the best prediction. Hence, human values did underlie product preference but did not combine additively with attribute importances to form that preference; product preference was simply a function of the beliefs that the product whole would reinforce human values and the importance of those human values (these findings are subjected to a critique in an upcoming section).

GUTMAN'S MEANS-END CHAIN THEORY

In his Theory of Means-end Chains, Gutman (1982, 1990) suggests that consumers associate product attributes with consequences that reinforce human values. Consequences are the outcomes of interactions with product attributes and can occur immediately, after a period, may be experienced directly or vicariously, and may be physiological (e.g., satiation of hunger, etc.), psychological (e.g., self-esteem, etc.) or social-psychological (status, social identity, etc.). Through experience with product attributes, consumers develop knowledge of products comprising the product's attributes, consequences, and ultimately, the human values the consequences help attain. Thus, Gutman (1982) accepts Rokeach's (1968, 1973)

and Feather's (1975) claims, discussed in Chapter I, that human values are formed through the abstraction of positive and negative experiences with specific objects, and that the process of abstraction results in a hierarchical network between human values and evaluative beliefs about the object. Moreover, once the human value preferences are formed, the values can then be generalised to new human values, consequences and attributes, resulting in the expansion of the hierarchical network at both the object and human value extremities. Most simply, what Rokeach and Feather term an "abstraction and generalisation hierarchy" is what Gutman terms a "means-end chain".

Means-end chains may be uncovered through a "Laddering" interview in which an interviewer asks the participants what attributes they use to discriminate among brands and why those attributes are important. When a participant tells why an attribute is important, the interviewer would then ask him or her to elaborate, and upon the response the interviewer would ask the participant to elaborate again. An example, taken from Reynolds and Gutman (1988), is that if the researcher were interested in how human values are associated with a beer's attribute of "low alcohol", the interviewer would begin by asking the participant why low alcohol is important, to which the participant might reply that it makes him or her feel less drowsy (a consequence). The interviewer would then ask why not feeling drowsy is important, to which the participant might reply that it allows him or her to spend more quality time with friends and family (a human value). The interview continues until the participant reaches the most basic and abstract level, which Gutman (1982) claims is usually a terminal value. Walker and Olson (1991) suggest that the most abstract level along the means-end chain a consumer elaborates shows the degree of his or her psychological involvement in the product. For instance, some participants stated that they liked a particular greeting card because it expressed their personality, whereas other participants stated they liked the greeting card because it allowed them to make the recipient happy. Walker and Olson suggest that the former is a more abstract reason and thus those participants should have greater psychological investment in the product, though they did not substantiate that particular claim.

SCOTT AND LAMONT'S CENTRALITY OF BELIEFS APPROACH

Scott and Lamont's Centrality of Beliefs Approach (e.g., Scott & Lamont, 1973; Vinson, Scott & Lamont, 1977) is founded in Rokeach's (1968, 1973) claim in particular, but also Feather's (1975), that human values and evaluative beliefs about objects are connected through a hierarchical network, and that as human values are more abstract and centrally-held they influence and organise lower-level elements. Scott and Lamont suggest that two types of lower-level evaluative beliefs of interest to consumer researchers are consumption values and attribute evaluations (e.g., attribute importances). Consumption values are generalised preferences in the realm of economic transactions and consumption choices, that is, they are characteristics of products consumers favour across a wide range of goods and services. For example, some people may want products that are practical whereas others may want ones with greater aesthetic qualities; some consumers may demand that retailers provide prompt service whereas others may be more concerned about the retailer's location. Attribute importances differ from consumption values because attribute importances centre on a specific product; a consumer might insist that Brand A sports car have a high-speed engine, anti-lock brakes, chrome detailing, and so on.

Scott and Lamont (1973) suggest that as consumption values are more abstract and centrally-held than attribute importances, but less so than human values, the theoretical flow of influence is from human values to consumption values to attribute importances. Though Scott and Lamont never tested the flow of influence, they did find that the three levels of abstraction are correlated. For example, Scott and Lamont found that a preference for an automobile attribute of Style was correlated with the consumption value of An Exciting Product, which was correlated with the human values of A Comfortable Life, An Exciting Life and A Pleasurable Life.

Though in Scott and Lamont's Centrality of Beliefs Approach human values are suggested to influence consumption values that in turn influence attribute importances, what Scott and Lamont do not adequately describe is how the system influences consumer behaviours generally or product preference specifically. Scott and Lamont simply suggest that the attribute importance construct in their approach

is the same as that outlined in expectancy-value theory. Therefore, the assumption could be made that if Scott and Lamont were consulted, they would concur that product preference is a joint function of attribute importances and attribute beliefs.

THE BASIC FORM OF THE ATTRIBUTE-MEDIATION APPROACH

The aim of Part I of the present thesis is to examine the attribute-mediation approach to the influence of human values on consumer choices, and in the interest of that aim, Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory and Scott and Lamont's (1973) Centrality of Beliefs Approach should be integrated to create a single, basic formulation of the attribute-mediation approach. The basic attribute-mediation approach should retain the essential rationale, but should eliminate those aspects for which the three variations of the attribute-mediation approach are inconsistent. The similarities and differences among the three approaches are in two areas: their cognitive structure and the roles of beliefs. In the course of reviewing the two areas, a basic formulation of the attribute-mediation approach is developed.

As Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory and Scott and Lamont's (1973) Centrality of Beliefs Approach are each founded in expectancy-value theory and the multi-attribute model, each outlines a cognitive structure in what the influence of human values on product preference is mediated by product attributes:

Lindberg, Garling and Montgomery (1989): human value $\Rightarrow$ attribute importance $\Rightarrow$ product preference

Gutman (1982): human value $\Rightarrow$ consequence $\Rightarrow$ attribute importance $\Rightarrow$ product preference

Scott and Lamont (1973): human value $\Rightarrow$ consumption value $\Rightarrow$ attribute importance $\Rightarrow$ product preference

Although the attribute importance construct is explicit in Scott and Lamont's model, the construct is implicit in Gutman's suggestion that through a process of generalisation human values assign importance to consequences that in turn assign importance to product attributes. Thus, when human values are being generalised, attributes would have *a priori* importances. Similarly, Lindberg, Garling and Montgomery suggest that attributes are evaluated on their ability to reinforce important human values and thus must have an *a priori* importance.

Considering that the attribute-mediation approaches share some overlap in the structures they propose, their principal differences are whether they specify a component that mediates the influence of human values on attribute importances, and if they do specify such a component, the form that the component takes. Gutman suggests consequences mediate the linkage, Scott and Lamont argue for consumption values, and Lindberg, Garling and Montgomery do not specify any intervening construct. Considering the inconsistency, adopting Lindberg, Garling and Montgomery's position is prudent because it allows the greatest flexibility in integrating the various perspectives. Specifying an intervening construct would commit the research to either Gutman's or Scott and Lamont's propositions, whilst not specifying an intervening variable would, at least theoretically, allow for the validity of any one or all of the approaches to manifest. The exclusion of the intervening variables only presents a problem if the upcoming test of the attribute-mediation approach results in a weak or non-existent relation between human values and attribute importance, as it would be ambiguous whether the result is due to human values mediating through some variable not measured (e.g., consumption values or consequences), or to human values having no place in the development of attribute importances. Nevertheless, human values and attribute importances are expected to have sufficient common variation as both are abstract criteria, are semantically similar, are formed through similar abstraction and generalisation processes, and so on.

Aside from the existence and form of the intervening variable between human values and attribute importances, Lindberg, Garling and Montgomery, Gutman, and Scott and Lamont generally outline similar cognitive structures through which

human values operate to influence product preference. Furthermore, the approaches also offer a similar rationale for why super-ordinate levels in their models influence and organise lower ones, namely, the belief-importance combination. In Lindberg, Garling and Montgomery's Multi-attribute Approach the belief-importance rationale is employed in their main hypothesis (Formula #1) that product preference depends on the beliefs that the products' attributes will lead to the reinforcement of human values and the importance of those human values. Similarly, in Gutman's Means-end Chain Theory consumers are suggested to associate product attributes with consequences that reinforce human values. Thus, consumer knowledge comprises which attributes lead to which consequences and which consequences lead to the realisation of human values, and therefore each component in the means-end chain is mediated by beliefs.

In Scott and Lamont's Centrality of Beliefs Approach, the belief-importance rationale appears to be used to explain the attribute importance $\Rightarrow$ product preference relation, given that Scott and Lamont claim that "attribute importance" is the construct employed in expectancy-value theory (in which product preference is suggested to result from the combining of attribute importances and attribute beliefs). However, Scott and Lamont do not use the belief-importance rationale for the other relations in their model, and instead simply state that human value importances influence consumption value importances which in turn influence attribute importances. Nevertheless, as the reduction of the attribute-mediation approaches to their basic form is of interest, adopting Scott and Lamont's exclusion of the belief component is sensible. To incorporate a belief component in the current model would require the acceptance of a particular attribute-mediation approach either by forcing the inclusion of a specific construct such as Gutman's consequences (e.g., the belief that attributes engender consequences that are important to human values) or from the manner in which beliefs link human values and attribute importances (such as Lindberg, Garling and Montgomery's claim that attribute importances are formed from the beliefs that they reinforce important human values). Testing the core or most basic attribute-mediation approach is therefore not possible if the belief component is included.

The exclusion of the belief component should not substantially affect the test of the attribute-mediation approach for two reasons. Firstly, past research has excluded the belief component with satisfactory results. Scott and Lamont's test showed that human values, consumption values, and attribute importances are correlated, and Lindberg, Garling and Montgomery's test of Formula #3 only included the evaluative component (attribute importances) and still yielded a significant prediction of housing class preference. Thus, even among the current approaches precedence exists for excluding the belief component. The second reason the exclusion of the belief component should not substantially affect the attribute-mediation test is that the belief component can (generally) be inferred if the evaluative component significantly predicts product preference that is indexed as product purchase and ownership. The assumption that product owners have beliefs and knowledge about what attributes their possessions contain or what values the possessions reinforce is reasonable. Even among non-owners, product knowledge may be less extensive but still satisfactory if the products are commonly available and in the public arena. Thus, in the eventuality that attribute importances and human values are good, sample-wide predictors of product purchase and ownership, the prediction would suggest that respondents act upon a common perception and beliefs about which products are consistent with their attribute importances or human values. If attribute importances and human values are poor predictors of product purchase and ownership, at the very least, not measuring beliefs will create some ambiguity about whether the low prediction was a result of consumers not applying their human values and attribute importances, or alternatively a result of consumers having insufficient beliefs and knowledge to select the product that matches their attribute importances and human values. Such ambiguity is acceptable for the current purpose.

SUMMARY, MODIFICATIONS TO PROPOSAL, AND HYPOTHESES

To summarise, the review and integration of Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory, and Scott and Lamont's (1973) Centrality of Beliefs Approach observed how

each of the theorists outlined similar cognitive structures through which human values operate to influence product preference and offered similar rationale for how super-ordinate levels in their models influenced lower ones, namely, a belief-importance combination. Nevertheless, essential differences among the attribute-mediation approaches were the roles of beliefs and the intervening variable between human values and attribute importances, and due to these differences the most basic attribute-mediation approach is:

human values $\Rightarrow$ attribute importances $\Rightarrow$ product preference

Thus, the aim of Part I of the present thesis is to test the basic attribute-mediation approach. Lindberg, Garling and Montgomery's (1989), Gutman's (1982), and Scott and Lamont's (1973) expansion of expectancy-value theory into the realm of human values engenders some confidence in the basic attribute-mediation approach, but the foundation in expectancy-value theory is also a reason for scepticism. Critics have asserted that expectancy-value theory is restricted in the degree and kind of product preference it can account for, and therefore the attribute-mediation approach may be similarly limited. The expectancy-value theory criticism is reviewed in depth, followed by the criticism's implications for the attribute-mediation approach.

The main criticism of expectancy-value theory is that it cannot explain that portion of product preference consumers derive from an evaluation of the product's intangible attributes (e.g., Holbrook & Moore, 1981; Keaveney & Hunt, 1992; McCracken, 1988). Attributes that are subjectively imbued onto the product by consumers, rather than "arising" from the product via the five senses, are "intangible" (e.g., Hirschman, 1980). Intangible attributes, such as symbolic meanings and aesthetics, can play a vital role in the evaluations of a wide range of goods; from clothing, to soft drinks, to furniture, and so on. Holbrook and Moore (1981), Keaveney and Hunt (1992), and McCracken (1988) suggest that expectancy-value theory is inappropriate for intangible attributes because the theory assumes consumers evaluate products attribute-by-attribute, when with intangible attributes, consumers probably evaluate products in a Gestalt-like, holistic fashion.

Expectancy-value theory is more appropriate for tangible attributes because consumers probably do evaluate tangible attributes one at a time. For example, the tangible attributes of a vacuum cleaner are the power of the motor, durability of construction, and proximity to the carpet, and although the precise combination rule may vary, the separate evaluations of these attributes contribute to the assessment of the product's ability to clean. For intangible attributes, however, the product is likely to be evaluated in a Gestalt-like, holistic judgement because intangible attributes are tied to a specific configuration of tangible attributes, resulting in the instantaneous evaluation of the product. Thus, paradoxically, whilst tangible attributes must exist, they do not separately contribute to product preference formed from intangible attributes.

To make the distinction between the two types of attributes and their judgements clearer, consider Fiske and Pavelchak's (1986) discrimination between a "piecemeal affective response" and a "category-based affective response". A piecemeal affective response is the expectancy-value type of judgement that proceeds attribute-by-attribute to evaluate a stimulus in a logical, systematic and comprehensive fashion, with the overall attitude towards the stimulus the result of the algebraic combination of the affect associated with each attribute. However, a category-based affective response is a Gestalt-like, holistic judgement in which the stimulus is compared with an exemplar and in the case that the two match, the affect associated with the exemplar category schema is automatically transferred to the stimulus. Thus, the stimulus must have a particular configuration of attributes for its exemplar or prototype to be recognised and classified, but the affect of the attributes does not contribute to the overall evaluation.

For a product stimulus example, consider an automobile consumer who might prefer a car with the intangible attribute "youthful image" if the car is a sports coupe but if the car is a sedan then he or she prefers the intangible attribute "sophisticated image". Thus, to instruct the consumer to rate his or her preference for the intangible attributes (e.g., a youthful image, a sophisticated image) is meaningless unless the researcher specifies the level of the tangible attribute (e.g., coupe or sedan). When one considers that other intangible attributes (e.g., prestige, etc.) are also tied to

specific tangible attributes (e.g., an attractive paint job, no rust, leather interior, large body size, chrome grill, etc.), the only way a multi-attribute model could legitimately include both tangible and intangible attributes is if it contains a replica of the attributes of an actual and specific product. To do so, however, shifts the investigation from the attribute-level to the product-whole level and thus violates the assumption in expectancy-value theory that consumers evaluate each attribute independently and that these independent evaluations combine to determine overall product preference.

Therefore, the essence of Keaveney and Hunt's (1992), Holbrook and Moore's (1981) and McCracken's (1988) criticism of expectancy-value theory is three-fold:

1. Expectancy-value theory and the multi-attribute model should generally be restricted to tangible attributes because intangible attributes will usually not meet the assumption in expectancy-value theory that attributes are evaluated independently.
2. Intangible attributes are "located" on a particular configuration of tangible attributes, which is termed the "product-whole level" such as the product's brand, class or category.
3. Although intangible attributes are found on the agglomeration of tangible attributes, intangible attributes are still more than the sum of tangible ones. Consequently, that portion of product preference which consumers derive from an evaluation of the intangible attributes of the product cannot be determined from measuring consumer preferences for tangible attributes of the product. Consumer preferences for intangible attributes must also be measured (but not through expectancy-value theory or the multi-attribute model given point #1).

The implication of the criticism of expectancy-value theory for the attribute-mediation approach is that the role of tangible attributes in mediating the influence of human values on product preference can be modelled through the attribute-mediation

approach, but intangible attributes cannot and therefore should be excluded. Thus, Gutman (1982), Scott and Lamont (1973) and Lindberg, Garling and Montgomery (1989) should be criticised for not recognising the limitation of expectancy-value theory and for failing to exclude intangible attributes from their models and investigations. However, such a failure may not damage the validity of their approach because human values may always mediate through tangible attributes, perhaps because intangible attributes are carried on the agglomeration of tangible ones. Contrary to that possibility, however, the current thesis accepts Keaveney and Hunt's (1992), Holbrook and Moore's (1981) and McCracken's (1988) reasoning that although intangible attributes are found on the agglomeration of tangible attributes, intangible attributes are still more than the sum of tangible ones. Therefore, the distinction between tangible and intangible attributes should be of consequence to the influence of human values, with human values mediating through both kinds of attributes to influence product preference.

One reason for cautious acceptance, besides the reasonableness that tangible and intangible attributes function in different ways, is that one of the attribute-mediation approaches provides evidence for it. The readers would recall that Lindberg, Garling and Montgomery (1989) tested three alternative relationships among human values, attribute importances and product preference; firstly, that human values underlie each attribute importance and these linkages combine additively with other value-attribute linkages to form product preference; secondly, that human values do underlie attribute importance but not linearly nor additively and therefore human values were presumed to influence product preference at a holistic level, such as brand, class or category; and thirdly, that human values do not underlie attribute importance and instead product preference is formed entirely from attribute importances. In a test of the three alternatives, Lindberg, Garling and Montgomery (1989) found that the second option -- human values underlie product preference but do not combine additively with attribute importances to form that preference -- provided the best predictor of residential housing preference. Importantly, Lindberg, Garling and Montgomery (1989) included both tangible and intangible attributes in their analysis (e.g., Size of House is tangible and intrinsic whereas Reputation of Neighbourhood is not) and therefore violated the assumption in expectancy-value theory that each

attribute is evaluated independently. Their finding that human values influence at the product whole-level but not the attribute-level is supportive of the claim, though not definitively, that intangible attributes are found on the product whole and are more than the sum of tangible attributes.

If intangible attributes are genuinely more than the sum of tangible attributes and both types mediate the influence of human values on product preference, then the attribute-mediation approach, properly limited to tangible attributes to meet the assumption of independence, would probably never fully account for the influence of human values on product preference. Realistically, any single approach cannot fully account for all variation, but because the proponents of the attribute-mediation approach did not specify any other route of human value influence other than through their expectancy-value constructs, the issue of whether their approach can fully account for value influence is important. The first hypothesis is that;

H1: The attribute-mediation approach, properly limited to tangible attributes, cannot fully account for the influence of human values on product preference.

If the attribute-mediation approach cannot fully account for the influence of human values then obviously human values must operate through another route. If the alternative route is through the consumers' evaluations of the product's intangible attributes for which tangible attributes are not able to account for, then the strength of the alternative route would increase as intangible attributes become more important to consumers' evaluations of the product. Thus, the second hypothesis is that;

H2: The inability of tangible attributes to mediate the influence of human values on product preference increases as intangible attributes become more important to consumers' evaluation of the product.

Support for both hypotheses would provide reasonable evidence of the divergent

roles tangible and intangible attributes play in mediating the influence of human values on product preference and, more generally, of the necessity for developing an alternative or supplementary approach that can account for the influence of human values on consumer evaluations of both kinds of attributes.

CHAPTER III. STUDY 1: EXAMINATION OF THE ATTRIBUTE-MEDIATION APPROACH HYPOTHESES

Study 1 examines the hypotheses;

H1: The attribute-mediation approach, properly limited to tangible attributes, cannot fully account for the influence of human values on product preference.

H2: The inability of tangible attributes to mediate the influence of human values on product preference increases as intangible attributes become more important to consumers' evaluation of the product.

METHOD

Design

Though an experimental design is advantageous in its ability to establish causal relationships, a survey design was selected due to its naturalism and capacity to canvass a broad range of phenomena. An experiment that isolates and manipulates all possible combinations of human values, tangible attribute importances and product preferences would be impractical. Manipulating human values alone is problematic for reasons that will be discussed at length in a later chapter.

The hypotheses are examined at the level of the product, that is, whether the attribute-mediation approach has more success accounting for the influence of human values on preferences for those products that are generally evaluated on their tangible attributes than for those products generally evaluated on their intangible attributes. Instead of a product-level analysis, the hypotheses could be examined at the level of the individual consumer by assessing whether the attribute-mediation

approach has more success accounting for the influence of human values on product preferences for individuals who prefer the product's tangible attributes than those individuals who prefer the product's intangible ones. Thus, an individual-level analysis would directly assess the role of both types of attributes, but given that tangible attributes are the focus of the current study, a product-level analysis was chosen. The product-level analysis, of course, requires that the examination of the attribute-mediation approach hypotheses is carried out across several products for which a reasonable assumption can be made about whether most consumers evaluate the products on their tangible or intangible attributes. The process of selecting such products is reported once the other needed product characteristics are outlined.

Besides the requirement that the examination of the attribute-mediation approach be made across several products for which a reasonable assumption can be made about whether each is generally evaluated on its tangible or intangible attributes, using products that are commonly available and familiar to consumers is preferred. As the conceptual model only comprises evaluative components (human values and tangible attribute importances) ambiguity could arise if they prove to be poor predictors of product preference; the low predictive power could suggest that consumers do not apply their tangible attribute importances and human values, or alternatively, that consumers have insufficient beliefs and knowledge to select the product that matches their evaluations. To ensure that the latter is not viable possibility, the products selected for examining the attribute-mediation approach should be ones that respondents are likely to own and that heavily saturate the marketplace, which can be accomplished by taking three indicators of product saturation and ownership into account. Firstly, a rough count was made of the frequency that various product categories were advertised in major New Zealand newspapers (Herald, Sunday Star Times), magazines (Woman's Weekly, North and South, Next, Metro, More) and on television (TV2 and 3). The frequencies were obtained over a two-week period for television and newspapers and approximately one issue of the magazines. Amongst the most frequently advertised products were cars, beverages (beer, other alcohol, mineral water, etc.), pet food, overseas holiday destinations and apparel (trousers, shoes, etc.). The second source of information about product saturation and ownership was the Consumer Expenditure Statistics

(1994), which showed the product areas accounting for the largest share of retail sales in New Zealand were automotive, food and drink and hardware, and that the most frequently manufactured products were dairy foods, woollen products, and women's garments. The third indicator of product saturation and ownership were texts that detailed the pivotal role some products or services play in the New Zealand way of life (e.g., Mitchell, 1972; Morton, 1975; Smyth, 1973).

From these indicators of product saturation and ownership, three products were selected to examine the hypotheses of the attribute-mediation approach. These three products are in the public view, are commonly owned, and a reasonable assumption can be made about whether each is generally evaluated on its tangible or intangible attributes. Moreover, as a heterogeneous product set would provide a more comprehensive and rigorous test, the three products selected also vary along other dimensions such as good versus service, major versus routine purchase, and durable versus non-durable. The three products are automobiles, overseas holiday destinations and types of meat.

Automobiles

Automobiles have a high rate of ownership, accounted for a large share of retail sales in New Zealand, and in the count of advertisements in newspapers, magazines and on television, automobiles were among the most frequently advertised. Moreover, automobiles seem to be what Keaveney and Hunt (1992) and Shavitt, Lowrey and Han (1992) suggest are high-risk choices that lead to effortful, careful and piecemeal evaluations of tangible product features. Moreover, Sirgy and Johar (1985) found that automobiles tend to be evaluated foremost on tangible features and cost then secondarily on their intangible / image attributes (although some differences between automobile classes were found). Overall, however, automobiles should provide a good exemplar of a product that is generally evaluated foremost on tangible attributes and secondarily on intangible attributes.

Overseas HolidayingHolidayingHolidayingHolidaying

Overseas holiday destinations were among the most frequently advertised in major newspapers, magazines and on television, and overseas holidaying is culturally important. For instance, in Half-gallon, Quarter-acre, Pavlova Paradise, Mitchell (1972) takes a humorous look at New Zealanders noting, “Three million people can’t cultivate their garden without the occasional peek over the fence at the three thousand million jostling outside. Being small makes Kiwis insecure and gives them a unique love-hate relationship with Overseasia. They can’t give it up. They are not sure it’s good for them” (pg. 161). The importance of overseas holidaying to New Zealanders is also evidenced in the 1990 census, which shows approximately 15% of the adult population travelled overseas in the previous year. Holidaying is a hedonic product that Hirschman (1980) suggests are characterised by emotional desires, the imaginative construction of reality, and consumers imbuing the product or service with subjective meaning and intangible attributes that supplement the tangible attributes. Thus, the imbuing of intangible attributes onto tangible attributes suggests that overseas holiday destinations should provide a good exemplar of a product that is generally evaluated on an even mixture of both tangible and intangible attributes.

In the interest of manageability, the overseas holidaying investigated was limited to Australasia (e.g., Australia, Papua New Guinea) and Oceania (e.g., Melanesia, Micronesia, Polynesia).

Meat ProductsProductsProductsProducts

Finally, grocery food purchases, specifically meat products, was selected as a routine, non-durable product, which Katz (1960) suggests that operant conditioning during early socialisation lead to predominately affective (e.g., category-based) judgements. Although many foods are probably judged holistically, meat products were selected in particular because of their central place in the meal (Douglas, 1975; Fiddes, 1991; Twigg, 1983). In Deciphering a Meal, Twigg (1983) argues “Meat is the most highly prized of food. It is the centre of around which a meal is arranged.

It stands in a sense of the very idea of food itself” (p. 22). Similarly, Fiddes (1991) observes that meat is so primary that its lack is described as a ‘meat hunger’ but not in the physiological sense, but rather as a food habit that “is a feature of society and is integrated into a structure of social values that may have nothing to do with the principles of nutrition” (p. 14; original quote from Le Gros Clark, 1968, p.69). Thus, the centrality in the social structure and the de-emphasis of tangible attributes such as nutritional qualities suggests that meat products would provide a good exemplar of a product that is evaluated foremost on intangible attributes and secondarily on tangible attributes.

Although the selection of the three products, automobiles, overseas holidaying and meat types, was based on the best available theoretical and empirical research on the attribute composition of each product, the relative importance of each product’s tangible and intangible attributes will not be independently verified. Thus, the attribute composition of each product is merely an assumption and commensurate caution is warranted when interpreting the results of the examination of the attribute-mediation approach (the point is re-addressed in the discussion). With that limitation made clear, automobiles are probably evaluated foremost on their tangible attributes, overseas holiday destinations on an even mixture of their tangible and intangible attributes, and meat products on predominantly their intangible attributes, and so H2 can be elaborated as;

H2: The inability of tangible attributes to mediate the influence of human values on product preference increases as intangible attributes become more important to consumers’ evaluation of the product. Consequently, the attribute-mediation approach should have the most success accounting for the influence of human values on preferences for automobiles, should have a moderate success accounting for the influence of human values on overseas holidaying, and the least success accounting for the influence of human values on meat consumption.

Respondents

As mentioned in the design section, examining the hypotheses in a naturalistic setting with the broadest range of phenomena possible is preferable, and for the same reason, a general population sample was chosen to a student sample. The survey was hand delivered to 1900 household post boxes in the medium-sized metropolitan region Wellington, New Zealand (the survey instrument is described in detail in the next section). Care was taken to ensure that the households were evenly dispersed among urban, near and far suburbs and the full range from individual to family dwellings. Targeted areas included Karori, Mt. Victoria, Central Wellington, Kelburn, Island Bay, Newtown, Johnsonville, Hatatai, Seatoun, Paraparaumu Beach and Waikanae Beach. The survey envelope was addressed to “Adult Member of Household”, and three weeks were allowed to return the questionnaire in the pre-paid envelope. Recipients unwilling or unable to participate were urged to pass the survey along to another adult household member. Respondents were informed their participation was voluntary, that their responses were anonymous and would not be used for any other purpose, and that if they had any queries or wished a summary of the results to ring me.

Three hundred eighty-one (20%) were returned, of which 41 were not used due to respondents failing to answer all the questions or completing some sections incorrectly. Though the relatively low rate could suggest a non-response bias, the demographic characteristics of the sample are variable and are similar to census records (see Table 2 on page 61) (Hereafter, referred to as Sample No. 1). Overall, the sample is generally representative in age and most ethnic groups, but under-representative of Pacific Islanders and males and over-representative of females. The sample also appears above average in education though the precise extent is unclear because the census education categories differ from those used in the current study. Despite the sample’s similarity to census records, the low response rate does suggest caution at generalisation. Approximately 50 respondents requested a summary of results posted approximately three months after the completion of the survey.

Survey

The survey measured human values, tangible attribute importances and purchases of automobiles, overseas holidays and meat products (see Appendix One beginning on page 307 for copy of cover letter and survey). The survey also contained sections not used in the current analysis: respondent accounts of their meat consumption, meat eating identity and consumption values. Readers would recall that consumption values are the construct Scott and Lamont (1973) suggest mediate the influence of human values on attribute importances, but as such a go-between is not specified in the other attribute-mediation approaches consumption values were dropped from consideration subsequent to the printing of the surveys.

Human Values

Human values were measured with the Rokeach Value Survey, which consists of 18 instrumental and 18 terminal values. The 36 human values were supplemented with four additional values: Social Justice, Equity, Social Power and Self-determination (definitions supplied by Ng et al., 1982). Concerning the response format, Rokeach (1968) originally instructed respondents to first rank the instrumental values and then the terminal values. The ranking procedure is advantageous because it reduces response sets and assures wide within-subject variability, but it has limited psycho-metric capabilities and is time consuming and taxing for the respondent. Several other methods have been proposed and tested including rating (Braithwaite & Law, 1985; Ng, 1982; Rankin & Grube, 1980) and paired-comparisons (Feather, 1973) which generated roughly equivalent value system profiles as ranking. However, whether these alternative formats ensure satisfactory within-subject variability is unclear. Wide individual variability is crucial, as the aim of the current study is to assess the ability of human values to predict specific events such as product purchase and ownership.

Due to the above concerns about rating and ranking procedures pilot studies were conducted for an Allen (1993) study that compared a standard 1-10, "Least Important" to "Most Important", scale and a forced-distribution format in which

respondents named the thirteen most important values then the thirteen least important. Those marked as most important were coded as a 3, those as least important were coded as a 1, and those not marked were given a 2. Instrumental and terminal values were inter-mixed in the same alphabetically ordered list because previous research has been unable to substantiate their independence (see Crosby, Bitner & Gill, 1990; Heath & Fogel, 1978). The list of human values was also counter-balanced with half the respondents receiving an alphabetical list in ascending order and the other half received an alphabetical list in descending order. The responses were subjected to factor analysis (principal components extraction with no rotation) that produced a small first factor in the forced-distribution method and a large first factor in the standard rating method. The finding suggested (but not definitively) that the standard rating method suffers from greater response set or social desirability biases, and so the forced-distribution method was selected for the Allen (1993) study and the current one.

For the current study, respondents who did not complete the forced-distribution procedure correctly were discarded (less than 2% of the sample). The means and standard deviations of human values are reported in Table 3 (on page 62), which shows that Honesty, Self-respect, True Friendship and Family Security were the most important whereas Obedience, Salvation and Social Power were the least important. The human value preferences seem to emphasise a self-originating guidance of behaviour (i.e., Honesty, Self-respect), recognise the importance of social relationships (True Friendship, Family Security) and resist authoritarianism (Obedience) and other forms of social power. The resistance of traditional authority was also found in Gold and Webster's (1990) study human, economic and political values in New Zealand.

As 40 human values would be unmanageable in the examination of the attribute-mediation approach hypotheses, the human values were grouped through factor analysis. The factor analysis met four criteria that ensure a stable factor structure: a minimum sample size of 100 to 200 (Comrey, 1978), a minimum ratio of participants to variables of between 2:1 and 10:1 (Gorsuch, 1983; Nunnally, 1978), a minimum ratio of participants to factors 2:1 (Cattell, 1978) and a minimum ratio of variables to

factors of 6:1 (Cattell, 1978). The factoring of the 40 human value items with an Eigenvalue 1.0 cut-off resulted in 13 factors accounting for 56% of the variance (see Table 4 on page 63). A maximum number of factors were selected (to the Eigenvalue 1.0 cut-off) so that a topmost amount of human value variance is available for use in the prediction of tangible attribute importances and product preference. Moreover, Hair, Anderson, Tatham and Black (1992) suggest that an Eigenvalue 1.0 cut-off is appropriate when the number of variables is between 20-50, as in the current analysis. A principal components extraction was selected and the solution not rotated because the purpose of the analysis is not to decipher the underlying structure but simply to reduce the number of items for testing the attribute-mediation approach hypotheses. For the same reason, the current factors are not interpreted unless necessary at a later stage. However, the dimensionality of human values for the current sample is fully explored and discussed in Allen (1994) which uses multi-dimensional scaling to reduce the items to a small, yet still meaningful, number of dimensions.

Tangible Attribute Importances and Product Preferences
Attribute Importances and Product Preference
Attribute Importances and Product Preference
Importances and Product Preference

Using a 10-point scale anchored by 'Not At All Important' (1) and 'Very Important' (10) respondents rated the importance of automobile, holiday destination and meat tangible attributes. Unlike human values, sufficient within-subject variability was expected and so a forced-distribution response format was not necessary. Concerning the number of tangible attributes for respondents to rate in importance, Fishbein (1967) suggests individuals can only consider between 6 and 11 object attributes. However, the current study uses the attributes to cover entire product categories, not just specific brands or classes, and thus a larger number of items (between 20 and 24) were considered essential. An attempt was made to ensure that the attributes were tangible and intrinsic to the product, although occasionally the tangibility and objectivity of the attributes are ambiguous. Some holiday destination attributes in particular are ambiguous because of the experiential aspect of the enterprise. Nevertheless, along the tangible-intangible or objective-subjective dimensions all of the selected attributes should be closer to the former

poles than the latter.

As mentioned, the use of a survey design and a general population sample are in the interests of naturalism and investigating the broadest range of phenomena possible. In the same interests, product preference was indexed as actual product purchase and ownership. Actual product purchase and ownership are more naturalistic than simple product attitude or liking, and are more stringent in that consumers must commit their resources such as money, time to purchase, and so on. However, many other factors contribute to product purchase other than human values or tangible attribute importances (e.g., financial ability, family considerations, and so on), and previous purchase does not necessarily imply current preference. The latter limitation is addressed by focussing on each respondent's multiple, and recent purchases of products within the same class or category.

Having reviewed the general framework of the tangible attribute importance and product preference measures, the procedures for selecting the automobile, overseas holiday destination, and meat product tangible attribute importances and product preference measures are reported in depth.

Automobiles

The automobile attributes were gathered from Allen's (1993) investigation that obtained the items from several sources: a pilot study in which American respondents described the characteristics of their favourite car, Vinson, Scott and Lamont's (1977) test of the human values TM consumption values TM automobile attribute importances relationship (the best discriminators between cultural groups were selected), from Horsky and Nelson's (1992) study of a new automobile brand's positioning, and from Lim, Olshavsky and Kim's (1988) study of the impact of inferences on automobile attribute evaluation.

For the present study, automobile attributes that were not intrinsic and tangible were discarded and new attributes added as a result of four informal conversations in which participants described the features they seek in an automobile. The informal

conversations also aided modification of the remaining attributes for a New Zealand context. The final automobile tangible attribute importances and their origin are listed in Table 5 (on page 64) and the mean importance to the current sample in Table 6 (on page 65). As might be anticipated the most important tangible attributes are safety and quality related (e.g., Safety, Reliability, and Few Repairs Needed), whereas the least important are Large Body Size and Air Conditioning / Cooling. In the interest of manageability, automobile tangible attribute importances were grouped through factor analysis (principal components extraction with no rotation) that with an Eigenvalue 1.0 cut-off maximised the number of factors; 5 accounted for 58% of the variance (see Table 6 on page 65). The analysis meets four criteria that help to ensure a stable factor structure: a minimum sample size of 100 to 200, a minimum ratio of participants to variables of between 2:1 and 10:1, a minimum ratio of participants to factors 2:1 and a minimum ratio of variables to factors of 6:1. As with the human value factor analysis, the content of these factors will not be interpreted unless necessary at a later stage.

As an indicator of automobile preference, respondents listed the make and model of their current automobile and up to two previously owned automobiles. The automobiles were then grouped into five classes using the schemes developed by New Car Buyers Guide (1991), Which? Car Buying Guide (1985) and Which? Car Buying Guide (1989). When an automobile was not listed in those schemes, the cubic capacity of the engine and the overall body length separated Smaller Family Cars (cubic capacity ≤ 1600 , length ≤ 168 inches) from Larger Family Cars. Other automobiles not listed in those schemes were categorised after visual examination in reference sources such as Automobile Association (1975) and Consumer Guide (1990, 1992) or the telephone consultation with automotive dealers. The final five classes are (see Appendix Two beginning on page 318 for full a coding scheme):

SMALLER FAMILY CARS -- e.g., Austin Mini, Peugeot 205, Ford Laser

LARGER FAMILY CARS -- e.g., Mitsubishi Tredia, Honda Accord, Holden
Commodore

LUXURY CARS -- e.g., Saab 900, Citroen BX, Holden Calais

SPORTS CARS -- e.g., Toyota Celica, MGB GT, Honda Integra

UTILITY AND MINIVANS -- e.g., Isuzu Trooper, Holden Ute, Mitsubishi
Spacewagon

Respondents' automobile preferences were scored as the percentage of cars they owned in each class out of the total number of cars they owned. For example, if an individual owned an Austin Mini, MGB GT, and Honda Integra, their SMALLER FAMILY CARS score (Austin Mini) would be .33, their SPORTS CARS score (MGB GT, Honda Integra) would be .66, and all other car classes would be zero. The cars were scored in that manner to shift the focus from general car ownership to an individual's preferred car class.

The exclusion of those respondents who did not own an automobile reduced the sample size by one-third, from 340 to 280. Of the remaining 280 respondents, the average number of cars owned of 2.4 (SD=1.02) from which the average proportion of Smaller Family Cars was .46 (SD=.38), Larger Family Cars .27 (SD=.33), Luxury Cars .10 (SD=.22), Sports Cars .06 (SD=.18), Utility and Mini-vans .03 (SD=.11), and Miscellaneous / Unclassifiable .08 (SD=.28). Sports Cars and Utility and Minivans are skewed beyond repair by transformation (taking the square root) and consequently only Smaller Family Cars, Larger Family Cars and Luxury Cars will remain in the analysis.

Holiday Destinations

Holiday destination tangible attributes were gathered from several sources: Kaciak and Louviere's (1990) correspondence analysis of vacation destination choices and attributes, Wahlers and Etzel's (1985) study of stimulation seeking which found that vacation attribute importances are influenced by the relative difference between optimal stimulation and daily level of stimulation, and Taylor's (1989) study of the United States travel market. Attributes were also accumulated from holiday brochures of Australasian and Oceania destinations, and from four informal conversations in which participants described the characteristics they seek in a holiday destination.

The pool of attributes gathered from the above sources (more than 50) was reduced according to three criteria. Firstly, all the attributes were ranked by frequency of occurrence across the sources and those most prevalent were considered the most eligible (a low frequency of occurrence did not automatically result in its deletion but simply a reconsideration). Secondly, as visiting Australasian and Oceanic holiday destinations will become the product preference measure, attributes were selected based on their ability to describe those destinations. To remain in consideration, the attribute must have described at least one destination, and conversely, each destination must have had several attributes from which it could be described. The assessment of the degree of fit between the attribute and the destination was intuitively judged from the descriptions provided in the destination brochures. For example, attributes such as Exciting Night Life, and Sophisticated Restaurants could describe Sydney or Melbourne, whereas Rugged and Tramping could describe Tasmania. The holiday destinations the attributes were intuitively judged to describe were those in the Australasia and Oceania region most frequently visited by New Zealanders (according to the 1990 census). The destinations were: Gold Coast, Bali, Norfolk Island, Northern Territory, Sydney, Fiji, Melbourne, Rarotonga, and Vanuatu. The final criterion that each attribute must have met is that it fall on the former poles of the tangible-intangible and objective-subjective dimensions.

Pilot study. The application of the above selection criteria reduced the initial pool of more than 50 attributes to 37, but before using the attributes in the main survey a pilot study examined their intelligibility and redundancy. The forty-four participants who completed the pilot survey were recruited in libraries, shopping centres and other public areas around Wellington. The demographic composition of the respondents reflected the manner of recruitment, that is, the sample was heterogeneous in age, gender, socio-economic status and so on. Participants rated the importance of the 37 holiday destination tangible attributes, and were encouraged to comment on the items' intelligibility. Those items criticised as unintelligible were revised, and a correlational analysis suggested which items should be combined due to their excessively high correlation.

Besides examining the intelligibility and redundancy of the holiday destination tangible attributes, the pilot study also empirically assessed the attributes' ability to describe the holiday destinations. Though the selection of the pilot items entailed an intuitive judgement of how well they described the holiday destinations, an empirical procedure was employed to make a more objective assessment. The empirical procedure comprised two-steps. Firstly, for each of the 37 attributes, respondents in the pilot study selected from a list of nine holiday destinations the two destinations they felt were best described by the attribute. For example, for the attribute "Safe" respondents were to suggest which two destinations (a first and second choice) they felt were "safest". The nine destinations, Gold Coast, Bali, Norfolk Island, Northern Territory, Sydney, Fiji, Melbourne, Rarotonga, and Vanuatu, were chosen both for their representativeness of the kinds of destinations available in the Australasia and Oceania region and their popularity (according to the 1990 census). In the second step, the responses were subjected to correspondence analysis that reduced the associations among and between attributes and destinations to a minimum number of dimensions, and then plotted both the attributes and destinations on a single perceptual map (correspondence analysis is described in greater detail in the next section describing the holiday destinations and attributes used in the main survey). The correspondence analysis was performed twice; the "first choice only" analysis included the respondent's first choice of the destination they felt was best described by each attribute, and the "combined choice" analysis included both the respondent's first and second choice destinations (the two choices were accorded the same weight). Both correspondence analyses generated similar overall solutions, but the "first choice only" correspondence analysis produced a two-dimensional solution that more comprehensively captured the variation in the cross-tabulation matrix; 72% of the variation was captured by two-dimensions in the "first choice only" analysis whereas in the "combined choice" analysis the two-dimensions captured 61%.

Given that both correspondence analyses of pilot study responses generated similar overall solutions and the "first choice only" analysis more comprehensively captured the original item variance, the "first choice only" results were selected for

further examination. The examination of the “first choice only” correspondence analysis results consisted largely of an inspection of the perceptual map, which suggested two modifications to the attributes and destinations used in the main survey. Firstly, attributes that were located near each other on the perceptual map were used by respondents to describe the destinations in similar ways. Thus, attributes in similar positions on the map are perceived by the respondents to have comparable (but not necessarily identical) meanings and therefore were combined in the main study. The combining of attributes reduced the number of attributes from 37 to 22 for both the destination description section and the tangible attribute importance section.

The second modification to the main survey suggested by the “first choice only” correspondence analysis of pilot study responses was the addition of holiday destinations. On the correspondence analysis perceptual map, each of the nine destinations was surrounded two or more attributes. As attributes in the general proximity of a destination show that the sample used those attributes to describe that destination, the attributes and correspondence procedure should accurately represent consumer perceptions of an even larger number of similar destinations. Thus, as a greater number of destinations would more comprehensively measure holidaying behaviour, the main survey increased the number of destinations from nine to 21. The additional destinations were selected based on the destinations of major airlines (e.g., Air New Zealand), the prominence of destination brochures at local travel agencies, and 1990 census records of the most frequently visited destinations by New Zealanders. The 21 destinations were: Australia’s Gold Coast, Bali, Brisbane, Cairns, Club Med (Lindeman Island), Fiji, Papua New Guinea, Great Barrier Reef, Melbourne, New Caledonia, Niue, Norfolk Island, Northern Territory, Perth, Rarotonga, Sydney, Tahiti, Tasmania,

Main study. Based on the results of the pilot study, respondents in the main study rated the importance of 22 holiday destination tangible attributes, and reported the number of times in the past five years they had visited any of 21 non-New Zealand destinations in the Australasia and Oceania region. The reported visits were limited to the past five years to maintain congruence with human values and

preferred destination attributes, and to the same end, respondents were instructed to only include vacations in which they had some degree of control in the destination choice.

The tangible attributes and their origins are listed in Table 5 (on page 64) and the mean importance for the current sample in Table 7 (on page 66). Among the most important attributes are Scenic, Safe, and Non-commercial, and the least are Ordinary, Theme Parks, and Night Life. In the interest of manageability, the holiday destination tangible attribute importances were grouped through factor analysis (principal components extraction with no rotation) that with an Eigenvalue 1.0 cut-off maximised the number of factors; 6 accounted for 60% of the variance (see Table 7 on page 66). As with human value and automobile tangible attribute importance factor analyses, the content of these factors will not be interpreted.

Besides using correspondence analysis in the pilot study to modify the attributes and number of destinations, correspondence analysis was also employed in the main study to group holiday destinations into maximally similar sets (akin to grouping automobiles into classes such as Smaller Family Cars, Larger Family Cars, etc.). In the main survey, respondents selected from the list of 21 holiday destinations the two destinations they felt were best described by each attribute. Due to the pilot study suggesting the superiority of the “first choice only” correspondence analysis, the main study also only used respondents first choice destinations. The first choice responses were converted to a cross-tabulation matrix that reports the frequency each destination was described by each attribute (see Table 8 on page 67). For example, the cross-tabulation shows that Gold Coast was most frequently described as having theme parks and great beaches, and Bali was described as tropical and inexpensive. The attribute Tramping was most frequently associated with Tasmania then Northern Territory and Papua New Guinea, whereas the attribute Have All Your Needs Attended To best described Club Med.

The cross-tabulation matrix was subjected to correspondence analysis, which firstly reduced the associations among and between attributes and destinations to a minimum number of dimensions, and secondly plotted both the attributes and

destinations on a single perceptual map. To decide the number of dimensions that most concisely captures the variation among and between attributes and destinations, the percentage of the variance captured by each of the first four dimensions (55.3, 21.3, 10.4 and 5.8, respectively) was plotted against the dimension number. The plotting revealed an “elbow” at the two-dimensional solution suggesting a point of diminishing returns in which the incremental increase in the variance explained by the addition of further dimensions is negligible against the increased complexity of interpreting more dimensions. Therefore, a two-dimensional solution was selected (both dimensions together captured 76% of the variance among and between attributes and destinations).

The co-ordinates of the attributes and destinations on the two dimensions are presented in Table 9 (on page 68) and the perceptual map in Figure 2 (on page 69). The placement of destinations represents the degree to which they were described with similar attributes, and the placement of attributes represents the degree to which they were used to describe similar destinations. Although researchers disagree about how accurately the perceptual map represents the association between any row variable and column variable (e.g., Carroll, Green & Schaffer, 1986; Hoffman & Franke, 1986), making general comparisons is legitimate. Furthermore, as the current purpose is to group destinations into similar sets and simply use the attributes to help describe the groupings, the principal limitation of correspondence analysis is not relevant to the current aim.

An examination of the perceptual map reveals four groupings of destinations that with the aid of the attributes within the general areas can be described as the following:

- GROUP 1 -- RUGGED AND AUTHENTIC NATIVE CULTURE -- Papua New Guinea, Northern Territory, Niue, Tonga, Western Samoa and Vanuatu.
- GROUP 2 -- MAJOR CITIES -- Melbourne, Sydney and Brisbane
- GROUP 3 -- PRESTIGE AND STRUCTURED -- Club Med (Lindeman Island) and Gold Coast.

GROUP 4 -- SAFE AND TROPICAL -- Rarotonga, Cairns, Great Barrier Reef Islands, Bali, New Caledonia, Tahiti/French Polynesia, Perth, Tasmania and Norfolk Island.

Brisbane is distant from all the groups and although it is closer to the Prestige and Structured group, Brisbane was placed in the Major Cities grouping due to its stronger conceptual similarity. Overall, the first dimension (horizontal axis) seems to separate major city destinations from rugged and less commercial destinations, and dimension two appears to separate prestigious and exclusive destinations from those that are more commonly available.

From the four groupings of destinations uncovered in the correspondence analysis, holiday destination preference was scored as the percentage of times out of the total number of vacations taken in the past five years the respondent holidayed at one or more of the destinations within the group. For example, if an individual holidayed once in Papua New Guinea and twice in Sydney the GROUP 1 score (Papua New Guinea) would be .33, the GROUP 2 score (Sydney) would be .66, and all other group scores would be zero. The effect of the standardisation is to shift the focus from general holidaying to an individual's preferred holiday destination class / group. The exclusion of those who had not holidayed at any of the destinations reduced the sample size by over one-third, from 340 to 225. Of the 225 remaining participants, the a mean number of holidays taken was 3.04 (SD=3.99), of which the proportion of holidays taken at the four group destinations were, in order, .05 (SD=.14), .58 (SD=.33), .14 (SD=.21) and .22 (SD=.32). GROUP 1 -- RUGGED AND AUTHENTIC NATIVE CULTURE is skewed beyond repair by transformation (taking its square root) and thus will not be included in any subsequent analysis.

Meat Products

Meat tangible attributes were operationalised in the broader category of characteristics of food in general not including types or styles. Attributes were collected from Lyman and McCloskey's (1989) study of preferred food attributes during the imagination of common emotions, Devaki, Sureka and Venkataramaiah's

(1988) examination of sex differences in preferred food attributes, and Simmons' (1989) Eating Values Inventory that measures human values specific to eating. Attributes were also gathered from four informal conversations in which participants described the features they seek in grocery foods.

The pool of attributes gathered from the above sources (more than 40) was reduced according to three criteria. Firstly, all the attributes gathered from those sources were ranked by frequency of occurrence and those most mentioned were considered the most eligible (a low frequency of occurrence did not automatically result in its deletion but simply reconsideration). Secondly, each attribute must fall on the former poles of the tangible-intangible or objective-subjective dimensions. Finally, attributes were selected that could not only describe different types of meat (e.g., red meat, white meat, etc.) but also describe the food preferences for the small percentage of vegetarians in the sample (approximately 6% according to Q.3 of the survey; see Appendix One beginning on page 307). The ability of each attribute to describe different types of meat as well as the food preferences of vegetarians was intuitively judged from previous research on vegetarians and omnivores (e.g., Back & Glasgow, 1981; Beardsworth & Keil, 1991; Dwyer, Mayer, Kandel & Mayer, 1974; Freeland-Graves, Greninger, Graves & Young, 1986). For example, attributes such as Nutritious and Low Environmental Impact To Produce should be most important to vegetarians and health conscious omnivores, whereas strong meat eaters might emphasise Taste and Flavour. Thus, the requirement that the tangible attributes describe the food preferences of both meat eaters and abstainers was most responsible for their operationalisation into the broader category of food in general.

The application of the above selection criteria reduced the initial pool of food tangible attributes from more than 40 to 27, which were tested in a pilot study. Participants in the pilot study were randomly selected from the Wellington telephone directory and received the pilot survey through the post accompanied with a pre-paid reply envelope. One-hundred surveys were sent out and thirty were returned. Participants were encouraged to comment on the attributes' intelligibility and correlational analysis was used to assess the attributes' redundancy. Attributes that

were excessively correlated were combined and those that some respondents criticised as intelligible were rewritten. The final food tangible attributes and their origin are listed in Table 5 (on page 64) and the mean importance to the main sample in Table 10 (on page 70). The most important tangible attributes centre on taste and safety (e.g., Tasty, Safe To Eat, Flavoursome) and the least are Bland, Salty and New On The Market. Food tangible attribute importances were grouped through factor analysis (principal components extraction with no rotation) that with an Eigenvalue 1.0 cut-off maximised the number of factors; 6 accounted for 57% of the variance (see Table 10 on page 70). The content of the factors will not be interpreted.

Meat consumption was indexed as the total number of times in three days before responding to the survey the respondent had eaten red and white meat. The three-day period was chosen for being long enough to reduce floor effects but short enough for respondents to make accurate counts. The numbers of times the individual had eaten red and white meat was each divided by the total number of main dish servings (red meat, white meat, dairy products, and fish/seafood) to compensate for larger eaters and to shift the focus towards meat type preference. The exclusion of participants with missing data resulted in a sample size of 303 with an average total number of main dish servings of 8.3 (SD=4.56), of which the average proportion of red meat servings were .19 (SD=.14) and white meat .16 (SD=.14).

Table 2. Demographic profile of Sample No. 1.

	Cases	Percent	Census for Target Area
<u>All Respondents</u>	340		
<u>Gender</u>			
Male	149	43.8	49.2
Female	191	56.2	50.8
<u>Age</u>			
18 and 19	11	3.2	-----
20 to 29	72	21.2	26.6
30 to 39	76	22.4	22.8
40 to 49	71	20.9	18.1
50 to 59	45	13.2	12.2
60 or more	65	19.1	20.3
<u>Ethnicity</u>			
NZ - European	278	81.7	81.2
NZ - Maori	15	4.4	5.2
Pacific Islander	1	.3	3.0
Other / Refused	46	13.5	10.6
<u>Education</u>			
No Qualification	15	4.4	-----
Higher School	63	18.2	-----
Technical/Trade	57	16.8	-----
Undergraduate Work	40	11.8	-----
Bachelors Degree	76	22.4	-----
Postgraduate Work	41	12.1	-----
Postgraduate Degree	48	14.1	-----

Notes:

Target Areas: Karori, Mt. Victoria, Central Wellington, Kelburn, Island Bay, Newtown, Johnsonville, Hatatai, Seatoun, Paraparaumu Beach and Waikanae Beach.

1991 Census.

Census education categories differ from those used in the current study.

Census information for 18 and 19 age group unavailable, and remaining age census categories modified to reflect the adult-only composition of the sample.

Table 3. Means of human values.

	Mean	StdDev
Honest	2.63	.53
Self-Respect	2.58	.57
True Friendship	2.54	.64
Family Security	2.51	.64
Happiness	2.43	.64
A World Of Peace	2.39	.74
Freedom	2.39	.70
Loving	2.36	.63
Responsible	2.34	.65
Equality	2.29	.75
Wisdom	2.26	.78
Broad-Minded	2.25	.70
Courageous	2.22	.69
A Sense of Accomplishment	2.15	.83
A World Of Beauty	2.11	.75
Independent	2.11	.76
Capable	2.08	.69
Cheerful	2.04	.68
Forgiving	2.03	.67
Mature Love	2.03	.78
Inner Harmony	2.02	.82
Helpful	1.99	.66
Exciting Life	1.97	.85
A Comfortable Life	1.96	.89
Social Justice	1.95	.85
Intellectual	1.92	.80
Polite	1.89	.72
Self-Determination	1.89	.77
Pleasurable	1.84	.79
Imaginative	1.83	.78
Self-Controlled	1.74	.73
Equity	1.69	.76
Logical	1.69	.75
Social Recognition	1.69	.80
Ambitious	1.59	.70
Clean	1.55	.74
National Security	1.49	.66
Obedient	1.33	.53
Salvation	1.29	.63
Social Power	1.19	.47

Note: Scale of 1 'Least Important' to 3 'Most Important'.

Table 4. Factor structure of human values.

	Factors												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Polite	.62	-.10	.09	-.10	.15	.06	-.10	.07	.09	-.10	-.31	-.01	.01
Obedient	.60	.01	.16	.22	-.07	-.05	-.09	.01	.12	-.18	.22	-.01	.11
Clean	.53	-.28	.10	-.19	-.08	-.20	-.15	.10	-.06	-.11	-.23	-.18	-.11
Exciting Life	-.49	-.17	.22	.10	-.14	-.18	.09	.05	.28	-.20	.06	-.06	-.03
Imaginative	-.45	.20	-.21	.18	-.09	-.35	.03	.06	.15	-.09	.13	-.11	-.05
Self-Control	.48	-.29	-.12	-.01	-.15	-.08	-.09	.03	.02	-.18	.13	-.19	.02
Mature Love	-.43	.14	.06	.31	-.24	.22	-.02	.08	-.14	.17	-.12	-.08	.02
Fam.Security	.40	.04	.18	.06	.09	-.04	.29	-.21	-.21	.21	.14	.23	-.36
Honest	.39	.17	-.01	-.21	-.18	.26	-.04	-.07	-.37	-.25	-.09	-.05	-.10
Responsible	.39	.01	-.24	-.13	.17	.06	.33	-.04	-.00	.05	.29	-.04	.05
Freedom	-.41	-.08	-.12	-.20	.25	.15	.09	-.03	.10	-.14	.11	.17	.35
Salvation	.39	.23	.05	.36	-.28	-.16	-.07	.19	.02	.07	.17	.05	.17
Self-determination	-.41	-.20	-.23	.08	-.13	.14	-.13	-.18	-.31	-.25	-.03	.12	.02
Broad-Mind	-.32	.01	-.32	-.21	.10	.06	.03	.17	.26	.05	-.23	.41	-.07
Forgiving	.36	.47	.01	.05	-.12	.07	-.07	.04	.21	.07	-.17	.18	.26
Helpful	.35	.44	-.05	-.02	-.00	-.15	.25	.01	-.16	.10	-.06	.28	.18
Loving	-.06	.38	.41	.13	-.08	.03	.31	.02	-.04	.07	-.08	-.22	.10
Logical	.24	-.38	-.33	-.24	.01	-.14	.01	.24	.03	.16	-.15	-.10	-.28
Equality	-.22	.41	-.01	-.30	.31	-.24	.14	-.08	-.16	.00	.13	-.01	-.01
Wisdom	.08	.10	-.55	.16	-.10	.18	-.14	.35	-.00	.12	.10	-.20	.12
Pleasurable	-.34	-.21	.50	-.22	.12	-.03	.02	.25	-.17	-.05	.09	.06	-.05
Comfortable	-.11	-.46	.50	.02	.07	.03	-.14	-.04	-.12	.16	.19	-.08	-.01
Happiness	-.08	-.08	.46	.04	.06	.34	.14	.33	-.05	.07	-.06	.10	-.15
Cheerful	.09	-.06	.37	-.14	-.17	-.05	-.18	.25	.10	-.36	.03	.37	.19
Social Justice	-.17	.24	.06	-.59	-.41	-.20	-.05	-.11	.01	.19	.24	-.04	.05
Social Power	-.05	-.33	.10	.31	.24	-.25	-.04	-.00	.05	.34	.11	.09	.07
Recognition	.08	-.08	-.04	.55	.58	-.13	.05	.02	-.06	-.14	-.12	.08	.04
Inner Harmony	-.19	.36	.01	.11	-.06	.47	-.27	.19	.04	.11	.17	.05	-.33
Self-Respect	-.11	.06	-.04	-.13	.03	.48	.25	-.19	.31	.01	-.10	-.26	.10
Nat. Security	.21	-.07	-.07	.07	.24	.35	-.34	-.24	-.15	.28	.15	-.05	.23
Capable	.21	-.33	-.17	-.17	.01	.02	.44	.11	.19	.25	-.05	.05	.01
Beauty	-.13	.32	-.07	-.06	.30	-.28	-.41	.11	.22	.04	-.04	-.12	-.17
Peace	.00	.39	.10	-.26	.38	-.08	-.39	-.30	.04	.05	-.06	-.09	-.03
Ambitious	.02	-.35	.13	.11	-.28	-.06	-.04	-.38	.33	.17	.15	-.02	.03
Intellectual	-.29	-.04	-.32	.08	-.10	-.21	.07	.35	-.37	.12	-.02	-.14	.10
Independent	-.06	-.36	-.24	-.05	.21	.21	.11	.01	.06	-.39	.25	-.11	.01
Courageous	.04	.32	-.23	.25	-.09	-.07	.18	-.27	-.07	-.33	.18	.11	-.31
Equity	-.25	-.32	-.12	-.03	-.14	-.15	-.05	-.29	-.36	.06	-.31	.06	.23
Accomplish	-.07	-.20	-.17	.23	-.27	.03	-.09	-.32	.17	.08	-.26	.24	-.20
Friendship	-.13	.24	.28	.16	.05	-.06	.22	-.10	.08	-.13	-.36	-.38	.03
Eigenvalue	3.8	2.8	2.3	1.8	1.7	1.6	1.4	1.4	1.3	1.24	1.16	1.09	1.0
Cumul. % Variance	9.5	16.4	22.1	26.6	30.7	34.6	38.3	41.7	45.0	48.1	51.0	53.7	56.2

Table 5. Tangible attribute importances and their origin.

Automobiles		Holiday Destinations		Food	
Item	Origin	Item	Origin	Item	Origin
Spacious Interior	VSL	Wilderness, Rugged	T,B,C	Tasty	D,C
Smooth Riding	VSL	Tropical	C	Sweet	LM
Safety	PIL	Sophisticated	T,C	Spicy	LM
Quality	VSL	Restaurants & Hotels		Sour	LM
Workmanship		Shopping	T,C		
Luxurious Interior	VSL	Scenic	KL,B,C	Simple	VEG,C
Low Pollution	VSL	Safe	C	Safe To Eat	VEG
Emission					
Large Engine	C	Ordinary	B	Organically Grown	VEG,C
Large Body Size	VSL	Exciting Night Life	T,C	Nutritious / High In	VEG,C
				Vitamins And	
				Minerals	
Inexpensive	PIL, HN	Museums, Galleries,	T,B	Nice Aroma	S
		and Theatre			
High Kilometres Per	HN,	Many Activities /	KL,B	New Product On The	S
Litre	LOK	Things To Do		Market	
High Speed	VSL	Intellectually	WE	Made Of High	D,C
Capabilities		Interesting		Quality Ingredients	
Heating	C	Inexpensive	KL,C	Low Environmental	VEG
				Impact To Produce	
Road Handling	VSL	Historical	T,B,C	Low In Fat	VEG
Few Repairs Needed /	PIL	Theme Parks	T	Looks Appealing	S,C
Low Maintenance					
Reliability /	HN,	Great Beaches	B,C	Inexpensive	S,C
Dependability	LOK				
Compact	PIL	Few Tourists / Non-	C	High In Protein	VEG
		Commercial			
Comfort	HN,	Educational	WE	Gourmet	VEG
	LOK				
Colour	PIL	Authentic Native	WE,B,C	Flavoursome	VEG
		Culture			
Air Conditioning	PIL	A Place For A	WE,B	Exotic / From	VEG
(cooling)		Planned/ Structured		Another Culture	
		Holiday			
Advanced	VSL	A Place To Have All	T,B	Easy To Prepare	C
Engineering		Your Needs			
		Attended To			
		A Unique Place	WE	Easy To Obtain	C
		A Good Place For	T	Salty	LM
		Tramping			
				Crunchy	LM
				Bland	LM

Notes:

VSM = Vinson, Scott and Lamont (1977)
 HN = Horsky and Nelson (1992)
 LOK = Lim, Olshavsky and Kim (1988)
 PIL = Pilot study of Allen (1993)
 KL = Kaciak and Lauviere (1990)
 WE = Wahlers and Etzel (1985)
 T = Taylor (1989)
 B = Holiday destination brochures
 C = Informal conversations

LM = Lyman and McCloskey (1989)
 D = Devaki, Sureka and Venkataramaiah (1988)
 S = Simmons (1989)
 VEG = Vegetarian research (Back & Glasgow, 1981; Beardsworth & Keil, 1991; Dwyer, Mayer, Kandel & Mayer, 1974; Freeland-Graves, Greninger, Graves & Young, 1986)

Table 6. Means and factor structure of automobile tangible attribute importances.

	Mean ^t	StdDev	Factors				
			1	2	3	4	5
Comfort	7.67	1.67	.72	.10	-.09	-.22	-.01
Smooth Riding	7.80	1.72	.71	.13	-.02	-.10	-.11
Handling	8.51	1.59	.66	-.03	.06	-.09	.02
Safety	9.33	1.39	.63	-.23	.16	-.24	-.24
Reliability	9.40	1.14	.59	-.35	.24	-.21	.25
Few Repairs Needed	8.98	1.45	.57	-.44	.18	.02	.11
Advanced Engineering	5.24	2.62	.53	.39	-.39	.02	-.15
Low Pollution Emission	7.76	2.23	.49	-.39	-.14	.23	-.37
Spacious Interior	6.66	2.10	.48	.27	.29	-.10	.25
Large Engine	4.06	2.25	.16	.70	.46	.19	-.07
Luxurious Interior	4.11	2.13	.34	.65	-.15	.03	-.01
Large Body Size	3.61	2.27	.18	.63	.52	.07	.02
Colour	4.75	2.66	.14	.35	-.49	.27	.22
Air Conditioning	3.90	2.48	.37	.35	-.47	-.08	.17
Compact	5.41	2.26	.34	-.32	-.46	.21	-.06
High Speed	4.34	2.34	.15	.53	.03	.55	.08
Inexpensive	6.82	2.39	.24	-.51	.22	.55	.04
Kilometres Per Litre	7.22	2.34	.41	-.43	.13	.49	.18
Heating	6.60	2.15	.49	-.09	-.08	-.13	.58
Quality	8.67	1.76	.53	.12	.07	.00	-.55
Eigenvalue			4.5	3.2	1.6	1.3	1.1
Cumul. % Variance			22.5	38.4	46.5	52.8	58.4

Note: ^t = Scale of 1 'Not At All Important' to 10 'Very Important'.

Table 7. Means and factor structure of holiday destination tangible attribute importances.

	Mean ^t	StdDev	Factors					
			1	2	3	4	5	6
Educational	5.61	2.30	.63	.34	-.30	-.04	-.09	-.11
Historical	5.84	2.53	.61	.29	-.36	-.13	-.06	.11
Intellectually	6.07	2.59	.60	.26	-.47	.15	-.04	.02
Interesting								
Museums,	5.54	2.60	.59	-.01	-.46	.06	.02	.31
Galleries,								
and Theatre								
Theme Parks	2.92	2.38	.58	-.21	.32	-.20	.23	-.15
Many Activities	6.49	2.30	.55	-.17	.02	.11	-.09	-.01
Planned	3.24	2.25	.54	-.26	.07	-.30	.39	-.29
/Structured								
Unique	5.59	2.61	.42	.26	.17	.37	-.16	-.29
Good Tramping	4.20	2.79	.13	.65	.27	.04	.45	.17
Wilderness,	4.64	2.76	.11	.59	.29	.23	.48	.13
Rugged								
Sophisticated	4.01	2.56	.43	-.56	-.06	.27	.03	.22
Restaurants								
and Hotels								
Shopping	4.91	2.56	.50	-.54	-.04	.06	-.16	.19
All Needs	4.04	2.69	.46	-.53	.28	-.03	.08	-.30
Attended To								
Non-Commercial	6.61	2.16	.08	.53	.33	-.06	-.39	.10
Authentic Native	5.22	2.73	.45	.50	.01	.24	-.04	-.27
Culture								
Inexpensive	6.83	2.27	.36	.38	.28	-.22	-.13	-.15
Beaches	6.00	2.56	.09	.00	.75	.10	-.27	.12
Tropical	5.29	2.51	.11	-.14	.58	.39	-.01	.05
Safe	7.65	2.34	.25	-.12	.26	-.65	-.22	-.11
Ordinary	2.56	1.90	.19	-.06	.21	-.54	.28	.40
Night Life	3.69	2.51	.34	-.40	.25	.42	.06	.25
Scenic	7.79	1.64	.31	.30	.19	-.24	-.29	.37
Eigenvalue			3.9	3.1	2.3	1.7	1.2	1.0
Cumul. %			17.8	31.8	42.4	49.9	55.3	59.9
Variance								

Note: ^t = Scale of 1 'Not At All Important' to 10 'Very Important'.

Table 8. Cross-tabulation of respondent descriptions of holiday destinations with attributes.

	Gold Coast	Bali	Brisbane	Cairns	Club Med	Fiji	Papua	Reef	Melbourne	Caledonia	Niue	Norfolk	Northern	Perth	Rarotonga	Sydney	Tahiti	Tasmania	Tonga	Vanuatu	Samoa
Wilderness, Rugged	1	0	0	3	0	0	105	5	1	3	2	5	119	0	0	0	0	26	0	4	3
Tropical	6	83	2	17	9	35	11	6	0	8	1	0	5	1	27	1	51	0	5	6	2
Restaurants/Hotels	27	0	8	0	18	1	0	1	70	1	0	0	0	1	0	134	7	1	0	1	1
Shopping	6	7	9	0	0	2	0	0	63	1	0	3	0	0	0	183	1	0	0	1	0
Scenic	4	34	1	13	6	8	7	99	0	3	1	5	20	4	10	5	24	20	0	10	1
Safe	18	5	18	5	34	12	0	6	27	3	13	43	0	12	26	17	1	23	5	1	3
Ordinary	23	2	51	12	5	9	3	0	16	4	10	28	5	36	7	13	0	22	8	4	10
Night Life	37	2	7	1	16	0	0	0	24	0	0	0	0	0	0	175	8	1	1	1	0
Museums, Galleries, Theatre	0	0	11	0	0	0	0	1	149	1	0	0	0	4	0	103	1	1	0	0	0
Many Activities	51	9	7	7	67	5	1	4	24	1	1	1	4	2	0	84	2	2	0	1	1
Intellectually Interesting	0	26	1	3	1	1	19	11	96	7	2	7	11	4	1	47	10	9	0	6	1
Inexpensive	6	47	1	3	1	26	6	1	3	1	20	34	3	1	37	14	1	7	29	11	15
Historical	0	19	1	0	0	1	15	2	33	4	1	63	17	5	2	37	20	42	4	1	1
Theme Parks	126	0	40	3	7	2	1	6	18	1	0	0	1	3	0	44	0	3	0	1	0
Beaches	119	21	1	11	8	25	1	18	0	7	0	1	1	8	16	8	18	0	5	4	2
Non-Commercial	0	1	0	7	0	0	53	2	2	1	63	15	23	6	12	2	2	13	23	29	15
Educational	0	22	2	6	0	2	28	26	47	11	2	18	22	8	2	26	17	20	1	3	1
Authentic Native Culture	0	29	0	2	1	14	81	0	1	4	15	0	12	1	13	0	8	1	38	27	23
Planned/Structure	27	3	11	9	129	7	2	9	11	0	1	0	7	9	1	27	4	5	0	1	3
Needs Attended To	18	13	3	1	173	9	0	6	6	4	0	0	1	1	2	27	1	0	3	1	0
Unique	3	40	0	8	5	1	42	28	1	3	35	15	39	0	5	3	9	5	10	11	4
Tramping	1	3	0	17	1	1	30	11	1	4	1	24	49	7	1	2	2	104	3	3	1

Note: figures indicate that each destination was described with each attribute.

Table 9. Correspondence analysis co-ordinates of holiday destinations and attributes.

	Dim. 1	Dim. 2
<u>Attributes</u>		
Wilderness, Rugged	1.40	-.52
Tropical	.53	.44
Sophisticated Restaurants/Hotels	-.97	-.55
Shopping	-1.02	-.89
Scenic	.60	.32
Safe	-.07	.29
Ordinary	-.07	.11
Exciting Night Life	-1.00	-.44
Museums, Galleries, Theatre	-.99	-1.09
Many Activities	-.74	.38
Intellectually Interesting	-.20	-.66
Inexpensive	.65	.16
Historical	.19	-.44
Theme Parks	-.77	.33
Beaches	-.13	.68
Non-Commercial	1.16	-.21
Educational	.26	-.37
Authentic Native Culture	1.13	-.07
Planned/Structured	-.57	1.14
All Needs Attended To	-.70	1.51
Unique	.95	-.04
Good Tramping	.94	-.21
<u>Destinations</u>		
Gold Coast	-.64	.59
Bali	.50	.23
Brisbane	-.59	.15
Cairns	.41	.33
Club Med	-.72	1.46
Fiji	.28	.62
Papua New Guinea	1.21	-.38
Great Barrier Reef	.49	.30
Melbourne	-.73	-.86
New Caledonia	.30	.03
Niue	1.05	-.08
Norfolk Island	.45	-.18
Northern Territory	1.14	-.38
Perth	.02	.18
Rarotonga	.57	.38
Sydney	-.94	-.59
Tahiti	.32	.14
Tasmania	.31	-.11
Tonga	.98	.10
Vanuatu	.81	-.04
Samoa	1.02	-.01

Figure 2. Correspondence analysis map of holiday destinations and attributes.

Notes:

Attribute labels not presented to avoid cluttering (see Table 9 for co-ordinates).
Dimension One is the horizontal axis and Dimension Two is the vertical axis.

Table 10. Means and factor structure of meat tangible attribute importances.

	Mean ^t	StdDev	Factors					
			1	2	3	4	5	6
Low Environmental Impact	6.93	2.57	.59	-.40	.24	-.08	-.22	.09
Easy To Obtain	7.10	2.18	.58	-.18	-.43	.22	-.14	-.05
Nice Aroma	6.20	2.31	.56	.23	-.07	-.32	.24	.04
High Protein	6.13	2.15	.56	-.12	.25	.12	.01	-.28
Organically Grown	5.20	2.72	.53	-.30	.36	-.12	-.20	.16
Nutritious	7.75	2.14	.49	-.48	.34	-.20	.02	.09
Looks Appealing	6.53	2.19	.48	.18	-.21	-.28	.22	-.33
Inexpensive	7.09	2.24	.49	-.12	-.14	.37	-.21	-.01
Flavoursome	7.73	1.69	.46	.25	-.28	-.45	.10	.07
Tasty	8.04	1.80	.42	.21	-.49	-.38	.05	.20
Low In Fat	7.20	2.47	.40	-.38	.34	-.03	-.12	-.16
Spicy	5.61	2.17	.25	.65	-.00	-.13	-.38	.32
Exotic/Another Culture	4.72	2.35	.27	.51	.21	-.19	-.36	-.07
Safe To Eat	8.85	1.80	.28	-.52	-.15	-.11	.28	.32
High Quality	7.72	2.13	.43	-.49	-.00	-.30	.16	.02
Sweet	4.82	2.26	.34	.47	-.24	.23	.07	.18
Gourmet	4.33	2.35	.35	.47	.25	-.07	.04	-.46
Sour	3.71	2.09	.31	.45	.35	.14	-.20	.38
New On Market	3.43	2.28	.42	.44	.10	.14	.19	-.34
Salty	3.25	2.07	.25	.44	.13	.23	.31	.21
Easy To Prepare	7.16	2.18	.49	-.15	-.52	.27	-.24	-.22
Simple	6.06	2.31	.35	-.25	-.34	.42	-.05	.08
Crunchy	4.25	2.30	.58	.07	.17	.27	.09	.04
Bland	2.10	1.74	.28	.10	.29	.39	.54	.19
Eigenvalue			4.6	3.2	1.9	1.6	1.2	1.2
Cumul. % Variance			19.1	32.5	40.3	46.9	51.9	56.7

Note: ^t = Scale of 1 'Not At All Important' to 10 'Very Important'.

RESULTS

Rationale of Analysis

To make the product the level of analysis and examine the attribute-mediation approach hypotheses, two separate regression analyses were performed for each of the eight product class preferences: three automobile ownerships (Smaller Family Cars, Larger Family Cars, Luxury Cars), three overseas holiday destination groups (Major Cities, Prestige and Structured, Safe and Tropical), and two meat types (red and white). As already stated, Sports Cars, Utility Vehicles - Minivans and Rugged, and Authentic Native Culture holiday destinations were skewed beyond repair by transformation and thus will not be included in any analysis.

In the first regression analysis, human values alone are regressed onto product preference. If human values significantly predict product preference then the first hurdle in examining the attribute-mediation approach hypotheses is reached, and the analysis can continue to the second step that assesses how tangible attribute importances mediate that human value influence. If human values do not significantly influence product preference, the result could suggest that human values have no part in consumer evaluations of products, though that conclusion would be overly speculative. Human values are abstract, general criteria and their influence on specific behaviours such as product purchase and ownership may not always be traceable (an issue that is re-addressed in the discussion). Nevertheless, to examine the attribute-mediation approach hypotheses, some indication of human value influence is required to detect if the influence occurs via tangible attribute importances.

The second regression analysis is made up of two blocks or stages. Block 1 regresses tangible attribute importances onto product preference, and then Block 2 regresses human values onto the remainder of product preference variance. If Block 2 does not explain a significant amount of product preference variance once the influence of tangible attribute importances is removed, then the attribute-mediation approach would appear to be the only route of human value influence. The

interpretation would be supported if the first regression analysis could significantly predict product preference with human values alone, because it would suggest that whatever influence human values do have on product preference occurs exclusively through tangible attribute importances. If, however, Block 2 can significantly predict product preference beyond tangible attribute importances, the finding would suggest that human values influence product preference through another route(s) besides that outlined in the attribute-mediation approach. Such a finding would support H1, and H2 would be supported if the strength of that alternative route is greater for those products assumed to be evaluated on their intangible attributes (e.g., meat products and overseas holiday destinations).

In each regression, human value and tangible attribute importance factor scores were entered instead of the individual items. The readers would recall that in each factor analysis a maximum number of factors were selected (to the Eigenvalue 1.0 cut-off) so that a topmost amount of human value and tangible attribute importances variance is available for use in the prediction of product preference. The factor analyses resulted in 13 human value factors, 5 automobile tangible attribute importance factors, 6 holiday destination tangible attribute importance factors and 6 meat tangible attribute importance factors.

However, the large number of factors, particularly for human values, presents a problem for the regression analyses because of the likelihood that human values will only moderately predict product preference. Admittedly, many agents influence product purchase other than human values (e.g., family considerations, finances, etc.) and that fact is compounded by human values' abstract nature that makes them difficult to trace to concrete, specific behaviours. Consequently, the low prediction rate coupled with the loss of degrees of freedom from the large number of independent variables, may result in some regressions failing to reach significance despite their accounting for a level of product preference variance that is acceptable given the obstacle in predicting product purchase with human values. As the weak statistical relationship between human values and product purchase is immutable, the degrees of freedom must be conserved. The conservation was accomplished by firstly, entering the independent variables into the regression equation on a step-wise

basis, and secondly, relaxing the significance required for the entrance of those variables. Unlike the full entry method, a step-wise regression only enters those independent variables that significantly predict the dependent variable at or below the $p < .05$ level (as determined by its F or t). Therefore, only the best predictors are used in the computation of the regression equation and a lower level of product preference variance needs to be explained for the equation to reach significance.

One problem, however, with the step-wise entrance of independent variables is that it decreases the reliability of the regression solution (Hair, Anderson, Tatham & Black, 1992). Other factors, such as the composition of the sample, outliers or interactions among variables, can shift the independent variables entered into the equation from test to test and sample to sample. However, relaxing the significance required for the entrance of the independent variables from $p < .05$ to $p < .10$ gives more leeway as it would eliminate any instability that might have been caused from independent variables shifting their prediction of the dependent variable from $p < .05$ in one test to $.05 < p < .10$ in another test. Thus, the $p < .10$ criterion should produce a (slightly) more robust regression equation than the $p < .05$ criterion, and yet still be more stringent than liberal standards above $p < .15$. Moreover, the attribute-mediation approach is examined for eight separate product classes, and so reliability can also be established through the emergence of a consistent pattern of relations found across the product classes and categories.

To summarise, two regressions were performed for each of the eight product classes. The first regression entered human values alone to predict product preference, and the second regression entered tangible attribute importances to predict product preference (Block 1) then entered human values onto the remaining product preference variance (Block 2). The human values and tangible attribute importances factor scores were entered instead of the individual items, and each regression entered the independent variables on a step-wise basis with a $p < .10$ criterion. The following 16 regressions were performed:

- The 13 human value factors were regressed onto participants' Smaller Family Car

ownerships.

- The 13 human value factors were regressed onto participants' Larger Family Car ownerships.
- The 13 human value factors were regressed onto participants' Luxury Car ownerships.
- The 13 human value factors were regressed onto participants' holidaying at Major Cities destinations.
- The 13 human value factors were regressed onto participants' holidaying at Prestige and Structured destinations.
- The 13 human value factors were regressed onto participants' holidaying at Safe and Tropical destinations.
- The 13 human value factors were regressed onto participants' red meat consumption.
- The 13 human value factors were regressed onto participants' white meat consumption.

- The 5 automobile tangible attribute importances were regressed onto participants' Smaller Family Car ownerships (Block 1), followed by the 13 human value factors (Block 2).
- The 5 automobile tangible attribute importances were regressed onto participants' Larger Family Car ownerships (Block 1), followed by the 13 human value factors (Block 2).
- The 5 automobile tangible attribute importances were regressed onto participants' Luxury Car ownerships (Block 1), followed by the 13 human value factors (Block 2).
- The 6 holiday destination tangible attribute importances were regressed onto participants' holidaying at Major Cities destinations (Block 1), followed by the 13 human value factors (Block 2).
- The 6 holiday destination tangible attribute importances were regressed onto participants' holidaying at Prestige and Structure destinations (Block 1), followed by the 13 human value factors (Block 2).
- The 6 holiday destination tangible attribute importances were regressed onto

participants' holidaying at Safe and Tropical destinations (Block 1), followed by the 13 human value factors (Block 2).

- The 6 food destination tangible attribute importances were regressed onto participants' red meat consumption (Block 1), followed by the 13 human value factors (Block 2).
- The 6 food destination tangible attribute importances were regressed onto participants' white meat consumption (Block 1), followed by the 13 human value factors (Block 2).

Results of Regression Analyses

Before reporting the results of the regression analyses, readers are informed that five factors, which according to Hair, Anderson, Tatham and Black (1992) may affect the stability and integrity of the regression analyses, were examined: linearity, homoscedacity, normality of error terms, multi-collinearity and a low subject-to-variable ratio. A visual inspection of the residual plots suggested each regression equation did not deviate substantially from linearity and were homoscedastic, and an inspection of the normal probability plots showed that the distributions were essentially normal. Moreover, as the independent variables are human value and tangible attribute importance scores from un-rotated factor analyses, multi-collinearity is not an impediment. With un-rotated factors the first factor captures the greatest amount of the variance, the second captures some variance not already captured by the first factor, and the third factor captures part of the remaining variance and so on. Therefore, as expected, a perusal of the correlation matrix confirmed that the factors are un-correlated. Finally, the minimum subject-to-variable ratio suggested ranges from 10 to an absolute minimum of 4 respondents per variable, for which each regression in the current study easily exceeds.

The results of the two-block regression analyses are reported in detail in Table 11 (on page 78) and the results of the human values only regressions are reported in detail in Table 12 (on page 79). Each detailed table reports the independent variables entered each equation, their beta weights and the Multiple Rs. For instance, Table 11 shows that the step-wise regression of automobile tangible attribute importances

(Block 1) onto Smaller Family Car ownership resulted in tangible attribute importance factors #2, #5 and #3 being entered and a Multiple R of .47.

The detailed tables may be referred to periodically, but the focal point for the evaluation of the attribute-mediation approach hypotheses is Table 13 (on page 80), which summarises the important aspects of Table 11 and Table 12 and reports other needed calculations. Beginning with the left portion of the table, the two-block regressions, the far left column reports the Multiple Rs from regressing tangible attribute importances onto product preference (Block 1). The second column from the left reports the Multiple Rs from regressing human values onto the remaining product preference variance not already accounted by tangible attribute importances (Block 2). The “Change in R” column reports the extent human values predicted product preference beyond tangible attribute importances, and so represents the influence of human values that does not flow through tangible attribute importances. The Multiple Rs from regressing human values alone onto product preference is reported in the “Human Values Only” column. Finally, the far right column marked “HVs via Tangible Attribute Importances” is the total influence of human values (the Human Value Only regression column) minus the “Change in R” from the two-block regression. Thus, the “HVs via Tangible Attribute Importances” column represents the influence of human values on product preference that does flow via tangible attribute importances. In interest of caution, however, the Multiple Rs from the human values only regressions are not necessarily precise indicators of human value influence in that, for example, the two cases that human values alone could not significantly predict product preference (Larger Family Cars and White Meat), incongruously, human values could significantly predict those product preferences once tangible attribute importances were removed (see the “Change in R” column). As the human values only regression and Multiple Rs must be used to calculate the strength of the indirect route of value influence, some degree of imprecision must be acknowledged and tolerated.

Hypothesis 1 stated that the attribute-mediation approach, properly restricted to tangible attributes, cannot fully account for the influence of human values on consumer choices. Consistent with that hypothesis, Table 13 shows that of the six

product classes that human values alone could significantly predict product preference (e.g., Smaller Family Cars, Luxury Cars, Major Cities destinations, Prestige and Structured destinations, Safe and Tropical destinations, and Red Meat), only for Smaller Family Cars did all of the influence occur via tangible attribute importances. For the remaining five products, tangible attribute importances could not fully account for the influence of human values, which is shown by the significant Change in Rs. Therefore, overall, the attribute-mediation approach cannot fully account for the influences of human values on product preference (Hereafter, the value route via tangible attribute importances is termed the “indirect route” and its alternative is termed the “direct route”).

Hypothesis 2 stated that the inability of tangible attributes to mediate the influence of human values on product preference increases as intangible attributes become more important to consumers’ evaluation of the product. Consequently, the attribute-mediation approach should have the most success accounting for the influence of human values on preferences for automobiles, should have a moderate success accounting for the influence of human values on overseas holidaying, and the least success accounting for the influence of human values on meat consumption. The primary means to assess the hypothesis is the “Change in R” column in Table 13, which shows the influence of human values that does not flow through tangible attribute importances. Hypothesis 2 concerns product categories, and not classes, and therefore finer distinctions among product classes will not be made until the discussion section. For the present, however, among the three product categories, the “Change in R” tends to be lowest (both in significance and Multiple Rs) for automobile ownership, higher for overseas holidaying, and highest for meat consumption, particularly red meat. Although important differences exist among product classes, a tentative conclusion is that the results are consistent with H2; that tangible attribute importances had the most success accounting for the influence of human values on preferences for automobiles, a moderate success with overseas holidaying, and the least success with meat consumption.

Table 11. Results from two-block regression of tangible attribute importances and human values onto product preferences.

Product Preference	BLOCK 1			BLOCK 2			
	Tangible Attribute Importances		Mult. R for Block 1	Human Values		Mult. R for Block 1 and 2	Change in R
	Factors Entered ^t	Beta		Factors Entered ^t	Beta		
Smaller Family Cars	FACTOR2	-.36	.47 ****	[none]		.47 ****	.00
	FACTOR5	.21	F= 24.8			F= 24.8	
	FACTOR3	-.18	df=3,267			df=3,267	
Larger Family Cars	FACTOR3	.28	.40 ****	FACTOR6	-.11	.42 ****	.02 *
	FACTOR2	.26	F=16.8			F=13.8	
	FACTOR1	.17	df=3,267			df=4,266	
Luxury Cars	FACTOR2	.22	.18 **	FACTOR10	-.11	.27 ***	.09 *
	FACTOR4	-.11	F=2,215			F=5.0	
			df=5.5			df=3,266	
Major Cities	FACTOR3	-.13	.22 **	FACTOR10	.20	.35 ****	.13 **
	FACTOR6	.15	F=5.5	FACTOR11	-.19	F=7.1	
			df=2,215			df=4,213	
Prestige and Structure	FACTOR3	.18	.27 ***	FACTOR11	.16	.34 ****	.07 **
	FACTOR2	-.13	F=5.6	FACTOR8	-.13	F=5.6	
	FACTOR1	.13	df=3,214			df=5,212	
Safe and Tropical	FACTOR1	-.15	.19 *	FACTOR10	-.16	.25 **	.06 *
	FACTOR2	.12	F=3.8			F=4.6	
			df=2,215			df=3,214	
Red Meat	FACTOR1	-.10	.12 *	FACTOR2	-.19	.28 ****	.16 ***
			F=3.8	FACTOR1	.13	F=6.3	
			df=1,301	FACTOR6	-.12	df=4,298	
White Meat	FACTOR2	.13	.15 *	FACTOR6	.11	.19 *	.04 *
	FACTOR1	.11	F=3.4			F=3.6	
			df=2,300			df=3,299	

Notes:

* p<.05, ** p<.01, *** p<.001, **** p<.0001

^t = only factors significant at the p<.10 level were entered.

Block 1 = tangible attribute importances onto product preference.

Block 2 = human values onto remaining product preference not already accounted by tangible attribute importances.

Table 12. Results from regression of human values onto product preferences.

PRODUCT PREFERENCE	Human Values		Mult. R
	Factors Entered ^t	Beta	
Smaller Family Cars	FACTOR10	.10	.16 * F = 3.9 df= 1,278
Larger Family Cars	FACTOR8 FACTOR4	.12 .10	.11 F = 3.6 df = 2,277
Luxury Cars	FACTOR5 FACTOR2 FACTOR10	-.11 -.11 -.10	.21 ** F = 4.0 df=3,276
Major Cities	FACTOR10 FACTOR11	.22 -.19	.28 **** F = 9.3 df=2,222
Prestige and Structured	FACTOR11 FACTOR3 FACTOR8	.18 .16 -.14	.28 *** F = 6.1 df=3,221
Safe and Tropical	FACTOR10	-.16	.16 * F = 5.7 df=1,223
Red Meat	FACTOR2 FACTOR1 FACTOR6	-.20 .12 -.11	.26 **** F = 7.3 df=3,299
White Meat	FACTOR3	.09	.09 F = 2.8 df=1,301

Notes:

^t = only factors significant at the p<.10 level were entered.

* p<.05

** p<.01

*** p<.001

**** p<.0001

Table 13. Summary of Multiple Rs from two-block and human values only regression onto product preferences.

PRODUCT PREFERENCE	TWO-BLOCK REGRESSION			Human Values Only	HVs via Tangible Attribute Importances ^t
	Block 1	Block 2	Change In R		
	Tangible Attribute Importance	Human_ Values			
<u>Automobile</u>					
<u>Ownership</u>					
Smaller Family Cars	.47 ****	.47 ****	.00	.16 *	.16
Larger Family Cars	.40 ****	.42 ****	.02 *	.11	.09
Luxury Cars	.18 **	.27 ***	.09 *	.21 **	.12
<u>Overseas Holidaying</u>					
Major Cities	.22 **	.35 ****	.13 **	.28 ****	.15
Prestige and Structure	.27 ***	.34 ****	.07 **	.28 ***	.21
Safe and Tropical	.19 *	.25 **	.06 *	.16 *	.10
<u>Meat Consumption</u>					
Red Meat	.12 *	.28 ****	.16 ***	.26 ****	.10
White Meat	.15 *	.19 *	.04 *	.09	.05

Notes:

* p<.05

** p<.01

*** p<.001

**** p<.0001

^t = test of significance unavailable.

Block 1 = tangible attribute importances onto product preference.

Block 2 = human values onto remaining product preference not already accounted by tangible attribute importances.

Change in R = indicates direct influence of human values.

HVs via Tangible Attribute Importances = indicates indirect influence of human values and is calculated by subtracting Change in R from Human Values Only.

DISCUSSION

Thus, the results are supportive of the hypotheses that (H1) the attribute-mediation approach, properly restricted to tangible attributes, cannot fully account for the influence of human values on consumer choices, and (H2) that the inability of tangible attributes to mediate the influence of human values on product preference increases as intangible attributes become more important to consumer's evaluation of the product. Specifically, although important differences among product classes exist, in general the attribute-mediation approach had the most success accounting for the influence of human values on preferences for automobiles, a moderate success accounting for the influence of human values on overseas holidaying, and the least success accounting for the influence of human values on meat consumption.

Importantly, whilst H1 was supported, the route of human value influence outlined in the attribute-mediation approach is, nevertheless, the predominant mode. A comparison of the strength of the direct route of value influence (the "Change in R" column in Table 13) with the strength of the indirect route (far right column) shows that for seven of the eight product classes the indirect route is greater than or equal to the direct. The exception is red meat and even in that instance the indirect route is of reasonable influence. Moreover, the predominance of the attribute-mediation route is also suggested by the result that the product classes most strongly predicted by tangible attribute importances (Smaller Cars, Larger Cars and Prestige and Structured destinations) are also those with the greatest difference between the stronger indirect route of value influence and the weaker direct route (a difference in Multiple Rs of .16, .07 and .14, respectively). That result implies that an increase in the role of tangible attribute importances increases the influence of human values through those importances and the predominance of the indirect route.

Though human values largely mediated through tangible attributes to influence product preference, for most of the products human values also influenced product preference directly. The direct route of value influence is probably a result of tangible attributes failing to account for the influence of human values on intangible

attributes given that, consistent with H2, the strength of the direct route was greater for those product categories which consumers probably place more importance on intangible attributes (e.g., meat products and overseas holiday destinations). Even among some product classes, support is found for the contention that the direct route corresponds to the role of intangible attributes. For instance, automobile ownership was expected to be the most appropriate to attribute-mediation approach because the high risk and cost of automobiles lead to careful and deliberate evaluations of tangible features first, and images second (Keaveney & Hunt, 1992; Shavitt, Lowrey & Han, 1992; Sirgy & Johar, 1985). The results confirm the expectation but also show that it varies among the automobile classes as the direct route is weakest for the car class that image is probably least important (e.g., Smaller Family Cars) and is strongest for the car class that image is probably most important (e.g., Luxury Cars). Likewise, toward the conclusion of the current chapter, the argument is made that intangible attributes such as symbolic meaning are more important in consumer evaluations of red meat than white meat.

However, whilst the strengths of the direct and indirect routes appear consistent with the attribute composition of the product classes and categories, support for H2 is tentative for several reasons. Firstly, the differences among the Multiple Rs of the direct influences of human values (e.g., the “Change in R” column in Table 13) are minor. The Multiple Rs of the automobile classes ranged from .00 to .09, the Multiple Rs of the overseas holiday destination groups ranged from .06 to .13, and the Multiple Rs for the meat types were .04 and .16. The minor differences in Multiple Rs suggests that comparing the Multiple Rs of different product categories is tenuous; a suggestion that is reinforced by the regressions’ step-wise entrance of independent variables which can be unstable. Nevertheless, a consistent pattern of relations did emerge, not only across product categories but also within product categories, in which the direct route of human values was stronger for those product categories and classes that a reasonable assumption can be made that intangible attributes are important to consumer evaluations of the products.

However, a second reason support for H2 is tentative is that the attribute composition of the product classes and categories are only assumed. H2 was based

on empirical and theoretical research about how automobiles, overseas holiday destinations and meat products may be evaluated by consumers, but the attribute compositions of the products were not verified independently, and therefore other factors may contribute to the direct and indirect influences of human values other than the tangible and intangible attribute compositions of the products. A third reason support for H2 is tentative is that intangible attributes were not explicitly tested and so their role in the bifurcation of value influence is indeterminate. Consequently, a future study should address each of the limitations by modelling and testing intangible attributes and modifying the level of analysis from the product to the individual consumer. The latter would avoid making assumptions about how most consumers evaluate a particular product, and instead would focus on how each individual examines each product's tangible and intangible attributes and how that examination affects the direct and indirect influences of his or her human values.

Concerning other limitations of the current study, perhaps the one of lingering concern to most readers is the low predictive power of human values on product purchase. Referring to the summary of the regressions in Table 13 (on page 80), for six out of the eight product classes, the human values only regression significantly, but weakly, predicted product preference (see second right column in the summary table). Some might argue that the weak (but significant) influence of human values on product purchases warrants a reconsideration of their merit in studying. However, a more tempered position is warranted given that attempting to predict actual product purchase and ownership made the analysis the most stringent test of the attribute-mediation approach. A stronger role of human values may emerge when using product preference measures that are not as severely affected by external factors (e.g., family considerations, financial limitations, and so on) such as persuasiveness to varying advertising strategies or alternatively simple product attitude. Moreover, a well-known axiom of Fishbein and Ajzen (1974) is that general attitudes predict general behaviour and specific attitudes predict specific behaviour. To obtain a strong prediction, a preference measure should be specific in four ways: it should include the object of reference, the action the individual wants to do with the object, the time he or she wants to do it, and the context. Human values have none of those features. Consequently, attempting to trace the effects of general human values on

specific consumer behaviours will be plagued by low predictive power, and thus the primary contribution of the current study is to show a particular pattern of relationships more so than any absolute strength.

Additional limitations of the study centre on the beliefs, consumption values and consequences constructs which, besides intangible attributes, were not modelled nor tested. In the basic conceptual model, Lindberg, Garling and Montgomery's position was adopted that human values influence attribute importances without operating through a go-between such as Scott and Lamont's "consumption values" or Gutman's "consequences". The formulation allowed the greatest flexibility in integrating the various perspectives, and the anticipation was that excluding the intervening variables would not present a problem as human values and tangible attribute importances should have sufficient common variation; an expectation confirmed. In terms of the role of beliefs, contrary to Lindberg, Garling and Montgomery's (1989) and Gutman's (1982) suggestions, Scott and Lamont's (1973) inclusion of the evaluative component and the exclusion of the belief component was selected because incorporating a belief component in the current model would require the acceptance of a particular attribute-mediation approach either by forcing the inclusion of a specific construct such as Gutman's consequences (e.g., the belief that attributes engender consequences that are important to human values) or from the manner in which beliefs link human values and attribute importances (such as Lindberg, Garling and Montgomery's claim that attribute importances are formed from the beliefs that they reinforce important human values). Testing the core or most basic attribute-mediation approach is therefore not possible if the belief component is included.

The exclusion of the belief component was expected to not substantially affect the testing of the basic attribute-mediation approach as past research has excluded the belief component with satisfactory results (e.g., Lindberg, Garling & Montgomery, 1989; Scott & Lamont, 1973). Moreover, consumer beliefs and knowledge about what attributes products contain and the human values reinforced can be assumption if the products chosen for the investigation are commonly owned, as the products for the current sample were (83% of the sample owned a Smaller

Family Cars, Larger Family Cars or Luxury Cars, 65% took a holiday in the past five years at one of the 21 destinations, and of the 90% of the respondents who answered the meat questions all had some level of meat consumption). Nevertheless, as the model only comprises evaluative components (human values and tangible attribute importances) ambiguity arises from whether the lower prediction of some product preferences was due to consumers not applying their tangible attribute importances and human values, or alternatively due to consumers having insufficient beliefs to select the product that matches their evaluations. Thus, a limitation of the present study is the uncertainty of whether the inclusion of a belief component would increase the predictive power of the model and more definitively determine the role of beliefs.

However, though the accuracy of prediction may increase with the inclusion of a belief component, the general conclusions of the current study may not alter. The addition of the belief component to tangible attribute importances may yield a stronger prediction of product preference than tangible attribute importances alone, and the addition of the belief component to human values, such as which tangible attributes reinforce which human values, may increase the predictive power of human values on tangible attribute importances and consequently the overall strength of the indirect route. However, the direct route of value influence may also increase in strength if a belief component were added, such as which product-wholes reinforce which human values, and therefore the differences in the strengths of the two routes would be narrowed. Thus, although the overall accuracy of prediction may change with the addition of a belief component, the attribute-mediation approach would probably still not fully account for the influence of human values on consumer choices. Of course, the outcome is speculative and is simply stated for consideration.

As to other limitations of the study, critics of the survey method often level a “consistency” argument that the participants may rate the items on a scale simply to appear consistent with their responses on another scale, and not because the responses represent their actual preferences. Feldman and Lynch (1988) for example, argue that an association found between attitudes and behaviour could be

due to respondents completing the behaviour measure to appear consistent with the attitude measure. Thus, a limitation of the current study is that in the meat product section respondents may inaccurately estimate the number of times they had eaten meat in the previous three days. Some respondents who, for example, emphasised nutrition and health-based tangible attribute importances may have felt compelled to understate their meat consumption. However, the kind of bias argued for by Feldman and Lynch seems most likely to occur when the behaviour is measured on a metric scale, and therefore is only possible in the meat product section of the survey. The possibility that respondents would list automobiles they have never owned or holiday destinations they have never visited seems unlikely. Given that implausibility and that automobiles were the most strongly predicted by tangible attribute importances suggests the association found between tangible attribute importances and product preference is not an artefact of the survey method but is instead indicative of consumers' cognitive structure. The same rationale applies to the association found between human values and product preference.

A final limitation of the examination of the attribute-mediation approach hypotheses is that the survey methodology and regression procedures show an association and interconnection among human values, tangible attribute importances, and product preference; not a causation. To show causation not only requires an association between variables, but also that one variable occurs before the other and that no other reasonable cause for the outcome exists (Hair, Anderson, Tatham & Black, 1992). The survey approach does not allow the isolation and manipulation of the independent variables to gauge their effects on the dependent variable. Theoretical arguments put forth by researchers such as Rokeach (1968, 1973) and Feather (1975), discussed in Chapter I, is that the flow of influence is from human values to attitudes and to behaviour, or as in the current context, from human values to tangible attribute importances to product preference. Nevertheless, these are still only theoretical arguments and the direction or existence of causality in the study is indeterminate.

Although the current study does have limitations, among its strengths are that a heterogeneous product set was used, care was taken to ensure that the lists of

tangible attributes were comprehensive, the broad scope of the Rokeach Value Survey, and that product preference was indexed as actual product purchase and ownership. Thus, H1 and H2 can cautiously be accepted and the conclusion made that when the attribute-mediation approach is properly limited to tangible attributes it cannot fully account for the influence of human values on product preference. Intangible attributes, although not central, are still of consequence to value influence. That conclusion is consistent with McCracken's (1988), Holbrook and Moore's (1981), and Keaveney and Hunt's (1992) expectancy-value theory criticism that although intangible attributes are carried on an agglomeration of tangible attributes, that portion of product preference consumers derive from an evaluation of the product's intangible attributes cannot be determined solely from consumer preferences for the product's tangible attributes. Intangible attributes are more than the sum of tangible ones.

Given that expectancy-value theory and the multi-attribute model are not able to include intangible attributes without violating the assumption that consumers evaluate each attribute independently, the attribute-mediation approach will probably never fully account for the influence of human values on product preference. Nevertheless, the attribute-mediation approach should not be rejected completely because the indirect route was the predominant mode of value influence. Instead, a more comprehensive conceptual model should be developed which builds upon the success of the attribute-mediation approach and can account for intangible attributes and the direct route of value influence. Part II of the present thesis pursues such a model, but before proceeding, the results of the current study should be examined more thoroughly to help determine the direction the new conceptual model should take. Particular attention should be paid to those findings relating to the direct route because the direct route is the most in need of theoretical and conceptual development. The findings of the current study can be more thoroughly examined in three ways: 1) by considering the significance of the products that are most strongly influenced by the direct route, 2) by considering the human values that tend to influence product preference through the direct route, and 3) by determining which individuals tend to use the direct route and the human values that characterise those individuals. As a forewarning, the results of the procedures in the present section are

not meant to form a definitive conclusion about what the new approach to the influences of human values on consumer choices should comprise, but rather, they are intended to gain only modest insight. Thus, the following procedures and their conclusions are made in the spirit of exploration and should be taken as such.

The results of the current study can be examined more thoroughly by considering the significance of the products that are most strongly influenced by the direct route of human values. Out of the eight product classes, human values had the strongest direct influence on red meat consumption (see “Change in R” column in Table 13). The anticipation was that human values would influence preferences for both red and white meat through an alternative route to tangible attribute importances because Katz (1960) suggests that operant conditioning during early socialisation lead to predominately affective/holistic judgements. However, the direct route was much stronger for red meat than white meat, which could be due to red meat being judged more affectively and holistically than white meat, but the reason why red meat is judged more affectively than white meat is difficult to conceive. More likely, human values influence red meat consumption more so than white meat consumption because of the differences in their intangible attributes. In fact, several sociologists and anthropologists have argued that red meat more so than white meat has potent symbolic meaning that refers to masculine identity and social power values (e.g., Adams, 1990, 1994; Fiddes, 1989; Heisley, 1990; Twigg, 1983). For example, Heisley’s (1990) study found that meat, particularly red meat, symbolises masculinity and strength whilst fruits, vegetables and grains generally symbolise femininity and weakness. Similarly, Twigg (1983) outlines a hierarchy of food symbolism in which red meat occupies the second highest position (just short of the taboo items of human flesh, carnivores, and uncastrated animals) but more powerful than white meat, fish and so on. She observes “deeply embedded in dominant culture is the idea of animal food as containing certain qualities, a particular power. This power centres around the qualities of strength, aggression, passion, sexuality - all that culture has traditionally designated as humankind’s animal nature” (p. 22). Twigg continues, “men in particular are thought in some sense to need meat, especially red meat, and a series of masculine qualities are encapsulated in the ideal of redbloodedness” (p. 24). Thus, the potency of the symbolic, intangible attributes

of a product and the attributes' roles in reinforcing and expressing the identities of social groups and individuals could be one explanation for why human values directly influence product preference.

The results of the current study can also be more thoroughly examined by contemplating the human values that tend to influence product preference through the direct route. An inspection of the detailed reports of the regressions (Table 11 and Table 12) reveals that for Smaller Car ownership human value factor #10 predicted product preference in the human values only regression, but not in Block 2 of the two-block regression. Thus, human value factor #10 influenced Smaller Car ownership indirectly via tangible attribute importances. For Larger Car ownership, human value factors #8 and #4 predicted product preference in the human values only regression, but factor #6 emerged in Block 2 of the two-block regression. Thus, factor #6 influenced product preference directly whereas #8 and #4 influenced indirectly via tangible attribute importances. For Luxury Car ownership factor #10 influenced product preference directly as evidence by its entrance in the second block of the two-block regression, and factors #2 and #5 influenced indirectly as they entered the human values only regression but not Block 2 of the two-block regression. For Major Cities, holidaying factors #10 and #11 influenced product preference directly. For Prestige and Structured holidaying factors #3, #8 and #11 predicted product preference in the human values only regression, but only #8 and #11 were entered in Block 2 of the two-block regression. Thus, factors #8 and #11 influence product preference directly and #3 influenced indirectly via tangible attribute importances. For Safe and Tropical holidaying, factor #10 influenced product preference directly. For red meat consumption factors #1, #2 and #6 influenced product preference directly. Finally, for white meat consumption human value factor #6 influenced product preference directly and #3 influenced indirectly.

Across all the relations summarised above, two human value factors show some degree of consistency. In three product classes each, human value factors #6 and #10 influenced product preference directly (and in only one instance did factor #10 influence indirectly). The probability that any factor always predicts product preference through the same route is slim. Human value factor #10 contained a non-

interpretable set of human values, but Factor #6 comprised the human values of Inner Harmony, Self-respect and National Security, the former two of which correspond to Schwartz and Bilsky's (1990) Maturity domain. The readers may recall that Schwartz and Bilsky developed a topology of human values based on the motivations and interests the values serve. Maturity values foster the development and expression of the ideal self-concept, and engender an appreciation of oneself, others and the surrounding world. Thus, an intriguing possibility is that when human values influence product preference directly they do so because the product functions to maintain and enhance the individual's identity. As readily apparent, the emphasis on self-realisation and expression is consistent with the previous exposition on the potency of red meat's symbolic meaning and its possible role in reinforcing and expressing personal and social identities.

The final way the results of the current study can be examined more thoroughly is by determining which individuals tend to use the direct route and the human values that characterise those individuals. Thus, though the current examination and the one in the previous paragraph both attempt to uncover human values associated with direct and indirect influences of human values, the focus of the previous examination was whether some human values tended to influence product preference through specific routes, whereas the current section examines whether those individuals who tend to use one route to the other can be characterised by their endorsement of specific human values. Unfortunately, the primary results of the examination of the attribute-mediation approach hypotheses cannot be used for the current purpose because an indication is needed of the strengths of the direct and indirect routes of human value influence for each individual. The examination of the attribute-mediation approach hypotheses was made for the sample as a whole and at the level of the product, not at the level of individual consumer. Thus, the method used to determine the strengths of each individual's direct and indirect human value influences is the "Residual Method", which is discussed at greater length in method section of Study 3 (beginning on page 191). Readers are encouraged to preview those pages before proceeding. The limitations of the procedure are also spelt out in those pages, but given the exploratory spirit of the present investigation the limitations of the Residual Method are acceptable.

Due to the multitude of calculations the Residual Method requires, only two product classes were examined: Smaller Family Cars and red meat. As the main analysis in the current study found, Smaller Family Cars had the strongest indirect route of value influence and so is the best representative of the indirect route, whereas red meat consumption had the strongest direct route of value influence and so is the best representative of that route. For each regression, factor scores were entered instead of the individual items. Human values comprised 13 factors, car tangible attribute importances 5 and meat tangible attribute importances 6. As the Residual Method is anchored in the relative prediction accuracy of the regressions, the absolute accuracy of prediction is less critical and therefore a step-wise entrance of independent variables was not needed. Thus, all independent variables were used and they were entered simultaneously (i.e., full-entry method). The regressions performed are listed below.

Smaller Family Car Residual Method

- The 5 automobile tangible attribute importance factors were regressed onto each of the 13 human value factors.
- The residuals from the preceding regression analyses (e.g., 13 human value factors minus their co-variation with automobile tangible attribute importances) were regressed onto the percentage of the individual's automobile ownerships that were Smaller Family Cars. For each individual, the residual of the regression shows how accurately the direct influence of human values predicts his or her Smaller Family Car ownership and will be termed the "Smaller Family Car DIR".
- The 13 human value factors (full variance) were regressed onto the residual of the preceding analysis (e.g., Smaller Family Car ownership minus the direct influence of human values). For each individual, the residual of the regression shows how accurately the indirect influence of human values predicts his or her

Smaller Family Car ownership and will be termed the “Smaller Family Car IIR”.

Red Meat Residual Method

- The 6 meat tangible attribute importance factors were regressed onto each of the 13 human value factors.
- The residuals from the preceding regression analyses (e.g., 13 human value factors minus their co-variation with meat tangible attribute importances) were regressed onto the percentage of the individual’s food consumption that was red meat. For each individual, the residual of the regression shows how accurately the direct influence of human values predicts his or her red meat consumption and will be termed the “Red Meat DIR”.
- The 13 human value factors (full variance) were regressed onto the residual of the preceding analysis (e.g., red meat consumption minus the direct influence of human values). For each individual, the residual of the regression indicates how accurately the indirect influence of human values predicts his or her red meat consumption and will be termed the “Red Meat IIR”.

Due to the large number of regressions, the factors that may affect their stability and integrity were only examined for a small, randomly selected pool of ten regressions. A visual inspection of the residual plots for the pool of regression showed that each did not deviate substantially from linearity and was homoscedastic, and an inspection of the normal probability plots suggested that the distributions were essentially normal. Concerning all the regressions, as the independent variables are human value and tangible attribute importance scores from un-rotated factor analyses, a perusal of the correlation matrix confirmed that the factors are un-correlated. Finally, the minimum subject-to-variable ratio suggested ranges from 10 to an absolute minimum of 4 respondents per variable, for which each regression in

the current analysis easily exceeds.

Also due to the large number of regressions performed in the Residual Method, only the results of the final two regressions, those used to separate individuals based on strength of their direct influence (DIR) and indirect influence (IIR), are reported. The direct influence regression onto Smaller Family Car ownership resulted in a Multiple R of .10 ($F(13,307)=.3$, $p=.99$) and the indirect influence regression onto Smaller Family Car ownership resulted in a Multiple R of .13 ($F(13,307)=.4$, $p=.96$). The direct influence regression onto red meat consumption resulted in a Multiple R of .28 ($F(13,289)=1.9$, $p<.05$) and the indirect influence regression onto red meat consumption resulted in a Multiple R of .08 ($F(13,289)=.1$, $p=.99$). As a whole, the absolute strengths of the regressions are not crucial. What is important is whether for each individual, and for each product, the direct influence regression (DIR) or the indirect influence regression (IIR) yielded a more accurate prediction of their product ownership. Following those determinations, the individuals can be profiled on their human values.

The separation of the sample according to whether their Smaller Family Car DIR or Smaller Family Car IIR more accurately predicted their Smaller Family Car ownership resulted in 151 respondents for whom the DIR was a superior predictor of their Smaller Family Car ownership (direct influence group), and 170 for whom the IIR was superior (indirect influence group). Discriminant analysis was then used to profile the groups on their human values. The 40 human values were entered into a step-wise discriminant analysis with a p-value required for entrance of .20 (the p-value criterion was relaxed from .05 to .20 due to the exploratory nature of the analysis). The discriminant analysis yielded a significant function (Eigenvalue=.13, df=7, $p<.001$) and could correctly predict 64% of the group memberships, significantly better than chance (Press's Q=25.8, $p<.001$) though the significance of the Press's Q may be affected by the large sample size. The Box's M for the analysis (M=26.25, $p=.34$) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices. The human values that met the entrance criteria and their discriminant loadings are: Broad-minded -.46, Cheerful .28, Equity .29, Family Security .45, Imaginative -.33, Inner Harmony .61,

and Pleasurable Life -.41. The sign of the discriminant loadings shows that being Broad-minded, Imaginative, and having a Pleasurable Life are preferred most by those individuals for whom the direct influence of human values more accurately predicted their Smaller Family Car ownership than the indirect influence of human values, whereas being Cheerful, and having Equity, Inner Harmony and Family Security are preferred most by those individuals for whom the indirect influence of human values more accurately predicted their Smaller Family Car ownership than the direct influence. These findings will be more fully discussed after reporting the red meat consumption Residual Method and discriminant analysis.

The re-separation of the sample according to whether their Red Meat DIR or Red Meat IIR more accurately predicted their red meat consumption resulted in 146 respondents for whom the DIR was a superior predictor of their red meat consumption (direct influence group), and 157 for whom the IIR was superior (indirect influence group). The 40 human values were entered into a step-wise discriminant analysis with a p-value required for entrance of .20 that yielded a significant function (Eigenvalue=.06, df=7, p<.05) and could correctly predict 58% of the group memberships, significantly better than chance (Press's Q=7.9, p<.01) though the significance of the Press's Q may be affected by the large sample size. The Box's M for the analysis (M=30.7, p=.36) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices. The human values that met the entrance criteria and their discriminant loadings are: Comfortable Life -.33, World of Beauty -.42, Equity .39, Freedom .37, National Security .41, Responsible -.46, and True Friendship .49. The signs of the discriminant loadings show that having A Comfortable Life, A World of Beauty, and being Responsible are preferred most by those individuals for whom the direct influence of human values more accurately predicted their red meat consumption than the indirect influence of human values, whereas having Equity, Freedom, National Security and True Friendship are preferred most by those individuals for whom the indirect influence of human values more accurately predicted their red meat consumption ownership than the direct influence.

For both products, Smaller Family Cars and red meat, those individuals using the

direct route seem to be characterised by three sets of human values: aesthetics, maturity and hedonism. The aesthetic value of A World of Beauty is consistent with the direct route representing the attention to intangible attributes such as aesthetics and symbolic meaning. Moreover, the emphasis on maturity values (e.g., Responsible, Imaginative, Broad-minded) is consistent with a previous examination that showed human value Factor #6, which largely comprised maturity values, tended to influence product preference through the direct route. The readers may recall that Schwartz and Bilsky (1990) suggest that maturity values foster the development and expression of the ideal self-concept, and engender an appreciation of oneself, others and the surrounding world. The Residual Method and discriminant analyses also showed that individuals who tended to apply their human values through the direct route were characterised by their endorsement of hedonistic and sensuous values such as A Pleasurable Life and A Comfortable Life, which had thus far not been given enough consideration. Whilst the recognition was made that meat consumption is governed by an affective, category-based judgement, the emergence of hedonistic values with the direct route for both red meat and Smaller Family Cars suggests that affectively may be a particularly important feature of the direct influence of human values.

As to the indirect route, two major sets of human values seem to characterise those individuals who apply their human values via tangible attribute importances. The first is an emphasis on inter-personal relationships (e.g., Family Security, True Friendship) and the second is a concern about security (e.g., Family Security, National Security). Whilst drawing any firm conclusions from these diverse value preferences is problematic, the concern about security does suggest that these individuals make careful and cautious choices, which is to some extent consistent with the indirect route representing an expectancy-value, piecemeal, attribute-by-attribute judgement.

Overall, the examination of the human values those individuals who use each route of value influence, suggests that the direct route is associated with a concern about aesthetics, the development and expression of the ideal self, and affective and sensuous experience, whereas the indirect route is associated with an emphasis on

security and inter-personal relationships. The examination of the human value factors that influenced product preference through the direct route also showed that the direct influence route is associated with maturity values and the development and expression of the ideal self. Moreover, the finding that red meat is strongly and directly influenced by human values, but white meat is not, also suggested that the direct route is associated with potent symbolic meanings that may reinforce and express the identities of individuals and social groups. Thus, evidence is converging that the direct route of value influence is characterised by affectivity, symbolic meanings, aesthetics, and the development and expression of the self.

To conclude, the examination of Lindberg, Garling and Montgomery's (1989) Multi-attribute Approach, Gutman's (1982) Means-end Chain Theory, and Scott and Lamont's (1973) Centrality of Beliefs Approach showed that when the basic attribute-mediation approach is properly limited to tangible attributes the influence of human values cannot be fully accounted for, and the inability was greater for those products that consumers probably evaluate intangible attributes. Thus, both tangible and intangible attributes appear consequential to the influence of human values, as are the different ways tangible and intangible attributes are judged (e.g., piecemeal, attribute-by-attribute, versus holistic, category-based). Accordingly, a new approach and conceptual model are needed that build on the success of the attribute-mediation approach, given that it accounted for the largest share of value influence, but also incorporate intangible attributes and the direct influence of human values that is likely associated with symbolic meanings, aesthetics, affectivity, sensuousness, and the expression of consumers' personal and social identities.

PART TWO: THE DIRECT AND INDIRECT INFLUENCES OF HUMAN VALUES

CHAPTER IV. THE PRODUCT MEANING APPROACH TO THE INFLUENCES OF HUMAN VALUES ON CONSUMER CHOICES

The results of Study 1 showed that when the attribute-mediation approach is properly limited to tangible attributes it cannot fully account for the influences of human values on product preference and that the inability is greater for those products evaluated on their intangible attributes. Therefore, a new conceptual model of how consumers' choice of products are influenced by the human values they endorse is needed that builds on the success of the attribute-mediation approach and can also account for the direct influence of human values that is likely associated with intangible attributes such as symbolic meaning and aesthetics, a category-based judgement, affectivity and sensuousness, and the expression of the self.

A fruitful avenue to pursue in developing such a conceptual model is the meaning products hold for consumers because a "product meaning approach to value influence" can embody central features of the attribute-mediation approach (e.g., tangible attributes and a piecemeal, attribute-by-attribute type of judgement) and the features of the direct route of human value influence (e.g., intangible attributes and a holistic, category-based judgement). Moreover, a product meaning approach can more closely define the composition of both tangible and intangible attributes, judgement type, the psychological function being served, and the routes through which human values operate to influence the evaluations of product meanings.

The first section of the current chapter develops such an approach, first reviewing the nature of meaning, then the categories of product meanings, where the general categories of product meanings are "located" in the product, what type of

judgement the meanings are assessed with, and finally, how consumers use human values to evaluate the meanings. Although the primary emphasis of Part II of the thesis is the product meaning approach to the influence of human values, a functional perspective is also offered that supplements the overly structural product meaning approach with an impetus or drive factor. The functional perspective is how the psychological functions of an individual's human values evaluate the psychological functions of his or her preferred product meanings, and several propositions are made about how the psychological functions may manifest in the value influence routes.

The chapter reviews a diverse range of theoretical and empirical research, and therefore readers are advised to preview the final conceptual model of the product meaning approach to value influence (see Figure 1 on page 21 for a schematic representation and Table 1 on page 22 for a more detailed tabular form). In the product meaning approach, the route of value influence outlined in the attribute-mediation approach (e.g., via tangible attribute importances) is suggested to be restricted to when consumers attend to the utilitarian meanings of products, make a piecemeal, attribute-by-attribute type of judgement, and the product serves an instrumental psychological function. The alternative, direct route of value influence uncovered in Study 1 is generally used when consumers attend to the symbolic meanings of products, make an affective, category-based type of judgement, and the product serves an expressive psychological function. Admittedly, the conceptual model aims to be broad enough to apply to most contexts, and consequently oversimplifies the complex differences among types of products, individuals, human values, product meanings, and judgements.

A PRODUCT MEANING APPROACH PRODUCT MEANING APPROACH PRODUCT MEANING APPROACH

Meaning is the relation among mind, object and word (Odgen & Richards, 1923) and many theoretical perspectives have been offered to explain the relation but three seem most applicable to the meanings of products. These are: Osgood's behaviourist approach, Richins semiotic perspective, and Szalay and Deese' notion of

psychological meaning. Following a brief overview of each perspective, the roles of human values in influencing consumer evaluations of product meanings are considered.

Osgood and his colleagues (e.g., Osgood, 1952; Osgood, Suci & Tannenbaum, 1957) suggest that individuals come to understand the meaning of words and other signs by making mediating representational responses. The mediating response is a facsimile of the individual's actual behaviour towards the object represented by the word or sign. As Osgood (1952) states,

“a pattern of stimulation which is not the object is a sign of the object if it evokes in an organism a mediating reaction, this (a) being some functional part of the total behaviour elicited by the object and (b) producing distinctive self-stimulation that mediates response which would not occur without the previous associations of non-object and object patterns of simulation” (p. 204).

Mediating responses, and meanings, emerge from direct experiences that link the sign and object, and also from associations with other words. Thus, although the response towards the object is transferred to the sign, the sign itself may elicit responses independently of the object. To measure meaning, Osgood developed the semantic-differential scale in which the respondent rates an object (or non-object) on a series of bipolar adjectives, such as “good versus bad”, “fast versus slow” and so on. In a series of studies, Osgood (1957) found that the bipolar adjectives factor to three principal dimensions: evaluation (good versus bad), potency (strong versus weak) and activity (fast versus slow). Among these dimensions, however, Osgood suggests the evaluative dimension is the most crucial to mediating responses.

Richins (1994) regards the meanings of products from a semiotic perspective and so before describing her approach semiotics is briefly outlined. Semiotics is the “the science of signs” and the study of any medium as a sign system (Saussure, 1974). Signs are words, images and objects that comprise a “signifier” -- the material form of the sign -- and the “signified” -- the concept it represents. Signs are organised into meaningful systems according to certain conventions or “codes” which are sets of

practices familiar to users of the medium. Pierce (1931-1935) delineates three categories of signs: “iconic” signs resemble the signified, “indexical” signs are connected in some way to the signified, and “symbolic” signs do not resemble the signified and instead are arbitrary and purely conventional. The extent to which the signified determines the signifier is referred to as the “motivation” or “constraint”, and therefore, iconic signs are highly motivated whereas symbolic signs are not. Semioticians distinguish between two levels of meaning; denotative meaning is the manifest or overt level whereas connotative meaning is the latent level. The connotative meanings include affectivity, subjective interpretation, human values and ideology, and “derive not from the sign itself, but from the way the society uses and values both the signifier and the signified” (Fiske & Hartley, 1978, p. 41).

From the semiotic perspective, Richins (1994) suggests products and other material possessions are signs interpreted by viewers using a code that assigns meaning. Contrary to some traditional economic theories that assume a product’s value is contained in its ability to be exchanged (for an overview see, for example, Ng, 1984), Richins argues that meaning gives products value. Richins makes the claim in part from the observation that often the importance consumers assign to some possessions (e.g., pets, family heirlooms, photographs, etc.) is disproportionate with the possessions’ exchange value, and further that a substantial function not captured by “economic value” is the role of products as signifiers of social relationships and personal preferences. Consumers choose products based on the products’ meanings within a cultural system, not from an objective or universalistic exchange value. Richins suggests that product meanings can be “public” in that they are assigned to the product by the society as a whole through institutions, communication systems and interpersonal structures, or they can be “private”. Private meanings are the sums of an individual’s subjective meanings and include both internalised public meanings and meanings that result from idiosyncratic experience.

What Richins (1994) considers private meanings, Szalay and Deese (1978) term “psychological meaning”. Psychological meaning is the individual’s subjective perception and affective reaction towards an object, including linguistic and non-

linguistic elements such as images. The individual's representations of nature, themselves and the world are organised as "subjective representational systems" in which each concept (e.g., Democracy) has a number of components (e.g., The Right to Vote, Free Speech, etc.). Each of these components varies along three dimensions: dominance, affinity and affectivity. Dominance is the centrality or importance of the component to the concept, affinity is the similarity between two component meanings, and affectivity is the positive or negative evaluation of the component.

Although each theory has a different emphasis, from Osgood's behaviourism, to Richins' semiotics, to Szalay and Deese's psychological meanings, their conceptions of meaning are similar in three ways; 1) that some meanings are suffused with affectivity, 2) that some meanings are subjective, and 3) that meaning can be either linguistic or non-linguistic. The former two features are consistent with the assertion that an individual's human values would influence his or her evaluations of product meanings. Like product meanings, human values are subjective and affectively charged, but unlike product meanings, human values are positioned at the top of the abstraction and generalisation hierarchy, which means they are centrally-held (e.g., what Szalay and Deese term "dominant"). At lower positions in the hierarchy are beliefs and affectivity resulting from direct and indirect experiences with specific objects such as products. So, human values are super-ordinate to product meanings and should direct attention to product meanings based on the dominance and similarity of each. Human values and product meanings that are dominant in the system and are subjectively perceived as similar in content should result in the affect for the human value being transferred to the evaluation of the product meaning. For example, an individual's preference for the human value Prestige would not only direct their attention to products that have meanings similar to prestige, such as a Mercedes-Benz, but would also contribute to his or her positive or negative evaluation of the automobile.

As psychological meaning may be linguistic or non-linguistic, the evaluation of product meanings and application of human value criteria could vary in both memory representation (e.g., verbal or imaginal) and judgement type (e.g., piecemeal, attribute-by-attribute or holistic, category-based). Moreover, to assume human

values are applied in the same manner to all product meanings would be overly simplistic. As Study 1 has shown, such a one-dimensional view of human values is unfeasible. Instead, the way in which human values influence the evaluations of product meanings probably varies with the type of meaning, and therefore the different categories of product meanings are outlined before the roles of human values are considered.

Types of Product Meanings and Their Psychological Functions of Product Meanings and Their Psychological Functions of Product Meanings and Their Psychological Functions

Richins (1994) proposes four major categories of product meanings: utilitarian, enjoyment, representation of interpersonal ties, and identity and self-expression. In contrast, several other researchers propose a simple utilitarian-symbolic distinction (Abelson, 1986; Abelson & Prentice, 1989; Dittmar, 1992; Hirschman, 1980; Kilbourne, 1991) which is borne out empirically. Abelson and Prentice (1987) for example, used multi-dimensional scaling to reduce lists of respondents' favourite possessions to a single dimension in which instrumental products (e.g., tools, automobiles, etc.) were opposed by those that symbolically express personal and social identities (e.g., family heirlooms, photos, etc.).

As the utilitarian-symbolic dimension is a major distinction among product meanings, the two routes of value influence found in Study 1, that is, the route proposed in the attribute-mediation approach and the alternative, direct route, could represent the influences of human values when consumers evaluate utilitarian and symbolic product meanings. However, to formulate rationale for why that may be so, the natures of utilitarian and symbolic meanings must be elaborated. The current section reviews the contents of utilitarian and symbolic meanings, where on the products the meanings are "located", the types of judgement consumers use to evaluate them, and the psychological functions they signify. Readers are forewarned that the current section, particularly on symbolic meaning, is lengthy as the section overviews various perspectives on utilitarian and symbolic meanings and the psychological functions the meanings represent. Following the elaboration of utilitarian and symbolic meanings, reasons that human values influence consumer

evaluations of the meanings are put forth.

Utilitarian Meaning

Utilitarian meaning represents the overt function the product serves in allowing the users to control their environment (Dittmar, 1992; Richins, 1994). The meaning is derived from the product in-use and is intrinsically linked to convenience, efficiency and exchange in the traditional economic sense. Examples of utilitarian meaning might be that a vacuum cleaner is for cleaning the carpet, a car is for getting from point A to point B, or a cellular telephone is for talking to a business associate. Hirschman (1980) suggests that as utilitarian meaning centres on the product and the product's physical performance, the meaning tends to be objective; "arising" from the object through the five senses. Similarly, Sheth, Newman and Gross (1991) argue that utilitarian meaning is "located" in objective and tangible attributes because tangible attributes reveal the quality of the product's physical performance, degree of functionality and ability to control the environment. For example, the utilitarian meaning of a vacuum cleaner would be found in such tangible attributes as the power of the motor, durability of construction, and proximity to the carpet, all of which impact the product's ability to clean.

Psychological Function of Utilitarian Meaning

Beggan (1991), Csikszentimihalyi and Rochberg-Halton (1981) and Furby (1978) suggest that a fundamental psychological function products serve is to give the user a feeling of "instrumentality", that is, that he or she can control and manipulate the environment competently and effectively. Furby's (1978) suggestion that products serve an instrumental psychological function is based on the central role some theorists, such as Adler (1929) and Seligman (1975), give to the need for control. Adler argued that feelings of competency and mastery are basic human needs, and Seligman suggested that objects that become internalised as the self are those that "exhibit near-perfect correlation between motor command and the visual kinaesthetic feedback; while those objects that do not become the world' (pp. 141-142). Some studies have found that the more that individuals have control of a

product the greater the product is incorporated into their self-definitions (Beggan, 1991; Prelinger, 1959). Beggan (1991), for example, found that the inducement of control deprivation on those participants who generally felt in control their environment (e.g., had a high internal locus of control) resulted in the increased importance of possessions that generally give control. The inducement of control deprivation did not alter the importance of possessions for those participants with an external locus of control.

Although some researchers such as Dittmar (1992) and Richins (1994) suggest that utilitarian meaning refers to the product's ability to control the environment, the researchers did not explicitly state that the utilitarian meanings of products indicate how the products serve an instrumental psychological function. The connection, however, is obvious; both an instrumental psychological function and utilitarian meaning centre on product in-use, physical performance, the control of the environment, and tangible attributes. Concerning that final feature, clearly only the product's tangible attributes can exhibit a correlation between motor command and visual kinaesthetic feedback.

Symbolic Meaning

Beyond the objective meaning of tangible attributes are levels of intangible attributes with subjective meanings (Friedman, 1986; Hirschman, 1980). Some of those subjective meanings are the result of idiosyncratic experiences and others are assigned to the product by society through institutions, communication systems and interpersonal structures. The culturally shared and intangible attributes comprise the product's image or symbolism (Dittmar, 1992; Levy, 1959). Symbolic meaning is closely tied to the culturally constituted world, and though one could argue that even utilitarian meaning is culturally constituted, Verkuyten (1995) suggests that symbols are characterised by representation being central. As Kilbourne (1991) states, "the term symbolic possession is not intended to imply that there is not symbolism in functional possession. Rather it is intended here to refer to possession in which the symbolic takes precedence over the functional" (p. 450). A similar notion is expressed by Firth (1973) who suggests that symbols are subjective, complex sets of

abstract beliefs associated with an object or action that represent an entity extrinsic to the physical form of the object. Likewise, Gusfield and Michalowicz (1984) and Turner (1969) argue that symbols are characterised by their location outside the means-goal relationship and emphasise that even the actors may be unaware of their use of symbols.

McCracken (1988) observes that if symbols are cultural constitutions then schemes for describing the culturally constituted world should elucidate the nature and content of symbolic meaning. McCracken suggests that culturally constituted meanings consist of two elements: cultural principles and cultural categories. Cultural principles are the ideals and human values that determine how cultural phenomena are organised, evaluated and ranked. Culture categories are the conceptual grids that divide the phenomenological world into smaller parcels; from categories of time, to species of animals, and to social categories such as gender, status and so on. Sensibly, as symbols refer to the culturally constituted world they can comprise cultural principles or categories. An American flag, for example, may symbolise “Freedom” (a principle) or a cellular telephone may symbolise “yuppies” (a cultural category). However, the dichotomy is misleading as all symbols represent social categories and principles simultaneously. The American flag not only represents the cultural principle “Freedom” but also the social category “Americans”.

An additional feature of symbolic meaning is its “location” on a particular configuration of tangible attributes; what was termed the product-whole level such as brand, class or category. The readers might recall from Chapter II that with intangible attributes such as symbolic meaning or aesthetics the product is likely to be evaluated in a holistic, category-based judgement because intangible attributes are tied to a specific configuration of tangible attributes, resulting in the instantaneous evaluation of the product (e.g., Holbrook & Moore, 1981; Keaveney & Hunt, 1992; McCracken, 1988). McCracken (1988), for example, argues that the symbolic meaning of clothing is judged holistically because the meaning of some clothing outfits (i.e., punk rockers, business-persons, etc.) lose their interpretability (to mean “punk rocker” or “business-person”) if any part of the outfit is changed. Interpretation is limited to the form the product was in when meaning was initially

transferred to it via advertising or the fashion system, and so, unlike the linguistic models of meaning (and the expectancy-value model), the elements that comprise symbolic meaning are not interchangeable and the creation of new meaning is limited.

The symbolic meanings of products are generally measured through one of two methods. In the first method, respondents are instructed to describe the traits and characteristics of the typical user of the product (e.g., Belk, Bahn & Mayer, 1982; Birdwell, 1968; Grubb & Hupp, 1968; Levy, 1959; Munson & Spivey, 1981; Ross, 1971; Rudmin, 1991; Sirgy, 1982). In the second method, respondents are instructed to list the words or phrases that come to mind when they think of the product (e.g., Elliott, 1994; Hirschman, 1981; Swartz, 1983; Szalay & Deese, 1978). Of particular interest to researchers using both methods, is the extent symbolic meanings are culturally shared. Some researchers have found that individuals can make consistent inferences about product users (Belk, 1978) or list similar words and phrases when thinking about a product (Szalay & Deese, 1978), but other researchers have found that symbolic meanings have a low consensus (e.g., Elliott, 1994; Hirschman, 1981; Swartz, 1983). Those researchers finding a low consensus suggest that although a consensus is required for the creation of symbolic meanings, once constructed the meanings can be redefined by sub-groups, making the meanings diffuse. Elliott (1994), for example, found that some clothing outfits had a low consensus among the population as a whole but were generally understood by younger participants whom he suggested “actively engage in symbolic work to challenge the assumptions of powerful ideologies and controlling institutions” (p. 14).

Psychological Function of Symbolic Meaning

Symbols serve two primary psychological functions: development and organisation of knowledge, and the expression of self-concepts and identities. Many theories have been put forth about how symbolic meaning serves these two psychological functions (e.g., Belk, Bahn & Mayer, 1982; Birdwell, 1968; Cooley, 1902; Dittmar, 1992; Dolich, 1969; Felson, 1978; Green, Maheshwari & Rao, 1969;

Hong & Zinkhan, 1995; Levy, 1959; McCracken, 1988; Mead, 1934; Newman, 1957; Orpen & Low, 1973; Samli & Sirgy, 1981; Sirgy, 1980; Solomon, 1983; Wallendorf & Arnould, 1988; Verkuyten, 1995). However, three of the above theories are dealt with presently: Mead (1934) and Cooley's (1902) symbolic-interactionism theory, Verkuyten's (1995) social representation approach, and McCracken's (1988) system of meaning transfer theory. After the three theories are briefly reviewed, important features that are absent from the theories are compensated with other approaches such as Johar and Sirgy's (1991) self-congruity theory, Wicklund and Gollwitzer's (1982) symbolic self-completion theory, among others.

Of the various theories of the functions of symbolic meaning George Herbert Mead's (1934) and Charles Cooley's (1902) symbolic-interactionism theory is perhaps the best known. In symbolic-interactionism theory, identity is suggested to develop from self-reflexivity, or taking the perspective of the other, which can only occur through a socially shared meaning system and the ability for role taking in which self, others and objects are designated and represented symbolically. Through the symbolic representation of groups, social roles and objects, individuals can acquire knowledge of social reality that allows them to interpret the behaviour of others, both specific individuals and aggregates such as reference groups, families and so on. Moreover, the knowledge of the social world allows individuals to imagine how other people perceive them and through the imagination, or self-reflexivity, the self-concept develops. In symbolic-interactionism theory, then, an individual's self-definition is wholly social.

A useful way to clarify symbolic-interactionism theory is through an example, offered by Dittmar (1992), who suggests that a girl comes to understand what it means to be a mother through enacting the role with a doll. Through experience the girl learns the meanings attached to dolls by interacting with others who treat her differently because of her doll ownership or alternatively refer to the characteristics of other doll owners (e.g., "You will be a good mother because you treat your doll so well" or "Isn't that girl with a doll nice"). In essence, the doll serves as a role model and becomes an embodiment of the cultural meanings associated with motherhood,

both those meanings associated with the social role of a mother and those meanings associated with the personal attributes of mothers (e.g., supportive, caring, etc.). Moreover, as the girl owns a doll, in time the doll comes to symbolise her own gender identity, roles, and personal attributes. Thus, as Solomon (1983) argues, consumer goods are symbolic objects that represent the social roles of others and socialise the individual to their own roles. Products are not simply responses to internal needs, as some consumer theories speculate, but are social stimuli that motivate individuals to form role self-definitions through self-reflexive evaluation.

Verkuyten (1995) maintains that symbols are social representations, which are culturally shared systems of meaning that have a strong central core, and provide a common point of reference for knowledge, thought and action. In particular, Verkuyten suggests that symbols are polemic social representations because they feature in inter-group conflicts by appealing to existing groups and creating new ones. The creation of new groups occurs through the human values represented in the symbolic meaning; only those individuals who support the human value are addressed by the symbolic form. For example, Verkuyten suggests that during the Gulf War the American Flag came to symbolise “imperialism” which left those opposed to imperialism feeling the flag did not represent them. Symbols also appeal to pre-existing groups by expressing the groups’ worth and esteem. When the American flag symbolised “imperialism”, the flag also symbolised pro-war supporters and their national identity, feelings of superiority, and pride in their country.

Verkuyten asserts that symbols refer to abstract, complex, and non-perceivable entities (e.g., human values, norms, ideals, etc.), and that symbols allow individuals to participate with the non-perceivable entities by experiencing them in a condensed, vivid, and materialised form. For example, the American flag -- the symbolic form -- allows individuals to experience the symbolic content -- Freedom. Applying Moscovici’s (1984) and Billig’s (1988) work with social representations to symbolic meaning, Verkuyten suggests three processes are necessary for psychological participation with symbols. Firstly, as unclassified and unnamed things are strange, alien, and threatening, an “anchoring” process cognitively integrates the represented

object into pre-existing systems of thought, and fosters ready-made opinions. Secondly, an “objectification” process turns unfamiliar, abstract concepts into concrete, familiar experiences. Verkuyten comments “values, needs, norms and ideals are concretised so that the perceivable object (the symbolic form) embodies these abstract notions (symbolic content) and gets a symbolic meaning” (p. 270). Although Moscovici (1984) suggests anchoring and objectification are the principal processes of social representation, Billig (1988) argues that for every psychological process a counter-process must exist and that the counter-process to objectification is “transcendation” which transforms the material object into an abstraction. Verkuyten accepts Billig’s argument and suggests that with symbols transcendation occurs when individuals abstract the symbolic meaning of the concrete object into broader meanings. The abstraction is essentially psychological investment, which requires a unity between the symbolic form and content and that the objects are used self-evidently and regularly.

In McCracken’s (1986, 1988) meaning transfer theory, the concern is how meaning moves from the culturally constituted world to the product and from the product to the individual. McCracken suggests that initially, culturally constituted meanings are associated with the product through advertising and the fashion system. Through advertisements, for instance, consumers attribute to the good certain properties known in the culturally constituted world, creating a “metaphoric identification of sameness”. Thus, the good comes to represent the culturally constituted meanings in isolation, and thereafter consumers can transfer the meaning from the good to themselves through various rituals. In possession rituals, for example, consumers clean, display, reflect upon the product; each of which uses the culturally constituted meanings in the good to mark and reinforce consumers’ social identities and self-concepts.

The crucial aspect of Mead (1934) and Cooley’s (1902) symbolic-interactionism theory, Verkuyten’s (1995) social representation approach, and McCracken’s (1988) system of meaning transfer theory, is that the psychological functions of symbolic meaning are 1) to foster a knowledge of the social world, and 2) to maintain, express and enhance the individual’s self-concepts, social identities and human values.

McCracken attributes the latter function to rituals, Verkuyten to transcendation, and Mead and Cooley to taking the perspective of the other, but each theorist essentially suggests that psychological investment with a product occurs through its symbolic content. However, whilst Mead, Cooley, Verkuyten and McCracken consider how psychological investment occurs via symbolic meaning, what the theorists do not address in detail is the need or motivation underlying the psychological investment. For those needs and motivations, Johar and Sirgy's (1991) self-congruity theory, Wicklund and Gollwitzer's (1982) symbolic self-completion theory, and other perspectives are more useful.

In Johar and Sirgy's (1991) self-congruity theory, four needs and motivations are outlined that result in consumers preferring products with images consistent with their self-images. Johar and Sirgy suggest that consumers who need self-consistency should prefer products that have an image consistent with their actual self-image. However, if a need for self-esteem is more important to some consumers than self-consistency, these consumers should prefer products that have an image closer to their ideal self-image. When consumers prefer a congruence between their actual social self-image (how they believe others perceive them) and the product's image, the preference is due to a need for social consistency, and finally, when consumers prefer a congruency between their ideal social self-image (how they want others to perceive them) and the product's image, the preference is from a need for social approval.

Johar and Sirgy suggest that the type of congruity a consumer is seeking can be determined by measuring his or her self-concepts (actual and ideal, self and social self) on a semantic-differential scale (e.g., liberal versus conservative, cold versus warm, etc.), then measuring his or her perception of the product's image on the same semantic-differential scale, and finally, calculating the difference. A lower score indicates a greater congruence. Several propositions from Johar and Sirgy's typology have been supported (e.g., Hong & Zinkhan, 1995; Orpen & Low, 1973; Samli & Sirgy, 1981; Sirgy, 1980). Hong and Zinkhan (1995), for example, found that a congruency between consumers' perceptions of the image of the product and their actual self-image and ideal self-image resulted in greater product preference

and intention to purchase (though it did not affect brand recall). In particular, Hong and Zinkhan found that the ideal self-concept elicited the strongest pull as consumers preferred advertisements consistent with their ideal self-concept to those simply consistent with their actual self-concept.

The importance of the ideal self-concept in the evaluation of product symbolic meaning is also stressed in three other theories and concepts: Wicklund and Gollwitzer's (1982) symbolic self-completion theory, Solomon's (1983) application of Mead (1934) and Cooley's (1902) symbolic-interactionism theory, and McCracken's (1988) notion of displaced ideals. In Wicklund and Gollwitzer's (1982) symbolic self-completion theory, consumers are suggested to use the symbolic meanings of products to compensate for low self-esteem caused by a lack of experience, expertise or competence. Wicklund and Gollwitzer, for example, found those tennis players who recently began their careers were the most likely to adopt possessions symbolic of that profession, and thus concluded that products turn feelings of inadequacy to feelings of completeness by making consumers' actual self-image closer to their ideal self-image.

Solomon (1983), who is an advocate of Mead (1934) and Cooley's (1902) symbolic-interactionism theory described earlier, makes a similar proposition as Wicklund and Gollwitzer (1982). Solomon suggests that lack of experience in playing a particular role causes consumers to rely on products that are stereotypical of the role. A common sense example offered by Solomon is how the *nouveau riche* are the most likely to purchase extravagant and ostentatious products whereas those who come from "old money" do not feel the need to show off their possessions. Solomon suggests that, through self-reflexivity, products that are symbolic of a new role allow consumers to create and enhance their role self-definitions.

Also expressing the importance of the ideal in product symbolism, McCracken (1988) suggests that products represent displaced ideals. Displaced ideals range from personal ideals such as happiness or true friendship to political ideals such as democracy, but like all ideals, displaced ideals are on a different plane, representing a different era or some different people. Consequently, products fill the gap between

the real and ideal and they do so for several reasons; products are concrete and enduring, are plentiful, have economic value that gives them symbolic value if beyond one's purchasing power, and most important, products are synecdoche in that one can represent the whole ideal. A wedding ring can symbolise the whole scene; a house with a white picket fence, a family, true love, and so on.

Meaning, Judgement, and Human Values, Judgement, and Human Values, Judgement, and Human Values, Judgement, and Human Values

Having reviewed the two major categories of product meanings and the psychological functions they represent, the roles that human values play in influencing consumer evaluations of utilitarian and symbolic meanings of products can now be considered. Before doing so, however, the theories and approaches to the meanings of products reviewed in the previous section should be regarded more critically in light of the suggestion, made in Chapter I, that any model of consumer decision processes should be tripartite; the model should specify what criteria consumers are using to evaluate products and where the criteria originate (e.g., attitudes, tangible attribute importances, human values, and so on), the judgement type that applies the criteria (e.g., a piecemeal, expectancy-value type of judgement or a holistic, category-based judgement), and the meaning that the product holds for consumers (e.g., utilitarian or symbolic).

Those researchers reviewed in the previous section who skilfully profiled the types and categories of product meanings (e.g., Abelson, 1986; Abelson & Prentice, 1989; Hirschman, 1980; Richins, 1994) failed to consider what types of judgement consumers use to evaluate the meanings, or what standard against which the product meaning is assessed. For instance, Abelson and Prentice (1989) and Hirschman (1980) showed that utilitarian and symbolic meanings were the major categories of valued possessions but neither Abelson and Prentice nor Hirschman addressed whether the possessions are judged on a piecemeal or category-basis, and what consumer standards the possessions obviously meet (given that the possessions are valued).

Likewise, most studies of symbolic meaning did not address how symbolic meaning is judged or the criteria consumers use to evaluate it (e.g., Elliott, 1994; Gusfield & Michalowicz, 1984; Hirschman, 1981; McCracken, 1988; Turner, 1969). Some theories and studies of symbolic meaning did link its evaluation to originating cognitive structures such as identity (e.g., Dittmar, 1992), social role definition (e.g., Firth, 1973; Mead, 1934; Cooley, 1902; Solomon, 1983), self-concept (e.g., Hong & Zinkhan, 1995; Johar & Sirgy, 1991; Wicklund & Gollwitzer, 1982) or human values (e.g., Sears, Huddy, & Schaffer, 1986; Verkuyten, 1995). However, none of those approaches considered how the product criteria formed from consumers' identities, social role definitions, self-concepts and human values are applied in the judgement of the product, that is, whether the criteria are applied on a piecemeal basis or a category one. In Mead's (1934) and Cooley's (1902) symbolic-interactionism theory, for instance, individuals are assumed to take the perspective of other to learn and express social roles through products, and in Verkuyten's (1995) social representation approach, symbols are suggested to encapsulate group identities and human values, but neither Mead and Cooley nor Verkuyten specify whether the symbolic meaning is judged on a piecemeal or category basis. Even the more psychological approaches to symbolic meaning, such as Johar and Sirgy's (1991) self-congruity theory or Wicklund and Gollwitzer's (1982) symbolic self-completion theory, ignore how the product is judged. Most critically, all of the above approaches which link symbolic meaning to originating structures such as identity, social role definitions, self-concepts or human values, overlook the existence of utilitarian meaning and the psychological function it may represent.

Thus, the brief critique of current approaches to the meanings of products illustrates that no single approach or theory has integrated what is argued to be three elements important to understanding consumer decision processes: criteria, judgement type, and product meaning. However, a conceptual model of how human values' affect consumer evaluations of product meanings can be developed which includes all three elements. The "product meaning approach to value influence" is founded in the supposition that as products comprise two major categories of meanings, utilitarian and symbolic, the two routes of value influence uncovered in Study 1 represent how human values influence consumer evaluations of those two

types of product meanings. The readers would recall that Study 1 found that human values influence product preference through two routes; one via tangible attribute importances and a second, direct route, which increased in strength as intangible attributes such as symbolic meaning and aesthetics became more important to consumers' evaluations of the product. In the "product meaning approach to value influence", the argument is that the route of human value influence proposed in the attribute-mediation approach (e.g., via tangible attribute importances) is only used when consumers attend to the products' utilitarian meaning and make a piecemeal judgement, whereas the alternative, direct route of value influence is used when consumers attend to the product's symbolic meaning and make an affective judgement. Rationale for the suggestion is offered presently, but readers should bear in mind that the conceptual model aims to be broad enough to apply to most contexts, and therefore over-simplifies the complex relationships among different types of products, individuals, human values, product meanings and their judgements.

Utilitarian Meaning, Piecemeal Judgement and the Indirect Route of Value Influence
Meaning, Piecemeal Judgement and the Indirect Route of Value Influence
Meaning, Piecemeal Judgement and the Indirect Route of Value Influence
Meaning, Piecemeal Judgement and the Indirect Route of Value Influence

As reviewed, utilitarian meaning is the overt function the product serves in allowing the user to control his or her environment, is derived from the product in-use, and is intrinsically linked to convenience, efficiency and exchange in the traditional economic sense. Moreover, utilitarian meaning is located in tangible attributes for tangible attributes disclose the quality of the product's physical performance, degree of functionality and ability to control the environment. Consequently, as a product's utilitarian meaning is located in its tangible attributes, a consumer's preference for the utilitarian meaning would be determined, in part, by his or her preferences for the product's tangible attributes, and vice versa. In either case, a consumer's attention to a product's utilitarian meaning should be associated with his or her human values mediating through tangible attribute importances to influence product preference.

From such reasoning, the attribute-mediation approach, properly limited to tangible attributes to meet the assumption in expectancy-value theory that consumers evaluate each attribute independently, can probably only explain the influence that human values have on product preference when consumers are attending to the product's utilitarian meanings. Neither the attribute-mediation approaches to value influence (e.g., Gutman, 1982; Lindberg, Garling & Montgomery, 1989; Scott & Lamont, 1973) nor traditional expectancy-value theory (Fishbein, 1967; Rosenberg; 1956) considered that their models may only be applicable when individuals are attending to utilitarian meanings. However, other researchers have made such considerations (e.g., Holbrook & Moore, 1981; Johar & Sirgy, 1991). Holbrook and Moore (1981), for instance, comment that when a product's benefits are primarily utilitarian in nature "an intelligent decision maker might well focus on adding up the relative pros and cons so as to determine the bundle that offers the highest summative value" (p.16). However, neither Holbrook and Moore nor similar critics (e.g., Johar & Sirgy) have verified their claims empirically. The most current empirical evidence shows is that consumers evaluate utilitarian meaning through a judgement that is similar to the judgement outlined in expectancy-value theory (e.g., Chaudhuri & Buck, 1995). For instance, Chaudhuri and Buck (1995) found that advertisements that employ a product information strategy and focus on the product's utilitarian meaning are judged analytically (e.g., attribute-by-attribute, logical and serial).

Thus, the aim of Part II of the thesis is two-fold, firstly, to establish whether the influence of human values on product preference via tangible attribute importances is associated with the attention to utilitarian meaning, and secondly, whether the human value and tangible attribute importance criteria are applied in an expectancy-value type of judgement. The readers might recall that Fiske and Pavelchak (1986) term the expectancy-value type of judgement a "piecemeal judgement", which proceeds attribute-by-attribute to evaluate a product in a logical, systematic and comprehensive fashion, with overall product liking a result of the algebraic combination of the affect associated with each attribute (Fiske & Pavelchak, 1986). Thus, attributes are evaluated anew each time encountered, each attribute is evaluated independently from other attributes, and each attribute and its evaluation

additively combines with other attribute-evaluations to form overall preference or attitude. The piecemeal judgement requires effort and does not use prior experience to make inferences about missing attributes.

All the features of a piecemeal judgement just described can be subsumed under the broader category of “reasoning style”, but the piecemeal judgement can be delimited on other dimensions such as memory representation and affect latency and intensity. Concerning the latter, due to the carefulness and thoroughness of a piecemeal judgement, the affect is probably delayed and is of low intensity (on the order of evaluation). Evaluations make goodness or badness, like or dislike judgements, and are not intense affects such as emotional states and sensory experiences. As to memory representation, a piecemeal judgement may comprise a verbal memory representation, which MacInnis and Price (1987) define as the combining of words and numbers in working memory to represent and solve problems. One reason for the expectation that a verbal memory representation is a feature of a piecemeal judgement is that Miller (1987) synthesised various individual differences in cognitive styles (e.g., predispositions) and suggested, *inter alia*, that a verbal memory representation was a feature of a superordinate style that he termed “analytic” but that is essentially piecemeal. Moreover, Holbrook and Moore (1981) suggested that a preference for verbal memory representation increases the individual’s attention to isolated, atomistic features, and therefore should be associated with the independent (e.g., piecemeal) evaluation of attributes. Despite Miller’s and Holbrook and Moore’s suggestions, no study has assessed whether a verbal memory representation is a feature of a piecemeal judgement, and therefore for the purposes of the current thesis a verbal memory representation is not assumed to be a characteristic of a piecemeal judgement.

The issue of memory representation, however, is not central. What is more important is whether the established characteristics of a piecemeal judgement (e.g., a logical, comprehensive, attribute-by-attribute analysis, with low and delayed affect) are related to the attention to utilitarian meaning, and even more crucially, whether utilitarian meaning and a piecemeal judgement conjointly are associated with the route of value influence on product preference proposed in the attribute-mediation

approach, that is, via tangible attribute importances.

Symbolic Meaning, Affective Judgement and the Direct Route of Value Influence
Meaning, Affective Judgement and the Direct Route of Value Influence
Meaning, Affective Judgement and the Direct Route of Value Influence
Meaning, Affective Judgement and the Direct Route of Value Influence

As the attribute-mediation approach, properly limited to tangible attributes, appears capable of only explaining the influence of human values when consumers attend to utilitarian meaning and make a piecemeal judgement, the alternative, direct route of value influence found in Study 1 probably corresponds to the evaluation of symbolic meaning and a holistic, category-based judgement. However, to develop such an argument, the content of symbolic meaning needs elaboration.

As reviewed, symbols are subjective, complex sets of abstract beliefs associated with an object and which refer to the culturally constituted world of principles and categories. Importantly, as cultural principles are human values and other beliefs that evaluate and rank phenomena, when a product symbolises a cultural principle it has strong human value content. Csikszentmihalyi and Rochberg-Halton (1981), for instance, suggest that a common symbolic theme in automobiles and appliances in the 1950's and 1960's was the human value principle for "Mastery of Nature". Social category symbolism occurs when a product is conspicuously owned or consumed by a specific group, resulting in the product symbolising both the group and its culturally constituted characteristics (Douglas & Isherwood, 1978; McCracken, 1988). These characteristics are critical to conceptualising value influence because a group becomes subjectively real to its members only when it differs from other groups along some cultural principle or value (see also Tajfel's Social Identity Theory, e.g., Tajfel (1981)). A similar point was made by Feather (1984), who, when investigating the relationship between gender roles and human values, concluded that the degree individuals identify with a particular group is the degree they believe that the human values which define the group are preferable. Similarly, in Verkuyten's (1995) social representation approach to symbolic meaning, the human value content of symbolism is suggested to create groups by implying that those individuals not holding the human value are not addressed by the symbolism.

Consequently, when a product symbolises a social category it simultaneously symbolises the human values and principles that define the category, and therefore, whether the symbolism refers to cultural principles or to social categories, in either case, the symbolism would generally refer to human values. Thus, the human value content of symbolic meaning should be directly evaluated by the human values consumers endorse. For example, a consumer's preference for the human value of "Freedom" would allow him or her to evaluate the symbol of the Bald Eagle, and by extension the Bald Eagle itself. In a similar way, if yuppies are defined as high achievers then a consumer's preference for the human value of "Achievement" would allow him or her to evaluate yuppies, and by extension products that symbolise yuppies such as a cellular telephone. Researchers of other types of symbolism also suggest that individuals evaluate symbols based on their human value content (e.g., Cobb & Elder, 1972; Firth, 1973; Gusfield & Michalowicz, 1984; Sears, Huddy & Schaffer, 1986). Political psychologists Sears, Huddy and Schaffer (1986), for example, suggest that symbols are organised in a schema-like structure in which specific policy symbols, such as forced bussing, are subsumed under broader values relating to social categories, such as race and gender, which in turn are contained under even more general human values, such as Equality. Thus, although the manifest content of the symbolic meaning may be a specific policy issue, individuals evaluate the symbol based on its broader human value content.

Thus, due to the human value content in symbolic meaning, when consumers attend to a product's symbolic meaning their human values should have a direct influence on their product preference. Moreover, as symbolic meaning tends to be "located" on the product whole with a particular configuration of tangible attributes (e.g., Keaveney & Hunt, 1992; McCracken, 1988), the application of human value criteria would be in a holistic, category-based judgement. As described in Chapter II, in a category-based affective response the stimulus is compared with an exemplar and with a match, the affect associated with the exemplar category schema (a cognitive structure that represents organised abstract knowledge about a given concept) is automatically transferred to the stimulus (Fiske & Pavelchak, 1986). Thus, the stimulus must have a particular configuration of attributes for its exemplar

(good specific examples of the category) or prototype (an abstract composite) to be recognised and classified, but the affect of the attributes does not independently contribute to the overall evaluation.

Although McCracken (1988) and Keaveney and Hunt (1992) suggest that consumers make a category-based, holistic judgement to evaluate symbolic meaning, more likely, the evaluation of symbolic meaning and application of human value criteria is an “affective judgement”. Like a category-based judgement, an affective judgement is holistic, but unlike a category-based judgement, an affective judgement is subjective and difficult for individuals to verbalise (Mittal, 1988; Zajonc, 1980). Zajonc suggests affective reactions involve the interaction of the stimulus with some internal state or condition of the individual, and so compared with cognitive (e.g., piecemeal) judgements, affective judgements more directly and subjectively relate the self to the object. The subjectivity and inexplicability, in particular, suggest that human values evaluate symbolic meaning through an affective judgement, not simply category-based response, because human values -- both those held by the individual and those represented in product symbolism -- implicate the self (subjective) and can be conceptually unclear and difficult to verbalise (e.g., Kilby, 1993). Moreover, though McCracken and Keaveney and Hunt suggested that a category-based judgement evaluates symbolic meaning, the hypothesis was never tested. In contrast, the association between an affective judgement and symbolic meaning has been shown, with Mittal (1988, 1994) finding that the expressive aspects of products, such as their sensory experiences, mood states attainment and symbolism, are judged affectively. Similarly, Chaudhuri and Buck (1995) found that advertisements that use a mood arousal strategy, which mainly involve symbols, are also affectively judged.

Thus, due to the empirical support for the affective judgement of symbolic meaning and the subjectivity and inexplicability of both human values and symbolism, the direct influence of human values on the evaluation of symbolic meaning probably comprises an affective judgement; not simply a category-based response. As to other features of an affective judgement, Zajonc (1980, 1984) suggests affective judgements can be made more quickly and with greater confidence than cognitive (e.g., piecemeal) judgements, and are of greater intensity; on the order of emotional

states and sensory experiences. Cohen (1990) terms an affective judgement an “affective trace” and notes that “evaluative cognitions are ‘cold’ things; outcomes of object/person assessment processes (e.g., Ajzen & Fishbein, 1980), remembrances of things learnt. Affective traces, on the other hand, are often the residue of highly involving and emotional states. When the term ‘affective trace’ is restricted to cognitive elements that serve as tags for experienced states of affect, their instantiation implies more than mere retrieval of information” (p. 157).

Unlike the uncertainty of whether a verbal memory representation is a feature of a piecemeal judgement, the relation between a visual memory representation and an affective judgement is strong both empirically and conceptually. In MacInnis and Price’s (1987) seminal work, visual/imaginal memory representation is defined as a process by which sensory information such as ideas, feelings and objects, are represented in working memory. Importantly, two central features of an affective judgement (holism and subjectivity) are also features of imagery (c.f., Gordon, 1972; MacInnis & Price, 1987). Moreover, several studies have shown that subjective, self-referring imagery increase affectivity (and behaviour intention and recall) (e.g., Anderson, 1983; Bone & Ellen, 1992; Goossens, 1994; Gregory, Cialdini, & Carpenter, 1982). Similarly, Hirschman and Holbrook (1982), Hansen (1981) and Lindauer (1972) suggest that sensory and emotional attributes are evaluated with self-referring, subjective imagery. Therefore, due to the strong conceptual and empirical association, for purposes of the current thesis a visual memory representation is assumed to be a feature of an affective judgement.

However, the issue of memory representation or any other single feature of an affective judgement is not central. What is more important is whether the general characteristics of an affective judgement (e.g., holism, goodness of fit to exemplar, strong and immediate affect, visual memory representation) are related to the attention to symbolic meaning, and more crucially, whether an affective judgement and symbolic meaning conjointly are associated with the direct influence of human values on product preference.

Levels of Prescriptive and Evaluative Beliefs and Levels of Product Meaningof

Prescriptive and Evaluative Beliefs and Levels of Product Meaning of Prescriptive and Evaluative Beliefs and Levels of Product Meaning Beliefs and Levels of Product Meaning

Through the examination of the properties of utilitarian and symbolic meanings, the suggestions were made that human values generally have an indirect influence (via tangible attribute importances) on product preference when consumers evaluate a product's utilitarian meaning because utilitarian meaning is located in tangible attributes. Moreover, as tangible attributes are independently quantifiable, product judgement proceeds on a piecemeal basis. Conversely, human values generally have a direct influence on product preference when consumers evaluate a product's symbolic meaning because symbolism contains human values. Further, the application would constitute an affective judgement because symbolic meaning is holistic and subjective. However, the rationales of these suggestions are largely founded in the properties of product meaning, such as their location on the product or their human value content. Consequently, tying the proposals more closely to the properties of human values and tangible attribute importances is advantageous. Figure 1 (on page 21) makes such an alliance. Much of the current section reviews concepts given previously, but as they were interspersed, a more concise presentation is now offered.

Beginning with the left portion of the figure, levels of prescriptive and evaluative beliefs, human values are centrally-held prescriptive beliefs about ultimate end-goals but their abstractness and no specific object of referent suggests they can lack conceptual clarity, connoting little more than a "felt sense". The lack of conceptual clarity coupled with human values' centrality and subjectivity (self-focus), implies that human values' affective component may be more critical than their cognitive component. At a lower level of abstraction and centrality are evaluative beliefs such as the importance assigned to tangible product attributes. As human values represent ultimate goals and organise the specific evaluative beliefs, importance is assigned to tangible attributes based on the attributes' ability to serve for the value's ends. Tangible attribute importances are goodness or badness evaluations, are objective (object-focused), specific and conceptually clear, which suggests that their cognitive components may be more critical than their affective. In sum, a specific and context-

bound level of evaluative beliefs (tangible attribute importances) is subsumed under a broader and more centrally-held level of prescriptive beliefs (human values) and these two levels vary along dimensions of abstract-specific, subjective-objective, ends-means, and affective-cognitive.

Referring to the right side of Figure 1, levels of product meaning, utilitarian meaning is the manifest function the product serves in allowing the user to control his or her environment and live a more efficient life. In the strictest operationalisation, utilitarian meaning will generally be found in tangible, functional attributes for tangible attributes reveal the quality of the physical performance of the product. As those attributes are concrete, their meaning is objective and specific; “arising” from the object itself via the five senses. Supplementing the objective meaning of tangible attributes are levels of intangible attributes with subjective meanings and those that are culturally shared are the product’s image or symbolism. Symbols are subjective, complex sets of abstract beliefs associated with a product and which represent entities in the culturally constituted world. The representation is generally at the product-whole level such as brand, class or category. In sum, a product contains a level of utilitarian meaning (in independent tangible attributes) and a more abstract level of symbolic meaning (in the product whole with dependent tangible attributes) and these two levels vary along dimensions of abstract-specific, and subjective-objective.

As tangible attribute importances are objective, specific, cognitive and means-oriented they evaluate utilitarian product meaning that is also objective, specific and located in independent, tangible attributes. Furthermore, as tangible attribute importances serve the goals of human values, human values are indirectly implicated in the evaluation of utilitarian meaning. The strong cognitive base of tangible attribute importances with the location of utilitarian meaning in independent attributes suggests product judgement is on a piecemeal basis, which progresses, attribute-by-attribute to evaluate a product in a logical, systematic and comprehensive fashion. Conversely, as human values are abstract, subjective, affective and represent ultimate end-goals, they directly evaluate product symbolism that is also abstract, subjective and contains human values. The affectivity and

subjectivity of human values and the location of symbolic meaning “on” the product-whole suggest that product judgement is affective because it meets three primary criteria: the implication of the self (e.g., subjectivity), the difficulty of explication, and holism.

THE PRODUCT MEANING APPROACH HYPOTHESIS

Given that Study 1 showed that human values predominately mediate through tangible attributes importances to influence product preference, the product meaning approach to value influence attempted to build on the success of the attribute-mediation approach while overcoming its failure to account for intangible attributes such as symbolic meaning. In addition, the product meaning approach sought to more closely define the meanings associated with tangible and intangible attributes, the manner in which they are judged, and the criteria consumers are using to assess them. Notwithstanding that important distinctions among different types of products and consumers are over-simplified, the product meaning approach to value influence is that human values generally have an indirect influence (via tangible attribute importances) on product preference when consumers evaluate a product’s utilitarian meaning and make a piecemeal judgement, and human values generally have a direct influence on product preference when consumers evaluate the product’s symbolic meaning and make an affective judgement. Human values probably influence product preference though more than these two routes, and these two routes may not always correspond precisely with the specified meanings and judgements, nor will utilitarian meaning always be found in tangible attributes and symbolic meaning on a configuration of tangible attributes. The proposal here is an approximate representation of what may generally occur.

As the product meaning approach to value influence was developed as an outcome of Study 1, the results of Study 1 naturally appear consistent with the product meaning approach. For instance, among the automobile classes, the indirect route was strongest for what is arguably the most utilitarian automobile (e.g., Smaller Family cars) whereas the direct route was strongest for the most symbolic (e.g., Luxury cars). Similarly, between the meat types, red meat was much more strongly

influenced through the direct route than was white meat, and as discussed, several anthropologists and sociologists have argued that red meat more than white meat has strong symbolic content (e.g., Adams, 1990, 1994; Fiddes, 1991; Heisley, 1990; Twigg, 1983). Moreover, human values that tended to influence product preference through a specific route or tended to characterise those individuals who applied their human values through a specific route, centred on affectivity and sensuous experience in the direct route (e.g., A Pleasurable Life, A Comfortable Life, etc.), and possibly a careful and cautious approach to the evaluation of objects in the indirect route (e.g., Family Security, National Security, etc.). A final way the findings of Study 1 are consistent with the product meaning approach to value influence, is that for seven of the eight product classes the strength of the indirect route was stronger than or equal to the strength of the direct route, which is sensible because utilitarian meaning is probably more important to consumers than symbolic meaning. In many, but not all, instances, the functionality of a product would be more important than the image it conveys.

Though the pattern of results found in Study 1 appears to support the product meaning approach, Study 1 had limitations such as omitting intangible attributes, not assessing judgement type, and making the product the level of analysis. The omission of intangible attributes is not serious given that the attention to symbolic meaning (an intangible attribute) is suggested to result in the direct application of human values. Consumers may have specific intangible attributes or product images that they prefer (just as they have specific tangible attributes that they prefer), but the human value content of these intangible attributes means that the intangible attributes are closely tied to consumers' human values. Thus, what is meant by the "direct route" is not that human values do not mediate through some construct such as intangible attribute importances, but that the influence of human values is so strong that intangible attribute importances do not absolutely need to be measured and modelled. Thus, akin to how the basic attribute-mediation approach developed in Part I omitted the intervening variable between human values and tangible attribute importances (e.g., Scott & Lamont's (1973) "consumption values" or Gutman's (1982) "consequences") because human values and tangible attribute importances were expected to be sufficiently correlated, the product meaning approach omits

intangible attributes and focuses primarily on how human values influence product preference directly when consumers attend to symbolic meanings.

The other limitations of Study 1 are more critical. If we are interested in closely associating the routes of value influence to tangible attribute importances, utilitarian and symbolic meanings, and judgement types, the level of analysis should not be the product because it forces an assumption to be made of how most consumers evaluate a particular product. Despite the quality of theory and empirical research that inform the assumption it is still just that -- an assumption. What is more appropriate is to make the individual consumer the level of analysis by measuring each consumer's meaning and judgement preferences and then comparing those preferences against the strengths of his or her direct and indirect influences of human values on product preference.

So, the aim of Part II of the thesis is to show, at the level of the individual, that human values have an indirect influence (via tangible attribute importances) on product preference when consumers evaluate utilitarian meaning and make a piecemeal judgement, and human values have a direct influence on product preference when consumers evaluate symbolic meaning and make an affective judgement. The contention, however, needs one further clarification. Consistent with the re-examination of the results of Study 1 made at the beginning of the current section, utilitarian meaning and its associated piecemeal judgement will probably be rated as more important than symbolic meaning and its affective judgement because for most products, but not all, people probably believe that a product's functionality is more important than its image. Thus, the primary distinction between the direct and indirect influences of human values may not be the absolute preference for the respective meanings and judgements, but rather, the relative preference as follows:

HYPOTHESIS 1: An individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or

her human values have a direct influence.

OTHER PROPOSITIONS

Besides the main hypothesis, several propositions are made of how the meanings of products affect the influences of human values; propositions which, if confirmed, draw out the implications of the product meaning approach and the roles of human values in general. That these are propositions and not firm hypotheses is emphasised. The first proposition considers an individual's cross-product tendency to apply his or her human values through the same route and the remaining propositions concern the psychological functions that the routes of value influence may represent.

Cross-product Consistency-product Consistency-product Consistency-product Consistency

The first proposition addresses the unity of the value-attitude-behaviour system. The product meaning approach rests on the assumption that human values are super-ordinate to product meanings and should direct attention to product meanings based on the dominance and similarity of each. Human values and product meanings that are dominant in the system and are subjectively perceived as similar in content should result in the affect for the human value being transferred to the evaluation of the product meaning. Likewise, in Scott and Lamont's (1973), Gutman's (1982) and Lindberg, Garling and Montgomery's (1989) attribute-mediation approaches human values are assumed to be one origin of influence in the value-attitude-behaviour system; a claim made by researchers of general human value processes as well (e.g., Feather, 1975, 1982; Kahle, 1983; Rokeach, 1968, 1973). Importantly, if human value preferences inform consumer choices, then the abstractness and generality of human values would result in product preferences that are relatively consistent across products not only in how they reinforce important human values but also their meanings and routes of influence. Therefore, the first proposition is;

PROPOSITION 1: Individuals have a cross-product tendency to attend to

the same product meanings, use the same type of judgement, and apply human value criteria through the same route.

Psychological FunctionFunctionFunctionFunction

Although the current formulation of the product meaning approach to value influence is tripartite, specifying what criteria consumers use to evaluate products and where these criteria originate (e.g., tangible attribute importances and human values), the judgement type that applies the criteria (e.g., piecemeal or affective), and the meaning attended (utilitarian or symbolic), the psychological functions the routes serve are nevertheless neglected. The schematic representation of the product meaning approach (see Figure 1 on page 21) illustrates most clearly that the rationales in the product meaning approach are the structural features of the components; human values influence meaning evaluation due to the similar properties of each (e.g., abstractness, location, breadth, and so on). The schematic representation of the product meaning approach is inconsistent with the argument made in Chapter I that a comprehensive model of consumer choices should specify criteria, judgement type, product meaning, and psychological function, and is also discordant with the review of product meaning earlier in the chapter which highlighted the importance of psychological function in product meaning. Utilitarian meaning signals an instrumental psychological function in which the product allows the individual to control and manipulate the environment competently and effectively, and symbolic meaning fosters a knowledge of the social world, and maintains, expresses and enhances the individual's self-concepts, social identities and human values.

Thus, the present section addresses the shortcoming of the current product meaning approach by specifying the psychological functions the direct and indirect influences of human values serve and how the functions may manifest and be measured. However, whilst psychological function is important to grasping value influence, psychological function is not a central issue. Instead, the investigation of the product meaning approach hypothesis is made at a more general level of product

meaning that includes psychological function along with content. Consequently, the validation of the product meaning approach hypothesis would, by default, suggest what psychological functions the attention to utilitarian and symbolic meanings and applications of human value criteria serves.

Nevertheless, specific propositions will be made concerning what psychological function each route of value influence serves and how the functions may manifest and be measured, but before doing so, previous approaches to how the psychological functions of attitudes, human values and product meanings affect preferences for products and other objects are reviewed. Readers are forewarned that the current section is lengthy. The section first reviews the section begins with a functional approach to attitudes, then considers the influence and functions of human values, then outlines a functional approach to the value-attitude-behaviour system, and finally considers how the psychological functions may manifest in the value influence routes.

Attitude Function Theory

Attitude function theory is the contention that attitudes may serve any number and combination of psychological functions, and that each function has a different implication for how attitudes are related to behaviour and how the attitudes may be affected by cues in the environment (e.g., Katz, 1960; Herek, 1987; Smith, Bruner & White, 1956). Katz (1960), for example, outlined four such psychological functions: instrumental (the need to maximise the rewards and minimise the costs from objects in the environment), knowledge (the need to organise and give meaning to the chaotic world), ego-defence (the need to protect oneself from acknowledging the most basic and difficult truths about themselves or about the world) and value-expressive (the need for self-esteem and a desire to facilitate self-definition by giving positive expression of one's self-concept and human values).

In contrast to Katz's four attitude functions, Herek (1986, 1987) outlines two major categories of attitude functions: evaluative and expressive. Herek developed his classification scheme by firstly content analysing essays written by participants

who expressed their thoughts and feelings about gays and lesbians. Many arguments were produced which clustered to five major themes or functions. In the validation phase, Herek developed questionnaire items based on these five themes, surveyed a new sample with new topics, and factor analysed the items. The factor structure closely matched his initial categorisation. According to Herek, attitudes serving an “evaluative” psychological function derive their valence from the intrinsic properties of the attitude object because interacting with the object results in tangible and quantifiable rewards and punishments. These attitudes allow individuals to organise and structure their world in a purely self-interested way, with objects the means for obtaining particular ends. Herek proposes sub-types of evaluative functions that are based on whether the attitude is derived from past experience or an anticipated experience, and whether the attitude is constrained to the specific object from which it originated or whether it applies to the entire object’s category. For example, a belief such as “My opinions about gay men and lesbians are based on my personal experiences with specific gay persons” serves an evaluative function in which the individual generalises from an experience with a specific object to the whole object’s category. Overall, Herek’s evaluative function is similar to Katz’ (1960) instrumental and knowledge functions.

Herek’s second broad category of attitude psychological functions is “expressive” in that the benefit is not so much derived from the attitude object but from expressing the attitude. The object is used as a symbol or vehicle for self-expression. Herek describes three sub-types of expressive attitudes; attitudes that serve a “social-expressive” psychological function results from the individual seeking acceptance by others in their immediate environment, attitudes that serve a “value-expressive” psychological function result from the individual expressing important human values and self-concepts, and attitudes that serve a “defensive” psychological function arise from unconscious intra-psychic events that seek to avoid anxiety producing thoughts. For example, an item such as “My opinions about gay men and lesbians are based on my concern that we safeguard the civil liberties of all people in society” serves a value-expressive function, whereas “My opinions about gay men and lesbians are based on the fact that I would rather not think about homosexuality or gay people” serves a defensive one. Herek’s value-expressive and

ego-defensive sub-types of the expressive psychological function are the same as Katz's descriptions and the social adjustive sub-type is similar to Smith, Bruner and White (1956) social-adjustive function in which attitudes help mediate self-other relationships.

Attitude Function and Advertising Effectiveness

The central features of Katz' (1960) and Herek's (1986, 1987) typologies of the psychological functions of attitudes (e.g., the object yields tangible and quantifiable rewards and punishments, the object is used as a symbol for self-expression, etc.) should ring familiar from the previous section on the psychological functions underlying utilitarian and symbolic meanings. However, before discussing the similarity in depth, previous attempts to couple attitude function with the attention to product meaning and with the influence of human values on preferences for products and other objects are reviewed. The review will illustrate that a major conceptual shortcoming of previous research is its failure to recognise that psychological functions are not limited to attitudes or product meanings but instead extend the breadth of the value-attitude-behaviour system.

Consumer researchers applying the functional approach to attitudes generally investigate how the psychological function that an individual's attitude serves affects his or her ability to be persuaded by two types of advertisements; those that focus on the product's tangible attributes and utility versus those that focus on its image and symbolism (e.g., Shavitt, 1990; Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). Most of these advertising effectiveness studies use self-monitoring as a proxy for attitude function, that is, these studies measure an individual's self-monitoring tendency and then assume that all the individual's attitudes serve the same psychological function that self-monitoring serves. These researchers have found that low self-monitors are more easily persuaded by utilitarian advertisements and high self-monitors prefer symbolic ones. As high self-monitors report they are aware and concerned about how others perceive them (see Snyder, 1974), these researchers suggest that high self-monitors

attend to symbolic meaning because symbolic meaning conveys information about the personal and social characteristics of the product user (Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985). Therefore, the product attitudes of high self-monitors serve a social adjustive/social identity psychological function. Although a consensus exists on the psychological function underlying the attitudes of high self-monitors, these same researchers disagree about the functions of low self-monitors, with some suggesting that the function is value-expressive (Snyder & DeBono, 1985) and others suggesting that the function is instrumental (Shavitt, Lowrey & Han, 1992). These researchers do agree that low self-monitors attend to utilitarian meaning, but Snyder and DeBono suggest the reason is that low self-monitors want to express their own, as opposed to their reference group's, identity and human values, whereas Shavitt, Lowrey and Han suggest the reason is that low self-monitors want to maximise the benefits and minimise the costs of interacting with objects.

Such contradictory proposals highlight problems with using self-monitoring as a proxy for attitude function. Those studies measure the strength of each individual's attitude on a typical instrument (such as the semantic-differential scale) then categorise the attitude on an assumption of what psychological function underlies self-monitoring. In contrast, other researchers tailor the measurement of the attitude strength to meet the specific properties of the attitude's psychological function (Locander & Spivey, 1978; Spivey, Munson & Locander, 1983). For instance, Locander and Spivey (1978) suggest that Katz' (1960) instrumental attitude should be measured through the multi-attribute model as both expectancy-value theory and an instrumental psychological function are founded in the assumption that attitudes develop from the abstraction of positive and negative experiences and that the attitude object is a means to an end goal. Thus, for example, an individual's instrumental attitude towards playing tennis is the joint function of how strongly he or she believes that tennis has various attributes such as "gives me a suntan" or "will make me healthy" and the importance he or she gives to those attributes. Locander and Spivey also suggest that Katz' value-expressive attitude should be measured along semantic-differential scales in which individuals describe who they believe are the typical people engaging in the attitude activity or are associated with the attitude object. Continuing the tennis example, respondents would rate how much they

believe a typical tennis player is “ugly versus beautiful”, “flexible versus rigid” and so on. The extent the attitudes serves a value-expressive psychological function is determined by measuring each individual’s own self-concept on the same semantic-differential scale, and then subtracting the individual’s perception of the typical tennis player from his or her perception of themselves; the lower the score the more the attitude serves a value-expressive psychological function.

Only one study of consumer preferences, carried out by Spivey, Munson and Locander (1983), has implemented Locander and Spivey’s (1978) suggestion of how to combine attitude measurement with attitude psychological function. Spivey, Munson and Locander (1983) measured consumers’ instrumental attitudes towards a luxury car with attribute importances and found that those rating attribute importances more highly were more easily persuaded by advertisements that focused on the car’s utilitarian meaning and tangible features. Despite Locander and Spivey’s innovative technique for measuring a value-expressive attitude, Spivey, Munson and Locander simply measured consumers’ value-expressive attitudes as the extent the consumers wanted a luxury car that conveyed particular symbolic meanings and images (e.g., conformist versus non-conformist, strong versus weak, etc.). Nevertheless, Spivey, Munson and Locander’s experiment did find that those who emphasised the images were more easily persuaded by symbolic advertisements that focused on the kind of people who drive the luxury car.

Attitude Function and Value InfluenceFunction and Value InfluenceFunction and Value Influence

Thus, Spivey, Munson and Locander’s (1983) study suggests that consumers use their instrumental attitudes to evaluate utilitarian product meanings and their value-expressive attitudes to evaluate symbolic meanings. The implication of that finding to the product meaning approach and psychological functions is discussed shortly, as is Locander and Spivey’s (1978) suggestion that expectancy-value theory and the multi-attribute model are best suited to measuring an instrumental attitude. The present section, however, observes how Locander and Spivey and the other researchers of attitude function and advertising effectiveness (e.g., Shavitt, Lowrey

& Han, 1992; Spivey, Munson & Locander, 1983; Snyder & DeBono, 1985) failed to consider that attitudes and their psychological functions may be influenced by human values. Other studies, specifically, Mellema and Bassili (1995), Maio and Olsen (1994, 1995), and Prentice (1987), have begun investigating how human values influence the psychological functions of attitudes.

For instance, the rationale in Mellema and Bassili's (1995) investigation of human values, self-monitoring and attitudes was that as self-monitoring is the degree that individuals are aware and concerned about how other people perceive them, low self-monitors should formulate their attitudes based on internal preferences and human values, and high self-monitors should attenuate their attitudes to fit the attitudes of other people in their immediate environment. Mellema and Bassili found that human values predicted the attitudes of low self-monitors more accurately than the attitudes of high self-monitors and that the difference was amplified for high and low self-monitors who are "schematic". Individuals who are "schematic" answered the self-monitoring questions rapidly, suggesting that the concepts are closely tied to their self-schema and definition. Despite Mellema and Bassili's important finding, the use of self-monitoring as a proxy for attitude function is problematic for reasons already mentioned, that is, an assumption must be made on the psychological functions that underlie self-monitoring. A more critical limitation, however, is Mellema and Bassili's presupposition that individuals' levels of self-monitoring indicate the psychological function of their attitudes and that human values merely operate accordingly. Given that self-monitoring is a general personality tendency that extends beyond any specific attitude or context, Mellema and Bassili's assumption that the psychological function exists at the level of attitudes but not at the level of human values seems unwarranted (the point is re-addressed shortly).

Maio and Olsen's (1994) study of attitude function and value influence is a slight improvement of Mellema and Bassili's (1995) investigation because rather using self-monitoring as a proxy for attitude function, Maio and Olsen measured attitude function through a "thought listing" procedure. In the thought-listing procedure, respondents listed reasons why they held a positive or negative attitude towards a school dance that raised money to build an on-campus smoking area. The attitudes

of those who listed self-interested thoughts (e.g., “I should go because I need a break”) were classified as instrumental whereas those who listed reasons involving their self-concept or human values (e.g., “It is unfair to have non-smokers pay for a smoking area”) were classed as value-expressive. Maio and Olsen surveyed the strength of the respondent’s attitude towards the dance using series of traits on a semantic-differential scale (e.g., good versus bad, unattractive versus attractive), and measured a limited set of human values and whether the respondent was willing to write a pro-dance essay (the behavioural measure). Maio and Olsen found that human values significantly predicted attitudes and behaviour for individuals holding a value-expressive attitude, but human values had low predictive power for individuals holding an instrumental attitude. However, the difference between the predictive powers of human values on the two types of attitudes depended on the human values investigated; some human values exaggerated the difference (e.g., “Freedom”, “Individualism”) and others reduced it (e.g., “Well-being”).

Despite Maio and Olsen’s (1994) important findings, some degree of caution in interpretation is warranted because, as previously mentioned, attitude strength should not be measured on a general semantic-differential scale that is subsequently classed to function according to an external measure, whether that external measure is self-monitoring or a thought-listing procedure. Instead, as Locander and Spivey (1978) suggest, the measurement of the attitude should be tailored to meet the precise character of its underlying function as doing so should provide more accurate measures of both attitude strength and function. Though not addressing attitude function specifically, Eagly, Mladinic and Otto (1994) make a criticism of the semantic differential scale that has similar implications. Eagly, Mladinic and Otto suggest that the semantic differential scale is adequate for measuring attitude strength but it cannot measure its base or structure. Often the items on the semantic differential scale do not describe the attitude object either in reality or in how the individual has thought about it previously. In such instances, the individual responds to the items by symbolically projecting his or her attitude onto them. The projection does not present a problem for measuring attitude strength but it can for measuring its structure, and possibly its psychological function. The instrumental function, in particular, is based on individuals’ assessing the objective properties of the attitude

object because individuals are concerned about the object's real (not unreal) rewards and costs. Thus, measurement of an instrumental attitude should comprise realistic elements, and therefore as Maio and Olsen (1994) used a semantic-differential scale of the object's real and unreal characteristics, their conclusions regarding the instrumental attitude should be interpreted more cautiously. Specifically, rather than concluding that human values have no influence on an instrumental attitude, a more careful interpretation would be that human values influence attitudes and behaviour more strongly for value-expressive attitudes than for instrumental attitudes and behaviour (a caution that Maio and Olson also make in their 1995 study).

A Functional Approach to the Value-Attitude-Behaviour System
Functional Approach to the Value-Attitude-Behaviour System
Functional Approach to the Value-Attitude-Behaviour System
Behaviour System

Besides the above reservation, a serious limitation of most studies of attitude function and human value influence (e.g., Maio & Olsen, 1994, 1995; Mellema & Bassili, 1995) is their assumption that only attitudes and not human values serve a psychological function. The readers might recall, from Chapter I, that Rokeach (1973) and others (e.g., Epstein, 1989; Kristiansen, 1990; Williams, 1979) have suggested that human values serve various psychological functions such as knowledge, social adjustment, value-expression, instrumentality, and ego-defence, and that these psychological functions are similar to the functions of attitudes. Thus, it is surprising that Maio and Olsen (1994, 1995) and Mellema and Bassili (1995) failed to consider that the psychological function of an individual's attitude is matched by the psychological function of his or her human values, and that consequently, each psychological function spans the breadth of the value-attitude-behaviour system.

Only Prentice (1987) has made that speculation. Prentice separated individuals on their expressive or instrumental attitude towards a fictitious proposal to build a Naval base near the respondents. Prentice found that those who held an expressive attitude also valued their symbolic possessions (e.g., diary, photos, etc.) and preferred symbolic values (e.g., World of Peace, World of Beauty, etc.), and although

a similar pattern was hypothesised for the instrumental value-attitude-behaviour system none was found. Prentice suggested a possible reason for the lack of association is that the instrumental function is more context bound than the expressive function and that arousing an instrumental attitude in one domain (such as attitude towards the Navy) does not mean that individuals will have an instrumental attitude in another (such as consumer choices). Moreover, the individual must have direct experience and knowledge of the object to appreciate its tangible benefits and means to an end, and so a fictitious issue cannot arouse it. The finding highlights the previous criticism of Maio and Olson (1994, 1995) in that individuals holding an instrumental attitude cannot project their attitudes onto semantic-differential scale items that represent the object unrealistically or in ways the individuals have not thought about it previously.

Equally important, however, Prentice's (1987) study may have been misconceived in another way. Prentice assumed that a functional approach to the value-attitude-behaviour system is simply an extension of attitude function theory to human values or products. However, a functional approach to the value-attitude-behaviour system may be differences in route and sub-system, that is, the strength of the interconnectedness among human values, attitudes and behaviour. Thus, the psychological functions individuals' value-attitude-behaviour systems serve cannot be assessed solely by measuring how individuals prefer different items (e.g., symbolic or instrumental values, symbolic or instrumental products), but how well human values predict behaviour through the two routes. The distinction is an important one because the two functions may or may not correspond to differences in preferred human values, attitudes and products. In many instances, those individuals for whom their value-attitude-behaviour system serves an instrumental function may prefer the same products as those individuals for whom their value-attitude-behaviour system serves an expressive function, simply because many products can be appreciated for either their utilitarian or symbolic properties (e.g., holiday destinations). The distinction echoes Katz' (1960) original claim that the benefit of thinking in terms of attitude functions is its recognition that individuals may like the same objects but for completely different reasons.

The present thesis assumes, like Prentice (1987), that the psychological function spans the value-attitude-behaviour system and therefore that each attitude function is rooted in a corresponding human value function and behaviour function, and that two primary functions are instrumental and expressive. The instrumental psychological function indicates that the product or other object fulfils the user's need to control his or her environment efficiently and effectively, whereas the expressive psychological function indicates that the product fulfils the user's need to express his or her self-concepts and identities, particularly his or her need for social-approval and self-consistency. However, unlike Prentice (1987), the present thesis assumes that the functional approach to the value-attitude-behaviour system is differences route and sub-system, that is, the strength of the interconnectedness between human values, tangible attribute importances and product preference.

Consequently, the two routes of value influence found in Study 1 and developed in the product meaning approach earlier in the chapter could represent the two psychological functions of the value-attitude-behaviour system. The readers would recall that in the product meaning approach, human values are suggested to have an indirect influence (via tangible attribute importances) on product preference when consumers attend to utilitarian meaning and make a piecemeal judgement, whereas human values have a direct influence on product preference when consumers attend to symbolic meaning and make an affective judgement. The influence of human values on product preference via tangible attribute importances when consumers attend to utilitarian meaning and make a piecemeal judgement probably serves an instrumental psychological function for two reasons. Firstly, an instrumental function attempts to maximise the rewards and minimise the costs of interacting with objects in the environment and utilitarian meaning represents the ability of the product to control the environment competently and effectively. A second reason the route of value influence via tangible attribute importances probably serves an instrumental function is that tangible attribute importances measure an instrumental attitude. The readers might recall, Locander and Spivey (1978) suggest that an instrumental attitude should be measured through an expectancy-value formulation, and so, Spivey, Munson and Locander (1983) operationalised the instrumental attitude as attribute importances. However, the instrumental attitude should be

operationalised as tangible attribute importances in particular to avoid the criticism made of Maio and Olsen (1994, 1995), among others, that the measure of an instrumental attitude should comprise a real representation of the attitude object.

The direct influence of human values on product preference when consumers attend to symbolic meaning and make an affective judgement likely serves an expressive psychological function because symbolic meaning is a potent vehicle for the expression of one's self-concepts, identities and human values. Most of the studies of attitude function and value influence, though theoretically misconceived, did find that the relationship between human values and behaviour was strongest for the (value-) expressive attitude. Thus, the structure of expressive function in the value-attitude-behaviour system is perhaps more aptly conceptualised as the value-behaviour system because the attitude closely ties human values to behaviour.

Interestingly, some findings of Study 1 appear consistent with the contention that the direct route of value influence serves to express one's self-concepts, identities and human values. Red meat consumption was strongly and directly influenced by human values and several researchers have not only suggested that red meat has potent symbolic meaning but that the meaning refers to dominance values and group identities such as males over females, Anglos over non-Anglos, and humans over nature, animals and the environment (e.g., Adams, 1990, 1994; Fiddes, 1991; Heisley, 1990; Twigg, 1983). Moreover, Study 1 found that Maturity values (e.g., Inner Harmony, Self-respect, etc.) tended to influence product preference directly and were preferred by individuals who tended to use the direct route. According to Schwartz and Bilsky (1990), Maturity values engender an appreciation of oneself, others and the surrounding world and foster the development and expression of the ideal self-concept, which is naturally consistent with suggestion that the direct route serves an expressive psychological function.

Functional PropositionsPropositionsPropositionsPropositions

As discussed at the beginning of the current section, the product meaning approach hypothesis is the primary focus of Part II of the thesis. Products meaning

no doubt includes psychological function (among other features) and therefore the investigation and validation of the product meaning approach hypothesis would, by default, support some suggestions of what psychological functions underlie the routes. Still, particular attention is paid to psychological function because psychological function can supplement the overly structural product meaning approach with an impetus or drive factor. Thus, given the ambivalence, the suggestions that the indirect influence of human values on product preference likely serves an instrumental psychological function and that the direct influence of human values on product preference likely serves an expressive psychological function are only explored through several, non-comprehensive propositions.

One proposition is that greater psychological investment or identification with a product is a feature of the direct route of value influence. If the direct application of human values serves to express one's self-concepts, identities and human values, and some individuals have incorporated a product more closely into their definitions of themselves, then these individuals should be more likely to express their human values directly. So, the second proposition is;

PROPOSITION 2: Greater psychological identification with a product is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

The next proposition is that the direct route is associated with an overarching importance of human values or what will be termed "value relevance". The readers might recall from Chapter I that Wojciszke (1989) suggests that people vary in the extent they incorporate human values into their ideal self-concept. In particular, those whom Wojciszke terms "idealists" are characterised by their claim that they use human values more frequently to judge themselves and others and make behavioural choices. Evidence that idealists more closely tie human values into their ideal self-concept was shown by their highly differentiated value system, their greater number of self-referent thoughts when thinking about human values, and

their stronger value-behaviour consistency. Thus, if some individuals more closely tie human values to their self-concepts that result in an overarching importance of human values (e.g., value relevance), then these individuals should be more likely to apply their human values directly onto product preference because the direct route serves an expressive psychological function. So, the third proposition is;

PROPOSITION 3: Greater value relevance is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

The next two propositions rest on the assumption that each psychological function spans the breadth of the value-attitude-behaviour system, and that therefore the psychological functions that each route serves is revealed in the human values that are unique to the routes. The proposal is that two such categories of human values, instrumental and terminal values, serve instrumental and expressive functions respectively, and consequently should be associated with the indirect and direct routes respectively. Concerning the indirect route, readers would recall that utilitarian meaning is the overt function the product serves in allowing the user to control his or her environment, is derived from the product in-use, and is intrinsically linked to convenience, efficiency and exchange in the traditional economic sense. Thus, if utilitarian meaning represents how using the product will bring about certain end goals, then individuals who attend to utilitarian meaning to apply human values via tangible attribute importances would prefer instrumental values (e.g. being Ambitious or Honest) because Rokeach (1968) suggests that instrumental values represent the importance of actions and means that bring about the ends of terminal values. So, the forth proposition is;

PROPOSITION 4: Instrumental human values serve an instrumental psychological function and therefore a preference for instrumental values should be associated with the indirect influence of human values.

Although the relationship between instrumental values and an instrumental function is somewhat apparent, how terminal values serve an expressive function only becomes evident when taking into account the multiple theories and research espousing the importance of the “ideal” in symbolic meaning (e.g., Wicklund and Gollwitzer’s (1982) symbolic self-completion theory, McCracken’s (1988) displaced ideals, Johar and Sirgy’s (1991) needs underling the expression of the ideal self, and so on). The readers would recall, for instance, McCracken’s (1988) suggestion that products symbolise “displaced ideals” that are so abstract and removed from daily experience that products bridge the real and ideal. Importantly, not only are these symbolised ideals ultimate and abstract but are also states of existence. Many products symbolise states such as being loved, respected, having prestige and so on. Thus, a characteristic of symbolic meaning, in contrast to utilitarian meaning, is that symbolic meaning is not tied to product use or performance. States of existence such as possessing, reflecting or displaying are enough to reap expressive benefits. For example, if some individuals purchased a luxury car to express their human values and make their real self closer to their ideal, then simply owning the car would be enough to expand their self-image. Obviously, the car’s non-use would be inconsistent with an individual who purchased it for the utility of getting from point A to point B. Thus, if products symbolise ideal states that are abstract and ultimate, then individuals who attend to symbolic meaning to express their self-concepts and human values directly would prefer terminal values (e.g., Comfortable Life, Mature Love) because Rokeach (1968) suggests that terminal values represent the importance of ultimate states of existence. So, the fifth proposition is;

PROPOSITION 5: Terminal human values serve an expressive psychological function and therefore a preference for terminal values should be associated with the direct influence of human values.

Some support for the contention that instrumental and terminal values serve instrumental and expressive functions respectively is manifest in Prentice’s (1987)

study that found that those individuals who held an expressive attitude also preferred symbolic possessions (e.g., diary, photos, etc.) and symbolic values (e.g., World of Peace, World of Beauty, etc.), though no consistent pattern was found for those individuals holding an instrumental attitude. Importantly, although the article does not mention it, all of Prentice's "symbolic" values are in fact terminal and Prentice's the "instrumental" values are instrumental. Thus, though Prentice's study suffered some conceptual shortcomings as discussed previously it does offer some support for the current proposals.

SUMMARY AND PLAN OF ANALYSIS AND PLAN OF ANALYSIS AND PLAN OF ANALYSIS AND PLAN OF ANALYSIS

Readers are encouraged to review again the schematic representation of the product meaning approach to value influence presented in Figure 1 (on page 21) and the more detailed tabular form Table 1 (on page 22). With the addition of psychological function the product meaning approach now defines four parts: criteria, meaning, judgement and function. Meaning and judgement are the primary focus of the chapter and part of thesis and so are stated in the hypothesis;

HYPOTHESIS 1: An individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence.

The examination of the product meaning approach hypothesis could be carried out using either an experimental or a correlational design. An experimental design has the advantage that it can establish that consumers' human values are one cause of their tangible attribute importances, product preferences and attentions to product meanings. An experiment, for example, could isolate and manipulate the kind of product meaning to which consumers attend and the kind of judgement they make, and then gauge how that manipulation affects the strengths of the value influence

routes. As reviewed in a previous section, some experimental studies have isolated and manipulated the kind of product meaning to which consumers attend and examined how that manipulation affected the relationship between attribute importances and product preference or affected the relationship between attitudes and product preference (e.g., Shavitt, 1990; Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). Spivey, Munson and Locander's (1983) experiment, for example, showed that the attention to symbolic meaning was associated with the increased influence of intangible attribute importances (e.g., each consumer's preferred product image) on product preference whereas the attention to utilitarian meaning was associated with the increased influence of tangible attribute importances on product preference. Thus, given the existing experimental evidence, a future study of human values that manipulated the kind of product meaning to which consumers attend might show that the attention to utilitarian meaning results in the increased influence of tangible attribute importances on product preference and that human values influence those tangible attribute importances, and that the attention to symbolic meaning results in the increased direct influence of human values given that intangible attributes closely tie human values and product preference.

However, such potential experimental evidence would be of limited benefit. Only the less important issue of whether product meaning (or judgement) affects the routes of value influence would be addressed; what would fail to be addressed is the more crucial question of whether human values are, in fact, influencing tangible attribute importances, product preference and the attention to product meaning. To show that human values cause another component human values must be manipulated so that changes in tangible attribute importances, meaning and judgement preferences and product preferences can be observed. Most experimental studies cited in the current chapter merely show that the correlation between attitudes and behaviour, or the correlation among human values, attitudes and behaviour, is affected when an external variable is manipulated such as product meaning or attitude function (e.g., Maio & Olsen, 1995; Prentice, 1987; Shavitt, 1990; Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). For instance, Spivey, Munson and Locander's (1983) experiment only showed that

the strength of the correlation between attribute importances and product preference varies when the kind of product meaning to which consumers attend was manipulated through advertisements.

Thus, to establish human value causality human values must be manipulated, which is the crux of the problem; few experimental methods can manipulate an individual's human value preferences. The most well-established of the methods is Rokeach's (1973) value self-confrontation procedure that, as discussed in Chapter I, informs participants that two of their important values are logically inconsistent and are different from those of an important reference group. Rokeach argues that the information creates a state of self-dissatisfaction, and that consequently participants will alter one of their values to make it consistent with the other human value and to the human values of the reference group. Moreover, participants alter specific attitudes and behaviours to bring them in line with the new human value importance.

Conceivably, the value self-confrontation procedure could be used to show that human values influence product preference through two primary routes. For instance, a determination could first be made about which human values are unique to each route, that is, which human values tend to influence product preference through a particular route, or alternatively, which human values characterise those individuals who tend to apply all their human values through a particular route. The readers may recall that Study 1 found that Maturity values (e.g., Inner Harmony, Self-respect, Broad-minded, etc.) tended to influence product preference directly and were preferred by participants who tended to use the direct route, whereas security values (e.g., Family Security, National Security) were preferred by participants who tended to use the indirect route. Once a determination is made concerning the human values associated with each route, two pertinent values would be selected (such as Self-respect for the direct route and Family Security for the indirect route) and each participant informed that these two human values are logically inconsistent and that his or her preference for these values differs from the preferences of an important reference group. Following the manipulation, changes should be observed in the participant's preferences for one of these two human values and his or her meaning and judgement preferences, tangible attribute importances, product preference and

routes of value influence.

Though the value self-confrontation procedure could be used to establish that human values influence consumer choices through separate routes, the procedure is limited in two ways. Firstly, the procedure requires that the two values manipulated are equally important and are logically inconsistent; obviously, most human value pairs that are logically inconsistent are not equally preferred. Consequently, most value self-confrontation studies have only used the values of Freedom and Equality because participants tend to emphasise both and the experimenter can make a reasonable argument that the values are logically inconsistent for as people gain more freedom inequality increases, and vice versa (e.g., Gray & Ashmore, 1975; Hamid & Flay, 1974; Hopkins, 1973; Penner, 1971; Rokeach, 1973; Rokeach & Cochrane, 1972; Rokeach & McLellan, 1972). The only other human values used in the self-confrontation procedure are A World of Beauty and A Comfortable Life (e.g., Grube, Mayton & Ball-Rokeach, 1994) and Wisdom and Happiness (e.g., Schwartz & Inbar-Saban, 1988). Although a case could be made for the inconsistency of other pairs of values, the likelihood that participants believe both human values are important limits the procedure to only a handful of values.

A more serious limitation of value self-confrontation procedure for the current purposes is that the motivations it arouses would interact with the value influence routes. As the experimental manipulation relies on the individual comparing his or her human values with the reference group and to other values in their value system, the procedure requires two motivations; a need for social approval and a need for self-consistency. However, the readers might recall that these two motivations likely underlie the expressive psychological function and the attention to symbolic meaning (e.g., Johar & Sirgy, 1991; Katz, 1960; Herek, 1987; Wicklund & Gollwitzer, 1982). For just one example, Johar and Sirgy (1991) suggested that a need for self-consistency leads to individuals preferring products with symbolic meaning consistent with their actual self-image, whereas a need for social approval leads to individuals preferring products with symbolic meaning consistent with their ideal social self image. In either case, the need for consistency and the need for social approval compel individuals to attend to the symbolic meanings of products, and

consequently, the value self-confrontation procedure would probably be successful in manipulating the values of those individuals attending to symbolic meaning, holding an expressive psychological function, and following the direct route, but would have little success for those individuals attending to the utilitarian meaning, holding an instrumental psychological function, and following the indirect route. Given that Study 1 showed the indirect route was the predominant mode of value influence, the value self-confrontation procedure can apparently only manipulate the human values of a small subset of participants.

Thus, the value self-confrontation procedure's ability to manipulate human values and gauge the effect on attitudes and behaviours is limited in the number of human values it can manipulate and the type of people who are amenable. What is needed is a way to manipulate all human values for all individuals; a difficult challenge. An alternative experimental method to the value self-confrontation procedure could be developed that could meet such a challenge, but the development of such a method is problematic and is outside the scope of the present thesis.

Therefore, correlational evidence of human value influence must be settled for rather than causal evidence, which means that the methodological decision in testing the product meaning approach hypothesis is whether to use an experimental design that did not directly address human value influence or to use a survey approach. The experimental design, outlined previously, could manipulate the kind of product meaning to which consumers attend and the kind of judgement they make, and then gauged how that manipulation affected the strengths of the value influence routes. However, for reasons mentioned, such experimental evidence would be of limited benefit, particularly, when compared with a correlational design and survey approach that could examine the product meaning approach hypothesis in a more naturalistic setting and with a broader range of phenomena. An experiment could only manipulate a small subset of human values, tangible attribute importances, product meanings, judgements and product preferences. As the conceptual model aims to be a general representation of how these components are related in most contexts, the capacity of the survey approach and correlational design to canvass a broad range of phenomena makes it the most suitable (the full implications of the examination of the

product meaning approach hypothesis in a correlational design are discussed in Chapter VIII).

Given that the product meaning approach hypothesis is at the level of the individual consumer, Study 2 develops and tests scales designed to measure each consumer's meaning and judgement preferences. Using these meaning and judgement scales, Study 3 tests the hypothesised relationship between each consumer's meaning and judgement preferences and the direct and indirect influence of his or her human values on product preference, that is, whether each consumer's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence.

The discussion of cross-product consistency and psychological function led to several conceptions and as they are not the central focus of the thesis are stated as propositions rather than formal hypotheses;

PROPOSITION 1: Individuals have a cross-product tendency to attend to the same product meanings, use the same type of judgement, and apply human value criteria through the same route.

PROPOSITION 2: Greater psychological identification with a product is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

PROPOSITION 3: Greater value relevance is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

PROPOSITION 4: Instrumental human values serve an instrumental psychological function and therefore a preference for instrumental values

should be associated with the indirect influence of human values.

PROPOSITION 5: Terminal human values serve an expressive psychological function and therefore a preference for terminal values should be associated with the direct influence of human values.

Also due to the propositions not being a central focus of the thesis, Study 4 explore the propositions by examining the results of Studies 1-3 in greater detail, by re-analysing the data collected in Studies 1-3, by analysing data collected in Studies 1-3 but not previously used, or by analysing a fourth data set.

CHAPTER V. STUDY 2: DEVELOPMENT OF MEASURES OF PRODUCT MEANING AND JUDGEMENT PREFERENCE

Given that the hypothesis of the product meaning approach is at the level of the individual consumer, the aim of Study 2 is to develop and test scales that can measure each consumer's preferred product meanings and judgement types.

METHOD

Design

To measure meaning and judgement preferences adequately, the scales should meet three criteria:

1. The scales should overlap conceptually with the constructs they purport to measure.
2. The underlying structures of the scales should match their conceptual structures.
3. The scales should be sensitive to consumers' "true" meaning and judgement preferences.

The construction and item selection of the meaning and judgement scales will be carried out in a way that ensures the first criterion is met, and whether the meaning and judgement scales meet the second and third criteria will be determined from the responses of general population participants who use the scales to indicate what kind of product meaning they prefer to attend to and what kind of judgement they prefer to make when considering the purchases of several specific products. Whether the meaning and judgement preference scales meet the second criterion will be resolved

by factor analysing the participants' responses to the items in the meaning and judgement scales, and comparing the factor structures with the scales' conceptual structures. The factor structures and conceptual structures would match if all the items that make up a scale load on the same factor. Thus, the factor analysis should result in either two or four factors; four factors if each of the four components emerges on a separate factor (e.g., utilitarian meaning on one factor, symbolic meaning on another, piecemeal judgement on still another, and affective judgement on the final factor), and two factors if the meanings and their associated judgements load on the same factor (e.g., utilitarian meaning and piecemeal judgement on one factor, and symbolic meaning and an affective judgement on the other).

Whether the meaning and judgement preference scales meet the third criterion can obviously not be determined. However, one finding that would suggest that the meaning and judgement scales are measuring consumers "true" meaning and judgement preferences is if the mean ratings' participants give to the scales vary across products that probably differ in their meanings and judgements. As mentioned, participants will use the scales to indicate what kind of product meaning they prefer to attend to and what kind of judgement they prefer to make when considering the purchases of several specific products. Accordingly, several product stimuli are needed for participants to indicate their meaning and judgement preferences; stimuli for which a reasonable assumption can be made whether for most consumers each product's meaning is primarily utilitarian or symbolic and its judgement primarily piecemeal or affective. Four features aided in the selection of such products. Firstly, according to Johar and Sirgy (1991), products that tend to denote utilitarian meaning (and serve an instrumental psychological function) are those with highly involved consumers who perceive critical differences among the brands. Secondly, Johar and Sirgy (1991) and Holman (1981) argue that products that are scarce and conspicuously owned or consumed tend to be symbolic. Thirdly, Keaveney and Hunt (1992) and Shavitt, Lowrey and Han (1992) suggest that high risk choices lead to effortful, careful and piecemeal evaluations of tangible product features, and finally, Mittal (1988, 1994) suggests that products high in expressiveness (e.g., symbolism and associated emotional and sensory experiences) tend to be judged affectively.

Thus, the products used as stimuli for participants to indicate their meaning and judgement preferences should vary in the four features outlined. Moreover, all of the products selected should be purchased regularly, or at a minimum should be contemplated by consumers frequently, to ensure that consumers have firm conceptions of their meaning and judgement preferences. The necessity for products that met all the above requirements was discussed with other social psychologists who suggested three products suitable for pilot testing: automobiles, lounge suites and sunglasses.

Automobiles seem to be what Keaveney and Hunt (1992) and Shavitt, Lowrey and Han (1992) suggest are high-risk choices that lead to effortful, careful and piecemeal evaluations of tangible product features, and Sirgy and Johar (1985) found that automobiles tend to be evaluated foremost on tangible features and cost then secondarily on their intangible / image attributes (although some differences between automobile classes were found). Thus, automobiles should provide a good exemplar of a product for which utilitarian meaning and a piecemeal judgement are more important to most consumers than symbolic meaning and an affective judgement. Moreover, using automobiles as stimuli in the current study maintains some consistency with the method and procedures in Study 1. Lounge suites were selected as a second product stimulus because they are conspicuous, central features in the home, are stylistic, and are moderately expensive, which suggests that both utilitarian and symbolic meanings of lounge suites will be important to consumer evaluations. Thus, lounge suites should provide a good exemplar of a product for which utilitarian meaning and its associated piecemeal judgement and symbolic meaning and its associated affective judgement are equal in importance. Finally, the conspicuousness and generally low cost of sunglasses suggest they should be evaluated somewhat equivalently on their symbolism and their utility in decreasing glare and harmful sunlight. In a thought-listing procedure in which respondents wrote their own sunglasses advertisements, Shavitt, Lowrey and Han (1992) found that sunglasses were high in both self-expressiveness (symbolism) and instrumentality (utility) for low self-monitors but was largely self-consistency for high self-monitors. Thus, sunglasses, like lounge suites, should provide a good

exemplar of a product for which utilitarian and symbolic meanings and the meanings' associated piecemeal and affective judgements are equal in importance.

Importantly, for none of the three products, automobiles, lounge suites, or sunglasses, is the product's symbolic meaning and its associated affective judgement definitively more important than utilitarian meaning and its associated piecemeal judgement. In each instance, utilitarian meaning is probably more important to most consumers than symbolic meaning, because as suggested in Chapter IV, often, but not always, the functionality of a product would be more important than the image it conveys. Thus, the primary distinction among the three products is the relative preference for utilitarian meaning and piecemeal judgement to symbolic meaning and affective judgement, with automobiles having the greatest disparity and lounge suites and sunglasses the least. Some products, such as family heirlooms, might present a case in which symbolic meaning is more important than utilitarian, but symbolic meanings would tend to develop over a period of ownership and psychological investment, and therefore such products would probably fail to meet the criteria for the current study that the product stimuli are purchased regularly, or their purchase considered regularly.

Prior to using these three products as stimuli to examine the soundness of the meaning and judgement scales, a pilot study was conducted in which respondents used a provisional version of the scales to rate their meaning and judgement preferences for one of the three products. Participants in the pilot study were randomly selected from the Wellington telephone directory and received the pilot instrument through the post accompanied with a pre-paid reply envelope. One hundred surveys were sent out, 40 were returned, and as the respondents rated the pilot meaning and judgement items for only one product (automobiles, lounge suites, or sunglasses) between 10 and 15 respondents rated each product. An analysis of the responses helped refine the instrument (see next section) and showed that for all three products utilitarian meaning and its associated piecemeal judgement were preferred to symbolic meaning and its affective judgement. Thus, as speculated, the products' functionality and usefulness are more important overall than the image they convey. Although utilitarian meaning and a piecemeal judgement were

preferred to symbolic meaning and an affective judgement, the relative preference did vary by product with automobiles showing the greatest difference and lounge suites and sunglasses the least. Sunglasses were slightly more symbolic and affective than lounge suites and therefore as the main study instructs respondents to rate all the products so that within-subject comparisons can be made, lounge suites were discarded from the main study to reduce the length of the questionnaire.

Whilst having only one product to represent each type of meaning and judgement is tenuous, automobiles and sunglasses are different points along the utilitarian-symbolic and piecemeal-affective continua, and thus should be sufficient for the current purposes of establishing whether the scales' factor structures match their conceptual structures and whether the scales are sensitive to consumers "true" meaning and judgement preferences. Concerning the latter, the pilot study confirmed the argument made in Chapter IV that for most products utilitarian meaning and its associated piecemeal judgement will be rated as more important than symbolic meaning and its affective judgement. Therefore, the sensitivity of the meaning and judgement preference scales would be verified if; 1) for both automobiles and sunglasses the utilitarian meaning and piecemeal judgement scale was rated more important than the symbolic meaning and affective judgement scale, and 2) the relative preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for automobiles than for sunglasses.

Respondents

As examining meaning and judgement preferences in a naturalistic setting with the broadest range of phenomena is advantageous, a general population sample was chosen to a student sample. The survey was distributed through the post to a random sample of 350 adults drawn from the Wellington telephone directory. The random procedure selected every *n*th name in the directory and for married and cohabiting couples alternated between the male and female partner. The respondents were encouraged to return the questionnaire within three weeks, and those unwilling or unable to participate were urged to pass the survey along to another adult household member. Participants were informed their participation was voluntary, that their

responses were anonymous and would not be used for any other purpose and that if they had any queries or wished a summary of the results to ring me.

One hundred fifty surveys were returned, of which 25 were undeliverable and 19 could not be used due to respondents failing to answer all the questions or completing the sections incorrectly. Thus, the correctly completed surveys and incorrectly completed surveys combined ($106+19=125$) out of the total number of surveys distributed minus those not delivered ($350-25=325$) is a reasonable response rate of 39%. Overall, the sample contains a representative proportion of men and women but under-represents the younger age groups (see Table 14 on page 159) (Hereafter, the data set is referred to as Sample No. 2). Approximately 30 respondents requested a summary of results posted approximately three months after the completion of the survey.

Survey

The survey measured human values and meaning and judgement preferences for automobiles and sunglasses (see Appendix Three beginning on page 319 for copy of cover letter and survey).

Human ValuesValuesValuesValues

Human values were measured in the same format as in Study 1. To review: the 36 human values of the Rokeach Value Survey were supplemented with the human values of Social Justice, Equity, Social Power and Self-determination (definitions supplied by Ng et al., 1982). A forced-distribution response format was employed in which of the 40 human values, respondents selected the 13 most important values and the 13 least important. Those human values selected as most important were coded as 3, those selected as least important were coded as 1 and the remainder were coded as 2. Instrumental and terminal values were inter-mixed in the same alphabetically ordered list because previous research has been unable to substantiate their independence (see, Crosby, Bitner & Gill, 1990; Heath & Fogel, 1978). The alphabetical list was also counter-balanced with half the respondents receiving a list

of values in ascending order and the other half receiving a list in descending order. Those respondents completing the forced-distribution procedure incorrectly were discarded (less than 1% of the sample).

Besides measuring human values with the Rokeach Value Survey, human values were also measured in two open-ended questions. The questions immediately followed the Rokeach Value Survey and were: “Referring to the values listed on the previous page, do you feel that there are some values that are important to you but do not appear in the list? If so, what are they?” and “Can you think of other values that may be important to New Zealanders but are not listed”. A selection of participants’ answers to these questions is given in Chapter VII, which discusses why the questions measure value relevance and examines the proposition that value relevance is a feature of the direct route of value influence on product preference.

Meaning and Judgement Preferences and Judgement Preferences and Judgement Preferences and Judgement Preferences

Given that several studies have confirmed, or suggested, which kind of judgement evaluates each kind of meaning (e.g., Chaudhuri & Buck, 1995; Keaveney & Hunt, 1992; Mittal, 1988), the scales will measure meaning and judgement preferences conjointly. One scale will measure consumer preferences for attending to utilitarian meaning and making a piecemeal judgement, whereas the other scale will measure consumer preferences for attending to symbolic meaning and making an affective judgement. However, the analysis still independently evaluates meaning and judgement preferences within each scale to verify their association.

Readers are encouraged to review the summary table of the product meaning approach in Table 1 (on page 22) as the characteristics of meaning and judgement preferences that the scales attempt to measure are outlined most clearly. The items of the scales that measure consumer preferences for attending to a product’s utilitarian and symbolic meanings focus primarily on the meanings’ content, and the items of the scales that measure consumer preferences for making piecemeal and affective

judgements focus on reasoning, affect latency and affect intensity. However, the scale items that measure consumer preferences for making an affective judgement also include memory representation due to the close conceptual and empirical association between an affective judgement and a visual memory representation (as discussed in Chapter IV). In addition, the meaning and judgement scales do not explicitly measure the psychological functions underpinning the two of routes of value influence and attentions to product meanings, though because the meaning portion of the scales focus on the meanings' general contents, the symbolic meaning preference scales implicitly measures a preference for an expressive psychological function and the utilitarian meaning preference scale may implicitly measures a preference for an instrumental psychological function.

Utilitarian Meaning and Piecemeal Judgement Judgement

The Utilitarian Meaning and Piecemeal Judgement Scale measures a desire to focus on the product's practicality and usefulness and judge with a reasoning that is attribute-by-attribute, logical, systematic, and comprehensive, and with an affect that is delayed and is of low intensity. The final version of the Utilitarian Meaning and Piecemeal Judgement Scale was developed from a pilot instrument in which the piecemeal judgement portion of the scale was Mittal's (1988) Information Processing Mode scale. Mittal's Information Processing Mode scale was derived from Chaiken's (1980) descriptions of a judgement process in which consumers accumulate information about each brand, evaluate the levels of the attributes for each brand, and then combine the attribute evaluations to form overall brand liking. Obviously, the Information Processing Mode is the same judgement outlined in expectancy-value theory and what Fiske and Pavelchak (1986) term a piecemeal judgement. Not explicitly tapped in Mittal's Information Processing Mode scale is the meticulous and rational nature of a piecemeal judgement, and so new items were constructed to more fully measure a piecemeal judgement. All the items measuring a preference for utilitarian meaning are original.

In total, 12 utilitarian meaning and piecemeal judgement items were tested in the

pilot study, described in the previous section, which assessed the items' sensitivity to three product categories: automobiles, sunglasses and lounge suites. Items that were excessively correlated with each other were combined, and those items that were insensitive to product type, that is, their mean ratings were the same whether consumers were evaluating automobiles, lounge suites or sunglasses, were discarded. The 8 final items of the Utilitarian Meaning and Piecemeal Judgement Scale are listed in Table 15 (on page 160) along with each item's origin and the construct the item is purported to measure. Utilitarian meaning preference is only measured with two items, and consequently, particular attention will be paid to the scale in the analysis section to ensure that the scale is satisfactorily reliable.

Symbolic Meaning and Affective Judgement

The Symbolic Meaning and Affective Judgement Scale measures a propensity to focus on the product's image and symbolism and judge with a reasoning that is holistic, approximate and intuitive, an affect that is immediate and on the level of emotional states, and a visual memory representation. The final version of the scale was developed from a pilot instrument founded upon Mittal's (1988) Affective Choice Mode and Expressiveness scales. Mittal's Affective Choice Mode scale measures consumer preferences for evaluating a product holistically and subjectively, and Mittal's Expressiveness scale measures a consumer's attention to the product's symbolism and ability to engender emotional and sensory experiences. Absent from Mittal's Affective Choice Mode scale, however, are the deeper emotional states associated with affective judgements, and thus to rectify the limitation, two of Mittal's Expressiveness scale items, specifically, the items measuring an emphasis on emotional and sensory experiences, were re-classified as measuring an affective judgement. The pilot instrument also contained newly constructed items to measure the remaining characteristics of an intuitive and instantaneous liking and more thoroughly measure a concern about a product image. Concerning the latter, the reader might recall that the expressive psychological function indicates that the product fulfils the user's need to express his or her self-concepts and identities, particularly his or her need for social-approval and self-consistency. Consequently,

the newly constructed items needed to be applicable to those consumers attending to symbolic meaning for social-approval purposes and for those consumers attending to symbolic meaning for self-consistency purposes.

In total, 16 symbolic meaning and affective judgement items were tested in the pilot study, discussed in the previous section, which assessed the items' sensitivity to three diverse product categories: automobiles, sunglasses and lounge suites. Items that were excessively correlated with each other were combined, and those items that were insensitive to product type, that is, their mean ratings were the same whether consumers were evaluating automobiles, lounge suites or sunglasses, were discarded. The final items of the Symbolic Meaning and Affective Judgement Scale are listed in Table 16 (on page 161) along with each item's origin and the construct the item is purporting to measure.

For the main study, the items in both scales were anchored on a 1-7 'Strongly Disagree' to 'Strongly Agree' scale, and rated twice, once in reference to cars and a second in reference to sunglasses.

Table 14. Demographic profile of sample No.2.

	Cases	Percent	Census for Target Area
<u>All Respondents</u>	106		
<u>Gender</u>			
Male	50	47.2	49.2
Female	56	52.8	50.8
<u>Age</u>			
18 and 19	3	2.6	-----
20 to 29	14	12.1	26.6
30 to 39	28	26.7	22.8
40 to 49	30	26.7	18.1
50 to 59	13	12.9	12.2
60 or more	18	19.0	20.3

Notes:

Target Area: Wellington Regional District.

1991 Census.

Census information for 18 and 19 age group unavailable, and remaining age census categories modified to reflect the adult-only composition of the sample.

Table 15. Utilitarian Meaning and Piecemeal Judgement Scale.

		Construct	
		Origin	Type
1. I think it is important to select the most practical product.	New	Meaning	Practicality
2. When deciding on whether or not to buy a product I think about how useful it will be.	New	Meaning	Usefulness
3. Before you make your final selection of a product, you would: Seek a lot of information about each product.	IPM	Judgement	Reasoning
4. I believe in being logical and rational when deciding on a product.	New	Judgement	Reasoning
5. Before you make your final selection of a product, you would: Consider the pros and cons for each product.	IPM	Judgement	Reasoning
6. I believe in selecting a product based on a careful examination of all its features.	New	Judgement	Reasoning and Affect Latency
7. I believe in making a responsible and well-considered decision.	New	Judgement	Reasoning and Affect Latency
8. I believe in exercising self-control and not being impulsive when deciding on a product.	New	Judgement	Affect Latency and Intensity

Notes: Items rated on a scale of 1-7, 'Strongly Disagree' to 'Strongly Agree'.
The specific product versions substituted 'a product' with 'a pair of sunglasses' and 'an automobile'.
IPM = Information Processing Mode (Mittal, 1988).

Table 16. Symbolic Meaning and Affective Judgement Scale.

	Origin	Construct	
		Type	Sub-type
1. To what extent would you want your chosen product to be: Most compatible with the image you have of yourself.	EXP/ Modified	Meaning	Self-consistency
2. I prefer a product that reflects who I am.	New	Meaning	Self-consistency/ Social-approval
3. The image a product portrays is an important part of my decision whether or not to buy it.	New	Meaning	Social-approval/ Social-approval
4. To what extent would you want your chosen product to be: In fashion or in vogue.	EXP	Meaning	Social-approval/ Social-approval
5. To what extent would you want your chosen product to be: Known to be expensive.	EXP	Meaning	Social-approval
6. To what extent would you want your chosen product to be: A product that you can proudly display.	EXP	Meaning	Social-approval
7. Usually my selection of a product is based on a gut feeling.	New	Judgement	Reasoning
8. To what extent would you want your chosen product to be: Something that puts you in a good mood when you use it.	EXP	Judgement	Affect Intensity
9. To what extent would you want your chosen product to be: Something that feels pleasant to your senses (i.e., sight, feel, etc.).	EXP	Judgement	Affect Intensity and Memory Representation
10. The instant I see a product I know if I like it.	New	Judgement	Affect Latency and Reasoning
11. Before you make your final selection of a product, you would: Think a lot about yourself as a user of the product (i.e., how you would look, feel, etc.).	ACM	Judgement	Memory Representation

Notes: Items rated on a scale of 1-7, 'Strongly Disagree' to 'Strongly Agree'.
The specific product versions substituted 'a product' with 'a pair of sunglasses' and 'an automobile'.
ACM = Affective Choice Mode (Mittal, 1988).
EXP= Product Expressiveness (Mittal, 1988).

RESULTS

As suggested in the design section, adequate meaning and judgement scales should overlap conceptually with the constructs they purport to measure, the scales' underlying structures should match their conceptual structures, and the scales should be sensitive to "true" meaning and judgement preferences. The meaning and judgement scales were constructed to overlap with the purported constructs, and thus the first portion of the current section addresses the structure of the scales and the next portion the sensitivity of the scales.

I. Scale Structure. Scale Structure. Scale Structure. Scale Structure

The structures of the meaning and judgement items were uncovered through factor analyses carried out separately for consumers' meaning and judgement preferences when considering the purchase of automobiles and sunglasses.

The 19 items measuring consumer preferences for meanings and judgements when evaluating automobiles (11 symbolic and affective items and 8 utilitarian and piecemeal items) were factor analysed with principal component extraction and varimax/orthogonal rotation. To ensure a stable factor structure four criteria have been proposed which the current analysis meets: a minimum sample size of 100 to 200 (Comrey, 1978), a minimum ratio of participants to variables of between 2:1 and 10:1 (Gorsuch, 1983; Nunnally, 1978), a minimum ratio of participants to factors 2:1 (Cattell, 1978) and a minimum ratio of variables to factors of 6:1 (Cattell, 1978). A principal component extraction was selected and the solution rotated to enable a more meaningful structure. The scree plot suggested three factors most concisely summarised the patterns of item ratings, and the three factors together captured 57.8% of the item variance (see Table 17 on page 169).

Interestingly, Factor One (Table 17) opposes the symbolic meaning and affective judgement items with the utilitarian meaning and piecemeal judgement items. However, the only items to load substantially on Factor One are the social-approval

symbolic items (such as products in vogue and that can be proudly displayed) followed by the self-consistency symbolic items (such as preferring products that are compatible with the image the consumers have of themselves). The item “To what extent would you want your chosen automobile to be: Something that puts you in a good mood when you use it” loaded moderately high on both Factor One and Three, and although the item is slightly higher on Factor One the item is more compatible with the other items on Factor Three. Factor Two contained all 8 of the utilitarian meaning and piecemeal judgement items, and Factor Three included all the affective judgement items except “I prefer an automobile that reflects who I am”. That item also loaded on Factor One with which its symbolic content suggests it is more similar.

Thus, the factor analysis of consumer meaning and judgement preferences when evaluating automobiles resulted in the utilitarian meaning and piecemeal judgement items loading on a single factor, and the symbolic meaning items emerging on a separate factor from the affective judgement items. A possible reason that the utilitarian meaning and piecemeal judgement items loaded on a single factor and the symbolic meaning and affective judgement items on separate factors is that a three-factor solution forced an odd split, and so even number of factors such as two or four would more evenly separate the meaning and judgement items. To appraise the possibility, a factor analysis with a two-factor solution was performed which resulted in the utilitarian meaning and piecemeal judgement items loading on one factor and the symbolic meaning and affective judgement items on the other. A four-factor solution was also performed and resulted in the utilitarian meaning, symbolic meaning, affective judgement, piecemeal judgement items each loading on separate factors. Thus, the odd number of factors probably accounts for the symbolic meaning items emerging on a separate factor from the affective judgement items, though that rationale does not explain why, at least according to the scree plot, the three-factor solution was the appropriate one in the first instance. Overall, despite the shortcoming, the three-factor solution reveals a structure that corresponds well to conceptual structure the meaning and judgement items are intended to measure.

The 19 items measuring consumer preferences for meanings and judgements

when evaluating sunglasses (11 symbolic and affective items and 8 utilitarian and piecemeal items) were entered into a factor analysis (principal component extraction with varimax/orthogonal rotation) that according to the scree plot was also best represented by three factors (see Table 18 on page 170). The three factors together accounted for 58.9% of the variance and, overall, the factor structure is similar to the factor structure of the meaning and judgement items when consumers evaluated automobiles. Interestingly, like the automobiles evaluation factor structure, Factor One opposes the utilitarian meaning and piecemeal judgement items with the symbolic meaning and affective judgement. However, the only items to load substantially on Factor One are the eight utilitarian meaning and piecemeal judgement items. The second factor contained mostly affective judgement items, and the third factor lead with the social-approval symbolic items followed by the self-consistency symbolic items. The exceptions are the items, “To what extent would you want your chosen pair of sunglasses to be: Most compatible with the image you have of yourself” and “I prefer a pair of sunglasses that reflects who I am”, both of which loaded relatively equally on Factors Two and Three. However, the items’ symbolic contents suggests they are more similar with the other items on Factor Three. Again, the symbolic meaning items emerged on a separate factor from affective judgement items, whereas utilitarian meaning and piecemeal judgement items loaded on a single factor. To review the possibility that a three-factor solution forced an odd split, a factor analysis with a two-factor solution was performed and resulted in the utilitarian meaning and piecemeal judgement items loading on one factor and the symbolic meaning and affective judgement items on the other. A four-factor solution was also performed and resulted in the utilitarian meaning, symbolic meaning, affective judgement, piecemeal judgement items loading on separate factors. Thus, again the odd number of factors appears to account for the symbolic meaning items emerging on a separate factor from the affective judgement items, though that rationale does not explain why, at least according to the scree plot, the three-factor solution was the appropriate one in the first instance. Overall, the factor structure of the meaning and judgement items when consumers evaluated both automobiles and sunglasses are consistent with the conceptual structures.

As the utilitarian meaning and piecemeal judgement items loaded on the same

factor in both the automobile and sunglasses evaluations, the utilitarian meaning and piecemeal judgement items can legitimately be combined into a single scale (hereafter referred to as the Utilitarian Meaning and Piecemeal Judgement Scale). The Cronbach's Alphas for the scale are .84 when consumers evaluated automobiles and .90 when sunglasses were evaluated. However, the factor analyses resulted in the symbolic meaning items loading on a separate factor from the affective judgement items, and therefore before combining them into a single scale their association should be established; both in absolute terms and by comparing the strength of their association with the strength of the association of the utilitarian meaning items with the piecemeal judgement items.

To make those determinations, the meaning and judgement items were made into four scales according to the construct they are purporting to measure: a preference for utilitarian meaning, symbolic meaning, affective judgement, and piecemeal judgement (see Table 15 on page 160 and Table 16 on page 161 for the constructs the items measure). The two items of the Utilitarian Meaning Scale produced a Cronbach's Alpha of .59 when consumers evaluated automobiles and .54 when consumers evaluated sunglasses, the Cronbach's Alpha for the six items of the Symbolic Meaning Scale was .87 for automobiles and .85 for sunglasses, the Cronbach's Alpha for the six items of the Piecemeal Judgement Scale was .82 for automobiles and .90 for sunglasses, and the Cronbach's Alpha for the five items of the Affective Judgement Scale was .67 for automobiles and .71 for sunglasses. The reliabilities of the Utilitarian Meaning Scale are low but could be a result of the small number of items, a possibility supported by the items' significant correlation in the evaluations of both automobiles ($r=.44$, $df=113$, $p<.001$, one-tailed) and sunglasses ($r=.38$, $df=113$, $p<.001$, one-tailed). The reliabilities of the Affective Judgement Scale are marginal but acceptable for the current purpose.

Following the construction of the separate meaning and judgement scales, the scales were correlated with each other (see Table 19 on page 171). In the evaluation of automobiles, a preference for a piecemeal judgement was strongly and positively correlated with attention to utilitarian meaning ($r=.64$) and a preference for an affective judgement was positively correlated with attention to symbolic meaning

($r=.67$). The correlations between preferences for utilitarian meaning and symbolic meaning, utilitarian meaning and an affective judgement, piecemeal judgement and symbolic meaning, and piecemeal judgement and affective judgement were all negative (e.g., $-.36$, $-.35$, $-.21$ and $-.29$, respectively). In the evaluations of sunglasses, a preference for a piecemeal judgement was also strongly and positively correlated with attention to utilitarian meaning ($r=.62$) and a preference for an affective judgement was positively correlated with attention to symbolic meaning ($r=.59$). Similarly, the correlations between preferences for utilitarian meaning and symbolic meaning, utilitarian meaning and an affective judgement, piecemeal judgement and symbolic meaning, and piecemeal judgement and affective judgement were all negative, although only two were significant (e.g., $-.15$, $-.03$, $-.20$ and $-.19$, respectively).

The most notable of the above relations is that the correlation of symbolic meaning with an affective judgement is not only significant, but is also equal in strength to the correlation of utilitarian meaning with a piecemeal judgement. Thus, combining symbolic meaning and an affective judgement into a single scale appears appropriate (hereafter referred to as the Symbolic Meaning and Affective Judgement Scale). The Cronbach's alphas for the scale are $.87$ when consumers evaluated automobiles and $.86$ when sunglasses were evaluated.

In the interest of completeness, the joint meaning and judgement scales were correlated with each other (see Table 19 on page 171). Akin to the relations shown in the separate meaning and judgement scale correlations, a preference for one type of meaning and judgement decreased a preference for the other. Specifically, when automobiles were evaluated the correlation between the Utilitarian Meaning and Piecemeal Judgement Scale and the Symbolic Meaning and Affective Judgement Scale was $-.34$, and the same negative relationship was found when consumers evaluated sunglasses ($r=-.22$). The negative relations are also evident across products, with the automobile Symbolic Meaning and Affective Judgement Scale correlated $-.19$ with the sunglasses Utilitarian Meaning and Piecemeal Judgement Scale, and the automobile Utilitarian Meaning and Piecemeal Judgement Scale correlated $-.21$ with the sunglasses Symbolic Meaning and Affective Judgement

Scale. The cross-product correlations also show that individuals tend to prefer the same meanings and judgements for both automobiles and sunglasses. The automobile Symbolic Meaning and Affective Judgement Scale was correlated .67 with the sunglasses Symbolic Meaning and Affective Judgement Scale, and the automobile Utilitarian Meaning and Piecemeal Judgement Scale was .64 with the sunglasses Utilitarian Meaning and Piecemeal Judgement Scale.

II. Scale Sensitivity. Scale Sensitivity. Scale Sensitivity. Scale Sensitivity

The previous section showed that the factor structures of the scales are consistent with their conceptual schemes, and therefore the current section addresses their sensitivity. The suggestion was that the sensitivity of the scales would be established if 1) for both automobiles and sunglasses the utilitarian meaning and piecemeal judgement scale was rated more important than the symbolic meaning and affective judgement scale, and 2) the relative preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for automobiles than for sunglasses.

The mean importance of the meaning and judgement scales for each product type are represented in Figure 3 (on page 172) and support the expectations. The means were compared in a 2(car versus sunglasses) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) within-subjects ANOVA, which showed that overall the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale (mean of 5.40 versus 4.05) ($F(1,105)=70.4$, $p<.001$, $MS_{\text{Error}}=2.8$), that overall the meaning and judgement preferences when evaluating automobiles were more important than when evaluating sunglasses (mean of 4.83 versus 4.02) ($F(1,105)=12.8$, $p<.001$, $MS_{\text{Error}}=.4$), and that these main effects were complicated by a significant interaction effect ($F(1,105)=50.0$, $p<.001$, $MS_{\text{Error}}=.6$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the hypothesis, the significant interaction confirms that the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly for cars than for sunglasses (mean of 5.76 versus 5.04) whereas the

reverse was true for the Symbolic Meaning and Affective Judgement Scale (mean of 3.89 for cars versus 4.20 for sunglasses).

Thus, as expected, for both automobiles and sunglasses, utilitarian meaning and its associated piecemeal judgement were preferred to symbolic meaning and its associated affective judgement, but difference was greater for automobiles than for sunglasses.

Table 17. Factor structure of meaning and judgement preferences for automobiles.

	Factor		
	1	2	3
To what extent would you want your chosen automobile to be: Known to be expensive.	.85	-.06	.06
To what extent would you want your chosen automobile to be: In fashion or in vogue.	.83	-.10	.04
To what extent would you want your chosen automobile to be: An automobile that you can proudly display.	.76	-.02	.12
The image an automobile portrays is an important part of my decision whether or not to buy it.	.72	-.20	.39
To what extent would you want your chosen automobile to be: Most compatible with the image you have of yourself.	.63	-.05	.48
To what extent would you want your chosen automobile to be: Something that feels pleasant to your senses (i.e., sight, feel, etc.).	.60	.09	.21
To what extent would you want your chosen automobile to be: Something that puts you in a good mood when you use it.	.48	.24	.41
I believe in selecting an automobile based on a careful examination of all its features.	.19	.80	-.27
Before you make your final selection of an automobile, you would: Consider the pros and cons for each automobile.	-.00	.77	.30
Before you make your final selection of an automobile, you would: Seek a lot of information about each automobile.	.10	.76	-.18
When deciding on whether or not to buy an automobile I think about how useful it will be.	-.16	.71	.17
I believe in making a responsible and well-considered decision.	.11	.67	-.32
I believe in being logical and rational when deciding on an automobile.	-.21	.65	-.45
I think it is important to select the most practical automobile.	-.37	.51	-.44
I believe in exercising self-control and not being impulsive when deciding on an automobile.	-.18	.47	-.14
Before you make your final selection of an automobile, you would: Think a lot about yourself as a user of the automobile (i.e., how you would look, feel, etc.).	.37	.09	.66
The instant I see an automobile I know if I like it.	.26	-.32	.58
I prefer an automobile that reflects who I am.	.44	-.23	.53
Usually my selection of an automobile is based on a gut feeling.	.03	-.38	.52
Eigenvalue	6.2	3.6	1.2
Cumulative Percent Variance	32.4	51.4	57.8

Table 18. Factor structure of meaning and judgement preferences for sunglasses.

	Factor		
	1	2	3
I believe in selecting a pair of sunglasses based on a careful examination of all its features.	.90	-.08	.00
I believe in making a responsible and well-considered decision.	.89	-.05	-.00
Before you make your final selection of a pair of sunglasses, you would: Consider the pros and cons for each pair of sunglasses.	.80	-.04	-.05
Before you make your final selection of a pair of sunglasses, you would: Seek a lot of information about each pair of sunglasses.	.78	-.06	.01
I believe in being logical and rational when deciding on a pair of sunglasses.	.75	-.26	-.02
I believe in exercising self-control and not being impulsive when deciding on a pair of sunglasses.	.68	.04	-.04
I think it is important to select the most practical pair of sunglasses.	.67	-.15	-.14
When deciding on whether or not to buy a pair of sunglasses I think about how useful it will be.	.54	.38	-.14
To what extent would you want your chosen pair of sunglasses to be: Something that puts you in a good mood when you use it.	.07	.72	.21
Before you make your final selection of a pair of sunglasses, you would: Think a lot about yourself as a user of the pair of sunglasses (i.e., how you would look, feel, etc.).	-.04	.69	.21
The instant I see a pair of sunglasses I know if I like it.	-.18	.63	.10
To what extent would you want your chosen pair of sunglasses to be: Something that feels pleasant to your senses (i.e., sight, feel, etc.).	.20	.61	.11
To what extent would you want your chosen pair of sunglasses to be: Most compatible with the image you have of yourself.	-.15	.59	.50
Usually my selection of a pair of sunglasses is based on a gut feeling.	-.33	.55	-.09
I prefer a pair of sunglasses that reflects who I am.	-.21	.55	.49
To what extent would you want your chosen pair of sunglasses to be: Known to be expensive.	.10	.06	.88
To what extent would you want your chosen pair of sunglasses to be: In fashion or in vogue.	-.05	.14	.84
The image a pair of sunglasses portrays is an important part of my decision whether or not to buy it.	-.19	.44	.60
To what extent would you want your chosen pair of sunglasses to be: A pair of sunglasses that you can proudly display.	-.08	.52	.54
Eigenvalue	5.8	4.0	1.5
Cumulative Percent Variance	30.3	51.2	58.9

Table 19. Correlations of automobile and sunglasses separate and joint meaning and judgement preference scales.

Correlations of automobile and sunglasses separate meaning and judgement preference scales.

	<u>AUM</u>	<u>APJ</u>	<u>ASM</u>	<u>AAJ</u>	<u>SUM</u>	<u>SPJ</u>	<u>SSM</u>
<u>APJ</u>	.64 ***						
<u>ASM</u>	-.36 ***	-.21 *					
<u>AAJ</u>	-.35 ***	-.29 **	.67 ***				
<u>SUM</u>	.50 ***	.50 ***	-.03	-.05			
<u>SPJ</u>	.44 ***	.61 ***	-.10	-.26 **	.62 ***		
<u>SSM</u>	-.20 *	-.22 *	.70 ***	.52 ***	-.15	-.20 *	
<u>SAJ</u>	-.10	-.10	.34 ***	.51 ***	-.03	-.19 *	.58 ***

Notes:

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

Degrees of Freedom for all correlations is 104, and significance is two-tailed

AUM = Utilitarian Meaning Preference When Evaluating Automobiles

APJ = Piecemeal Judgement Preference When Evaluating Automobiles

ASM = Symbolic Meaning Preference When Evaluating Automobiles

AAJ = Affective Judgement Preference When Evaluating Automobiles

SUM = Utilitarian Meaning Preference When Evaluating Sunglasses

SPJ = Piecemeal Judgement Preference When Evaluating Sunglasses

SSM = Symbolic Meaning Preference When Evaluating Sunglasses

SAJ = Affective Judgement Preference When Evaluating Sunglasses

Correlations of automobile and sunglasses joint meaning and judgement preference scales.

	<u>AUMPJ</u>	<u>ASMAJ</u>	<u>SUMPJ</u>
<u>ASMAJ</u>	-.34 ***		
<u>SUMPJ</u>	.64 ***	-.19 *	
<u>SSMAJ</u>	-.21 *	.67 ***	-.21 *

Notes:

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

Degrees of Freedom for all correlations is 104, and significance is two-tailed.

AUMPJ = Utilitarian Meaning And Piecemeal Judgement Preference When Evaluating Automobiles

ASMAJ = Symbolic Meaning And Affective Judgement Preference When Evaluating Automobiles

SUMPJ = Utilitarian Meaning And Piecemeal Judgement Preference When Evaluating Sunglasses

SSMAJ = Symbolic Meaning And Affective Judgement Preference When Evaluating Sunglasses

Figure 3. Average meaning and judgement preferences by product.

Note: Scale of 1-7, 'Strongly Disagree' to 'Strongly Agree'.

DISCUSSION

Thus, the scales measuring consumer meaning and judgement preferences appear to meet all three criteria: the scales overlap conceptually with the constructs they purport to measure, the scales' underlying structures match their conceptual structures, and the scales seem sensitive to "true" meaning and judgement preferences.

The meaning and judgement scales were constructed explicitly to overlap with the purported constructs, and the factor analyses showed that whether consumers were indicating their meaning and judgement preferences for automobiles or sunglasses, the meaning and judgement items reduced to the same three factors: a utilitarian and piecemeal factor, a symbolic factor and an affective judgement factor. The emergence of the symbolic meaning items on a separate factor from the affective judgement items is likely due to the odd number of factors, although the reason three factors were the preferred solution in the first instance is uncertain. One possibility is that the small number of utilitarian meaning items enabled them to load more easily with the piecemeal judgement items, than the larger number of symbolic meaning items could load with the affective judgement items. Utilitarian meaning preference is measured with two items, compared with six items that measured symbolic meaning preference.

Whatever the precise reason the symbolic meaning items loaded on a separate factor from the affective judgement items, the correlation of a preference for symbolic meaning with a preference for an affective judgement was strong, positive, and similar in strength to the correlation of a preference for utilitarian meaning with a preference for a piecemeal judgement. Those results suggest that the symbolic meaning and affective judgement items can be legitimately combined, a interpretation confirmed by the satisfactory reliabilities of the Symbolic Meaning and Affective Judgement Scale (e.g., the reliabilities were .87 when consumers evaluated automobiles and .86 when sunglasses were evaluated). The reliabilities of the Utilitarian Meaning and Piecemeal Judgement Scale were also satisfactory (e.g.,

.84 when consumers evaluated automobiles and .90 when sunglasses were evaluated).

The strong and positive correlations between the preferences for attending to utilitarian meaning and making a piecemeal judgement and between the preferences for attending to symbolic meaning and making an affective judgement, and the joint meaning and judgement scales' high reliabilities, are consistent with previous research that has shown, or has suggested, that consumers make a piecemeal judgement to evaluate utilitarian meaning and an affective judgement to evaluate symbolic meaning (e.g., Chaudhuri & Buck, 1995; Keaveney & Hunt, 1992; Mittal, 1988). For instance, Chaudhuri and Buck (1995) found that advertisements that use a product information strategy and focus on the product's utilitarian meaning are judged analytically (e.g., piecemeal) and that advertisements that use a mood arousal strategy, which largely involve symbols, are affectively judged. Similarly, Mittal (1988) found that the expressive aspects of products such as their sensory experiences, mood states attainment, and image and symbolism are judged affectively. Thus, for both of the above reasons -- the previous conceptual and empirical support and the findings in the current study -- we can be reasonably confident that the attention to utilitarian meaning is associated with a piecemeal judgement and that the attention to symbolic meaning is associated with an affective judgement, though that confidence is offset by the recognition that consumers preferred meanings and judgements were measured, not the actual judgements consumers make when evaluating automobiles' and sunglasses' actual meanings.

Concerning the third criterion the meaning and judgement scales should have met, ANOVA showed that the joint meaning and judgement scales are probably sensitive to the natures of the products as for both automobiles and sunglasses, utilitarian meaning and its associated piecemeal judgement were preferred to symbolic meaning and its associated affective judgement, but difference was greater for automobiles than for sunglasses. However, support for the sensitivity of the meaning and judgement scales is tentative because only two products were investigated. Moreover, although automobiles and sunglasses are different ends along the utilitarian-symbolic and piecemeal-affective continua, each is not

necessarily an adequate indicator of a utilitarian, symbolic, piecemeal, or affective product. One could easily think of more utilitarian products (e.g., a vacuum cleaner, hand tools) or symbolic one (e.g., family heirlooms). Thus, firm support for the sensitivity of the meaning and judgement scales would be only be achieved from testing the scales on a larger number of products, particularly those products that are at more extreme ends of the utilitarian-symbolic and piecemeal-affective continua. For the present purposes, however, the sensitivity of the meaning and judgement scales appears satisfactory.

The analysis also showed that whether consumers were evaluating automobiles or sunglasses, the Utilitarian Meaning and Piecemeal Judgement Scale and Symbolic Meaning and Affective Judgement Scale were negatively correlated, as were the Utilitarian Meaning Scale and the Symbolic Meaning Scale, and the Piecemeal Judgement Scale and the Affective Judgement Scale (see Table 19 on page 171). Whilst an individual can technically judge a product on both a piecemeal and affective basis either simultaneously or in some sequence, Mittal (1988) also found a negative correlation between an affective judgement and a judgement he termed Information Processing Mode (IPM) but is essentially piecemeal. Mittal suggested that although IPM and affective judgements are each a separate process, they are likely to be negatively related because an affective judgement can be made more readily than an IPM judgement, making the latter unnecessary when an affective judgement is strong. Zajonc (1984), who was an advocate for the predominance of affective judgements, stated “that affect and cognition are separate and partially independent systems and that although they ordinarily function conjointly, affect could be generated without a prior cognitive process. It could, therefore, at times precede cognition in a behavioural chain” (p.117). That position did generate some controversy, but Mittal’s (1988) finding and the negative relationship found between preferences for a piecemeal and affective judgement in the present study, does suggest the increase or importance of one type of judgement decreases the importance of the other type of judgement, and possibly the product meanings the judgements evaluate given that the preferences for utilitarian and symbolic meanings were also negatively correlated.

A final finding of note in the current study is that the meaning and judgement scales were positively correlated across products, that is, that a consumer's preference for utilitarian meaning, symbolic meaning, piecemeal judgement, and an affective judgement, was similar whether he or she evaluated automobiles or sunglasses. The finding suggests that consumers have generalised meaning and judgement preferences, and is concordant with the proposition made in Chapter IV that if human values inform consumer choices, then the abstractness and generality of human values would result in consumers preferring products that are consistent not only in how they reinforce important values but also in their meanings, judgements and routes of value influence. The notion is explored further in Chapter VII, but presently, the finding suggests that as individuals tend to prefer the same meaning and judgement across products then only general preferences need be measured. Thus, the next study employs a "generic" form of the meaning and judgement scales in which respondents' rate their preferences for products in general, rather than repeating the items for each specific product.

CHAPTER VI. STUDY 3: EXAMINATION OF THE PRODUCT MEANING APPROACH HYPOTHESIS

With Study 2 having established the structural reliability and sensitivity of the meaning and judgement preference scales and that utilitarian meaning and piecemeal judgement are preferred to symbolic meaning and an affective judgement, Study 3 aims to associate each consumer's meaning and judgement preferences with his or her direct and indirect influences of human values in the test of the product meaning approach hypothesis:

HYPOTHESIS: An individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence.

METHOD

Design

As discussed in Chapter IV, the product meaning approach hypothesis is examined in a correlational, rather than experimental, design because of the survey approach's naturalism and ability to canvass a broad range of phenomena, and the difficulty in isolating and manipulating an individual's human values. The survey will focus on the same two products examined in Study 2, automobiles and sunglasses, and for the same reasons. The high cost and risk of automobiles should result in piecemeal evaluations foremost on tangible and utilitarian features and secondarily on symbolism, whereas the conspicuousness and low cost of sunglasses suggests symbolic meaning and its associated affective judgement is nearly as important as utilitarian meaning and its associated piecemeal judgement. Therefore,

automobiles and sunglasses are different ends along the utilitarian-symbolic and piecemeal-affective continua.

Whilst Study 2 may have been limited by having only one product to represent each type of meaning and judgement, the present study analyses automobiles and sunglasses separately and therefore having two products is not so much a limitation as it is a replication. In Study 2, meaning and judgement preferences for automobiles were contrasted with meaning and judgement preferences for sunglasses to assess the sensitivity of the meaning and judgement scales, that is, whether for both automobiles and sunglasses the Utilitarian Meaning and Piecemeal Judgement Scale was rated more important than the Symbolic Meaning and Affective Judgement Scale, and whether the relative preference was greater for automobiles than for sunglasses. However, the present study examines the pattern of meaning and judgement preferences and routes of human value influence for automobiles and sunglasses independently. Thus, support for the product meaning approach would be found if the influences of human values on automobile preference varies with meaning and judgement preferences in the directions hypothesised in the product meaning approach, and even stronger support for the product meaning approach would be found if the influences of human values on sunglasses preference also varies with meaning and judgement preferences in the directions hypothesised.

Respondents

As examining meaning and judgement preferences in a naturalistic setting with the broadest range of phenomena is advantageous, a general population sample was chosen to a student sample. The survey was distributed through the post to a random sample of 750 adults drawn from the Wellington telephone directory. The random procedure selected every n th name in the directory and for married and cohabiting couples alternated between the male and female partner. The respondents were encouraged to return the questionnaire within three weeks, and those unwilling or unable to participate were urged to pass the survey along to another adult household member. Respondents were informed their participation was voluntary, that their responses were anonymous and would not be used for any other purpose and that if

they had any queries or wished a summary of the results to ring me.

Two steps were taken to increase the response rate; firstly, all those who participated were eligible to win a prize of 100 Dollars. The winning name was drawn and the award distributed approximately three weeks after the completion of the survey. The second step taken to increase the response rate was the posting of a reminder letter along with another copy of the survey to those who had not returned the survey within two weeks of receipt. Eighty-one additional responses were achieved by that second procedure.

Overall, 324 surveys were returned, of which 40 were undeliverable and 28 could not be used due to respondents failing to answer all the questions or completing the sections incorrectly. Thus, the correctly completed surveys and incorrectly completed surveys combined ($256+28=284$) out of the total number of surveys distributed minus those not delivered ($750-40=710$) is a reasonable response rate of 40%. Similar to Sample No. 2, the current sample contains a representative proportion of men and women but under-represents the younger age groups (see Table 20 on page 186) (Hereafter, the data set is referred to as Sample No. 3). Forty respondents requested a summary of results posted approximately three months after the completion of the survey.

SurveyQuestionnaireQuestionnaireQuestionnaire

The survey measured human values, automobiles and sunglasses tangible attribute importances and ownerships, and meaning and judgement preferences (see Appendix Four beginning on page 325 for copy of cover letter and survey). The survey also contained a section on memory representation preference that is not used in the current analysis.

Human ValuesValuesValuesValues

Human values were measured in the same way as in Studies 1 and 2 (readers are encouraged to review those studies for a description). The means and standard

deviations of the human values for the current sample are reported in Table 21 (on page 187), and show that, similar to Study 1, Honesty, Self-respect, True Friendship and Family Security were the most important and National Security, Obedience, Salvation and Social Power the least important. The 40 human values were grouped through factor analysis that resulted in 15 factors accounting for 62% of the variance (see Table 21 beginning on page 187). A maximum number of factors were selected (to the Eigenvalue 1.0 cut-off) so that a topmost amount of human value variance is available for use in the prediction of tangible attribute importances and product preference, and a principal components extraction was selected and the solution not rotated because the purpose of the factor analysis is not to decipher the underlying structure but simply to reduce the number of items for testing the product meaning approach hypothesis.

Tangible Attribute ImportancesAttribute ImportancesAttribute ImportancesAttribute Importances

Using a 10-point scale anchored by 'Not At All Important' (1) and 'Very Important' (10) respondents rated the importance of automobile and sunglasses tangible attributes. Unlike human values, sufficient within-subject variability was expected and so a forced-distribution response format was not necessary. Concerning the number of tangible attributes for respondents to rate in importance, Fishbein (1967) suggests individuals can only consider between 6 and 11 object attributes. However, the current study uses the attributes to cover entire product categories, not just specific brands or classes, and thus a larger number of items (between 20 and 24) were considered essential. An attempt was made to ensure that the attributes were tangible and intrinsic to the product, although occasionally the tangibility and objectivity of the attributes are ambiguous. Nevertheless, along the tangible-intangible or objective-subjective dimensions all of the selected attributes should be closer to the former poles than the latter.

Automobiles

The car attributes were the same as those used in Study 1. To review: the automobile attributes were gathered from Allen's (1993) investigation that obtained

the items from several sources: a pilot study in which American respondents described the characteristics of their favourite car, Vinson, Scott and Lamont's (1977) test of the human values $\Rightarrow$ consumption values $\Rightarrow$ automobile attribute importances relationship (the best discriminators between cultural groups were selected), from Horsky and Nelson's (1992) study of a new automobile brand's positioning, and from Lim, Olshavsky and Kim's (1988) study of the impact of inferences on automobile attribute evaluation. In Study 1 and the current one, attributes that were not intrinsic and tangible were discarded and new attributes added as a result of four informal conversations in which participants described the features they seek in an automobile. These informational conversations also aided modification of the remaining attributes for a New Zealand context.

The mean importances of the car tangible attribute importances to the current sample are presented in Table 22 (on page 189). Among the most important attributes are Reliability, Safety, and Few Repairs Needed, whereas the least are Large Body Size, Large Engine and Air Conditioning. In the interest of manageability, automobile tangible attribute importances were grouped through factor analysis (principal components extraction with no rotation) that with an Eigenvalue 1.0 cut-off maximised the number of factors; 5 accounted for 40% of the variance (see Table 22 on page 189). The analysis meets four criteria that help to ensure a stable factor structure: a minimum sample size of 100 to 200, a minimum ratio of participants to variables of between 2:1 and 10:1, a minimum ratio of participants to factors 2:1 and a minimum ratio of variables to factors of 6:1. As with the human value factor analysis, the content of these factors will not be interpreted unless necessary at a later stage.

Sunglasses

Previous research that developed or implemented sunglasses tangible attribute importances was unavailable, and so sunglasses tangible attributes were gathered exclusively from manufacture and retail outlet brochures (e.g., Ray-Ban, Sunglasses Hut, etc.). The brochures comprised numerous, easily detectable attributes; for instance, one typical brochure stated "The Original Eyecon Sunglasses are made in

the USA and offer; 100% UV Protection, Scratch-resistant, polycarbonate lenses, Lightweight construction, and Unlimited lifetime warranty”. The pool of attributes gathered from the brochures (more than 50) was reduced according to two criteria; firstly, all the attributes were ranked by frequency of occurrence and those most prevalent were considered the most eligible (a low frequency of occurrence did not automatically result in its deletion but simply a reconsideration), and secondly, each attribute must fall on the former poles of the tangible-intangible and objective-subjective dimensions. The application of the selection criteria reduced the initial pool of attribute importances from more than 50 to 20. These were: brand name printed on lens or frame, colour of frame, darkly tinted lens, engineered design, fits comfortably on face, high UV protection, inexpensive, lenses with a large coverage area, light-weight, made of highest quality materials, metal frame, nylon frame, precision ground optical glass lenses, reduces glare and increases image clarity, reflective/mirrored lenses, scratch-resistant lenses, shape of frame (e.g., round, square, etc.), strong, rugged, impact resistant, suitable for a variety of sunlight conditions, and thin frame.

The mean importances of the sunglasses tangible attributes are presented in Table 23 (on page 190). Among the most important tangible attributes are Fits Comfortably On Face, Reduces Glare, and UV Protection, whereas the least are Brand Name Printed On Lens Or Frame, Reflective / Mirrored Lenses, Metal Frame, and Nylon Frame. Sunglasses tangible attribute importances were grouped through factor analysis (principal components extraction with no rotation) that with an Eigenvalue = 1.0 cut-off resulted in 6 factors accounting for 64% of the variance (see Table 23 on page 190). The factors are not interpreted.

Product PreferencePreferencePreferencePreference

As mentioned, the use of a survey design and a general population sample are in the interests of naturalism and investigating the broadest range of phenomena possible. In the same interests, and consistent with Study 1, product preference was indexed as actual product purchase and ownership. Indexing product preference as actual product purchase and ownership are more naturalistic than simple product

attitude or liking, and is more stringent in that consumers must commit their resources such as money, time to purchase, and so on. However, many other factors contribute to product purchase other than human values or tangible attribute importances (e.g., financial ability, family considerations and so on), and previous purchase does not necessarily imply current preference. The latter limitation is addressed by focussing on each respondent's multiple, recent purchases of products within the same class or category.

Automobiles

As an indicator of automobile preference, respondents listed the make, model and year of their current automobile and up to two previously owned automobiles. Cars greater than ten years old were excluded to help ensure that preferences measured by the meaning and judgement scales were still commensurate with product ownership. With older cars the year of manufacture is probably unrelated to the length of time the current owner has maintained possession, whereas newer cars, by definition, are relatively recently purchased.

As in Study 1, the automobile makes and models were grouped into five classes using the schemes developed by New Car Buyers Guide (1991), Which? Car Buying Guide (1985) and Which? Car Buying Guide (1989). When an automobile was not listed in those schemes, the cubic capacity of the engine and the overall body length separated Smaller Family Cars (cubic capacity ≤ 1600 , length ≤ 168 inches) from Larger Family Cars. Other automobiles not listed in those schemes were categorised after visual examination in reference sources such as Automobile Association (1975) and Consumer Guide (1990, 1992) or the telephone consultation with automotive dealers. The final five classes are (see Appendix Two beginning on page 318 for full a coding scheme):

SMALLER FAMILY CARS -- e.g., Austin Mini, Peugeot 205, Ford Laser

LARGER FAMILY CARS -- e.g., Mitsubishi Tredia, Honda Accord, Holden
Commodore

LUXURY CARS -- e.g., Saab 900, Citroen BX, Holden Calais

SPORTS CARS -- e.g., Toyota Celica, MGB GT, Honda Integra

UTILITY AND MINIVANS -- e.g., Isuzu Trooper, Holden Ute, Mitsubishi
Spacewagon

Respondents' automobile preferences were scored as the percentage of cars they owned in each class out of the total number of cars they owned. For example, if an individual owned an Austin Mini, MGB GT, and Honda Integra, their SMALLER FAMILY CARS score (Austin Mini) would be .33, their SPORTS CARS score (MGB GT, Honda Integra) would be .66, and all other car classes would be zero. The cars were scored in that manner to shift the focus from general car ownership to an individual's preferred car class.

The exclusion of those respondents who did not own an automobile and whose only automobile(s) was more than ten years old reduced the sample size by nearly one-half, from 256 to 142. Of the remaining 142 respondents, the average proportion of Smaller Family Cars owned was .50 (SD=.46), Larger Family Cars .37 (SD=.43), Luxury Cars .08 (SD=.24), Sports Cars .02 (SD=.10), Utility Vehicles .04 (SD=.18) and Miscellaneous / Unclassifiable .14 (SD=.28). Sports Cars, Luxury Cars and Utility and Minivans are skewed beyond repair by transformation (taking the square root) and consequently only Smaller Family Cars and Larger Family Cars will remain in the analysis.

Sunglasses

The general public was anticipated to own a wide range of sunglasses brands, and so the measure of sunglasses ownership needed to be multi-faceted in the event that brand name became an unworkable index of product class ownership. For their current pair of sunglasses respondents reported the brand name (e.g., Ray-Ban, Bill Bass, etc.), where and when the pair of sunglasses was purchased, the price paid, and the main purpose the pair of sunglasses was bought (e.g., Sports, Driving, General Use, etc.). For respondents who listed more than one pair of sunglasses only the first pair listed was retained. Moreover, sunglasses purchased more than three years prior to the completion of the survey were excluded to help ensure that meaning and

judgement preferences measured by the scales are still commensurate with product ownership.

In the current sample, more than 50 brands of sunglasses were listed but 12% of participants were unsure of the brand name of their sunglasses and a further 17% did not answer the brand name question. Thus, due to a profusion of brands and many respondents not knowing which brand they own, the price paid was considered the best indicator of quality and product class ownership. The exclusion of respondents who did not own a pair of sunglasses and those whose only pair of sunglasses was more than three years old reduced the sample size by more than one-half, from 256 to 98. Of the remaining 98 respondents, the mean price paid was 73.30 NZ Dollars (SD=85.8).

Meaning and Judgement Preferences and Judgement Preferences and Judgement Preferences and Judgement Preferences

The Utilitarian Meaning and Piecemeal Judgement Scale and Symbolic Meaning and Affective Judgement Scale were in a generic form in which respondents rated the items for products in general, rather than repeating the items for each specific product. The decision to use a generic form of the meaning and judgement scale was due to the result in Study 2 that consumers tended to prefer the same meaning and judgement for both automobiles and sunglasses. The generic form yielded a slightly lower Cronbach's Alpha for the Utilitarian Meaning and Piecemeal Judgement Scale (.78) but did not affect the reliability of the Symbolic Meaning and Affective Judgement Scale (.88).

Table 20. Demographic profile of sample No. 3.

	Sample No. 3		Census for Target Area
	Cases	Percent	
<u>All Respondents</u>	256		
<u>Gender</u>			
Male	133	51.8	49.2
Female	123	48.2	50.8
<u>Age</u>			
18 and 19	5	1.9	-----
20 to 29	43	16.6	26.6
30 to 39	51	20.1	22.8
40 to 49	53	21.2	18.1
50 to 59	43	16.6	12.2
60 or more	60	23.6	20.3

Notes:

Target Area: Wellington Regional District.

1991 Census.

Census information for 18 and 19 age group unavailable, and remaining age census categories modified to reflect the adult-only composition of the sample.

Table 21. Means and factor structure of human values.

	Mean ^t	StdDev	Factors					
			1	2	3	4	5	6
Obedient	1.49	.64	.59	-.10	.04	-.12	.05	-.06
Polite	2.01	.78	.53	-.28	.07	-.06	-.09	.21
Salvation	1.45	.74	.51	.28	-.07	-.18	-.13	-.32
Exciting Life	1.86	.79	-.48	-.05	.26	.06	-.12	-.38
Imaginative	1.71	.71	-.48	.08	-.26	-.02	-.15	.04
Freedom	2.27	.74	-.47	.18	.17	-.23	.20	.20
Self-determination	1.91	.78	-.45	-.18	-.16	-.14	.15	-.04
Responsible	2.49	.60	.41	-.09	-.27	-.01	.11	.16
Self-Controlled	1.91	.77	.40	-.36	-.18	-.03	-.11	-.13
Honest	2.67	.54	.33	-.04	-.13	.07	.17	.27
Logical	1.75	.75	-.04	-.55	-.26	-.11	-.18	.02
Ambitious	1.65	.69	.03	-.47	.07	.03	.24	-.05
Clean	1.75	.82	.37	-.46	.14	-.04	-.05	.04
Forgiving	2.01	.71	.32	.45	-.17	-.06	-.17	-.21
Inner Harmony	1.93	.84	.03	.44	-.15	.09	.17	-.22
Independent	2.22	.77	-.26	-.42	-.13	.05	.17	.15
Equality	2.04	.77	-.07	.39	.09	-.23	.36	.19
World Of Peace	2.36	.78	.05	.37	.26	-.22	.29	.32
Helpful	1.97	.65	.35	.36	-.05	-.06	.05	.11
Capable	2.15	.69	-.21	-.34	-.22	-.03	-.19	.05
Comfortable Life	1.88	.88	-.18	-.35	.50	.12	-.06	-.07
Intellectual	1.81	.76	-.34	.06	-.43	.04	.03	-.04
Happiness	2.42	.64	.10	.09	.43	.35	-.08	.08
Wisdom	2.21	.82	.11	.20	-.43	-.13	-.22	-.04
Social Justice	1.78	.86	-.14	.15	.31	-.56	-.18	-.02
Pleasurable	1.70	.74	-.10	.03	.41	.49	-.21	-.00
Social Power	1.26	.50	.04	-.17	-.17	.42	.20	-.39
Loving	2.43	.64	.09	.33	.07	.36	-.18	-.04
True Friendship	2.54	.62	.02	.26	.24	.35	-.14	.06
Cheerful	1.96	.74	.12	.01	.24	.08	-.53	.11
National Security	1.63	.74	.06	-.07	.27	-.10	.47	-.17
Recognition	1.79	.82	.12	.01	-.35	.43	.45	-.09
Broad-Minded	2.21	.76	-.24	-.06	-.20	.03	-.17	.54
Self-Respect	2.61	.61	-.17	.04	-.11	.34	.06	.40
World Beauty	1.95	.77	-.16	.31	-.05	.07	-.14	.09
Courageous	2.25	.67	-.09	-.01	-.01	-.41	-.09	-.11
Mature Love	2.00	.81	-.31	.30	-.20	.10	.01	-.27
Accomplishment	2.02	.82	-.10	-.10	-.08	-.24	-.19	-.18
Family Security	2.58	.61	.17	.01	.32	-.05	.18	.11
Equity	1.65	.71	-.10	-.18	.36	-.15	.24	-.29
Eigenvalue			3.19	2.85	2.35	1.98	1.71	1.62
Cumul. % Variance			8.0	15.1	21.0	25.9	30.2	34.3

Note: ^t = Scale of 1 'Least Important' to 3 'Most Important'.

Table 21. Means and factor structure of human values (continued).

	Factors								
	7	8	9	10	11	12	13	14	15
Obedient	-.02	.30	-.06	-.01	.12	-.16	-.19	.02	-.18
Polite	-.17	.02	.22	-.01	-.05	-.06	-.08	.07	-.05
Salvation	.08	-.16	-.10	-.06	-.09	-.16	-.15	-.00	.14
Exciting Life	.12	-.01	.03	-.02	.14	-.02	-.05	-.08	-.28
Imaginative	.18	-.15	.09	-.25	-.31	-.16	-.22	.09	.01
Freedom	.22	-.16	-.19	-.11	-.16	.06	-.13	-.32	.04
Self-Determination	.02	.02	.10	.21	.11	-.33	.01	.17	.14
Responsible	.04	.14	-.23	.02	.03	-.00	.25	.05	-.40
Self-Controlled	.06	.07	-.33	-.07	-.07	-.03	.01	-.10	.02
Honest	.19	-.10	.03	.30	-.19	.28	.13	-.21	.11
Logical	-.02	-.12	-.29	.08	.04	.14	.02	.07	-.02
Ambitious	.22	.12	.20	-.09	-.30	-.26	.02	-.02	.19
Clean	-.14	-.13	.27	-.22	-.09	-.08	-.10	-.14	.10
Forgiving	.18	-.21	-.16	.03	-.03	.05	-.02	-.04	-.05
Inner Harmony	-.18	-.31	-.16	.10	.24	-.30	.09	.02	.18
Independent	-.13	.21	.09	.14	.33	.13	-.25	-.11	-.13
Equality	.28	.29	-.25	-.25	.02	.14	-.13	.04	-.11
World Of Peace	-.29	-.13	.07	-.23	.09	.05	-.12	-.14	-.03
Helpful	.08	.09	.03	.02	.17	.14	-.13	-.05	.30
Capable	.05	-.26	-.29	.18	.27	.09	-.25	-.18	-.06
Comfortable Life	-.05	.11	-.14	.02	-.12	-.06	.05	-.28	.01
Intellectual	-.25	.33	.05	-.06	-.14	.29	.21	.11	.17
Happiness	.21	-.00	-.19	.15	.22	-.07	.07	.17	.05
Wisdom	-.25	.17	.15	.26	-.05	-.04	-.17	.01	.07
Social Justice	-.08	.43	-.10	-.04	.02	-.14	.10	.01	.19
Pleasurable	-.19	-.03	-.24	-.06	-.28	.07	-.08	-.00	-.02
Social Power	-.14	.20	.04	-.36	.12	.06	-.00	-.02	.19
Loving	.23	.27	.00	-.06	-.12	-.08	-.05	.29	-.27
True Friendship	.05	.29	.30	.11	.26	.19	-.04	-.15	.10
Cheerful	.09	-.26	.15	-.09	.07	.30	.08	.11	.23
National Security	-.23	-.28	.01	-.06	.14	.09	.16	.19	.06
Recognition	.24	-.19	.16	-.16	-.09	.15	-.02	-.00	-.10
Broad-Minded	-.15	-.05	-.21	-.25	-.02	.01	.18	.38	.09
Self-Respect	.33	-.02	.12	.23	.17	-.37	-.02	.03	.13
World Beauty	-.50	-.21	.28	-.07	-.00	-.13	.01	-.08	-.41
Courageous	.33	-.05	.45	.20	-.10	.20	-.07	.13	-.15
Mature Love	-.15	.14	-.10	.34	-.20	.09	.15	-.20	.05
Accomplishment	.33	-.04	.19	-.33	.33	.00	.53	-.14	-.09
Family Security	-.06	-.06	.05	.39	-.23	-.09	.40	-.03	-.11
Equity	-.02	-.11	-.04	.22	-.02	.26	-.20	.51	-.00
Eigenvalue	1.54	1.41	1.37	1.33	1.13	1.09	1.08	1.06	1.02
Cumul. % Variance	38.1	41.6	45.1	48.4	51.2	54.0	56.6	59.3	61.9

Table 22. Means and factor structure of automobile tangible attribute importances.

	Mean ^t	StdDev	Factors				
			1	2	3	4	5
Handling	8.64	1.49	.76	-.18	.07	-.11	-.10
Smooth Riding	8.05	1.73	.73	.04	-.09	-.22	.06
Quality	8.70	1.65	.72	-.13	-.17	-.24	-.22
Comfort	8.17	1.62	.68	.02	.11	-.22	.10
Safety	9.04	1.46	.67	-.35	-.32	-.15	-.21
Advanced Engineering	5.85	2.81	.63	.40	.20	-.16	-.24
Few Repairs Needed	8.96	1.52	.59	-.52	-.06	.01	.30
Reliability	9.37	1.06	.57	-.54	-.15	-.05	.30
Heating	7.24	1.99	.54	-.13	.23	-.08	.39
Air Conditioning	4.98	2.93	.52	.34	.49	.02	.05
Spacious Interior	7.00	2.10	.48	.16	-.36	.08	.34
Kilometres Per Litre	7.41	2.25	.47	-.43	.06	.46	-.27
High Speed	4.92	2.44	.28	.63	.10	.22	-.01
Luxurious Interior	4.82	2.45	.48	.62	-.01	.08	.02
Large Engine	4.73	2.39	.41	.59	-.39	.28	-.09
Large Body Size	4.34	2.35	.38	.56	-.49	.26	.06
Colour	5.44	2.66	.35	.33	.53	-.05	.24
Compact	6.08	2.26	.35	-.21	.51	.43	-.17
Inexpensive	6.78	2.40	.11	-.34	-.03	.72	.24
Low Pollution Emission	7.17	2.47	.50	-.27	.01	.09	-.51
Eigenvalue			5.72	3.01	1.59	1.35	1.11
Cumul. % Variance			28.6	43.6	51.6	58.3	63.9

Note: ^t = Scale of 1 'Not At All Important' to 10 'Very Important'.

Table 23. Means and factor structure of sunglasses tangible attribute importances.

	Mean ^t	StdDev	Factors					
			1	2	3	4	5	6
Made Of Highest Quality Materials	6.53	2.73	.71	-.03	-.05	-.36	-.02	-.35
Scratch-Resistant Lenses	7.48	2.40	.66	-.32	-.23	-.23	.23	.17
Thin Frame	4.72	2.64	.64	.24	-.18	.06	.22	.29
Engineered Design	4.65	2.80	.63	.34	-.13	.04	-.09	.01
Strong, Rugged, Impact Resistant	7.32	2.56	.61	-.28	-.18	-.02	.17	.35
Suitable For A Variety Of Sunlight Conditions	8.16	1.99	.59	-.32	.14	.02	-.29	.15
Precision Ground Optical Glass Lenses	5.46	3.11	.58	.12	-.37	-.40	.09	-.05
Lenses With A Large Coverage Area	5.95	2.64	.54	-.26	.02	.12	.38	-.43
Light-Weight	6.63	2.63	.54	-.05	.22	.24	-.23	.29
Metal Frame	3.77	2.65	.53	.40	-.33	-.12	.02	.11
High UV Protection	8.67	1.74	.52	-.39	.17	.01	.12	-.37
Nylon Frame	3.54	2.65	.49	.23	.13	.44	-.14	-.30
Brand Name Printed On Lens or Frame	3.08	2.64	.45	.53	.00	.07	-.30	-.04
Reduces Glare And Increases Image Clarity	8.95	1.41	.46	-.51	.27	-.04	-.36	.16
Darkly Tinted Lens	5.19	2.80	.20	.48	.33	-.05	.19	.05
Reflective/Mirrored Lenses	2.44	2.18	.42	.47	-.18	.38	-.22	-.16
Fits Comfortably On Face	9.30	1.08	.39	-.45	.45	-.03	-.20	-.07
Colour Of Frame	6.58	2.80	.07	.38	.72	-.34	.17	-.04
Shape Of Frame (e.g., Round, Square, etc.)	7.21	2.44	.22	.39	.67	-.17	.16	.18
Inexpensive	6.19	2.57	.19	-.15	.17	.65	.51	.15
Eigenvalue			5.04	2.41	1.92	1.34	1.13	1.01
Cumul. % Variance			25.2	37.3	46.9	53.6	59.2	64.3

Note: ^t = Scale of 1 'Not At All Important' to 10 'Very Important'.

RESULTS

The first portion of the current section examines the product meaning approach hypothesis, and the second portion explores whether other factors such as product ownership affected the examination of the hypothesis.

I. Meaning and Judgement Preferences and the Direct and Indirect Influences of Human Values

The objective for the analysis is to examine whether each individual's direct and indirect influences of human values on product ownership varies with his or her meaning and judgement preferences as measured by Utilitarian Meaning and Piecemeal Judgement Scale and the Symbolic Meaning and Affective Judgement Scale. The product meaning approach hypothesis is that an individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement should be greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence. Two different procedures would enable the examination of the product meaning approach hypothesis: the "Standard Method" and the "Residual Method".

In the Standard Method, participants would be divided into two groups according to their meaning and judgement preferences. One group would comprise those individuals who strongly prefer utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement, and the second group would comprise those individuals who only slightly prefer utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement (if at all). Then, the regression procedure employed in Study 1 would be performed separately on these two groups. That procedure carried out two regressions; the first regressed human values alone onto product ownership, and the second regressed tangible attribute importances onto product ownership then regressed human values onto the remaining product ownership variance not already accounted by tangible attribute importances. The Multiple R that human values predicted of product ownership beyond tangible

attribute importances showed the strength of the direct route, whereas the strength of the indirect route was calculated by subtracting the Multiple R of the direct route from the Multiple R of the human values only regression.

Thus, if Standard Method were employed to examine the product meaning hypothesis then the indirect route Multiple R should be greater for the group that strongly prefers utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement than for the group that only slightly prefers utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement. Conversely, the direct route Multiple R should be lower for the group that strongly prefers utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement than for the group that only slightly prefers utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement.

The advantages of the Standard Method are that it maintains closeness with the original data and is easily interpretable, but it has two limitations. Firstly, the two groups may not be similarly heterogeneous; the regression analyses might yield different levels of prediction simply because one group is more homogenous than the other. A more serious limitation for the current purpose is that, as Study 1 showed, human values are weakly related to product ownership, especially automobile ownership, and so the Multiple Rs would likely be small as would differences between groups, both of which make any comparison tenuous. Unlike Study 1, a multitude of product categories and classes are not available to assess whether a consistent pattern of Multiple Rs emerges across products.

A second regression process, the Residual Method, can also be used to examine the product meaning approach hypothesis, and does not suffer from the limitations of the Standard Method. As is evident from the name, the Residual Method uses the regressions' standardised residuals, rather than their Multiple Rs, to gauge the strength of each individual's direct and indirect influences of human values. For those readers more visually inclined, an illustration of the procedure is provided in Figure 4 (on page 203).

In Stage 1, tangible attribute importances are regressed onto human values, leaving residuals in which the co-variation of tangible attribute importances is removed from human values.

Stage 2 then regresses the residuals from Stage 1 onto product ownership. That regression, therefore, represents the direct influence of human values as the influence via tangible attribute importances is excluded. For each individual, the residual of that regression shows how accurately the direct influence of human values predicts his or her product ownership and thus is called the Direct Influence Residual (DIR).

To detect how accurately the indirect influence of human values can predict each individual's product ownership, Stage 3 regresses the original, full-variance human values onto the DIR. As the DIR does not contain the direct influence of human values, any further influence of human values on that residual must occur indirectly via tangible attribute importances. Thus, that regression shows how accurately the indirect influence of human values can predict each individual's product ownership and is called the Indirect Influence Residual (IIR).

Having calculated the DIR and IIR the next stage separates the sample into two groups according to whether the DIR or the IIR was a more accurate predictor of their product ownership. Specifically, as the DIR and IIR are Studentised residuals, individuals would be separated according to which was lower; the absolute value of their DIR or the absolute value of their IIR. If the product meaning approach hypothesis is correct, then the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement should be greater for the group whose IIR was a superior predictor (the indirect influence group) than for the group whose DIR was a better predictor (the direct influence group).

Thus, the advantage of the Residual Method to the Standard Method is that it calculates the regression equations for the sample as a whole rather than for subgroups that may differ in their heterogeneity. Moreover, by using the residual as an indicator of prediction strength, rather than the Multiple R, the procedure can

detect differences among individuals even when the absolute magnitude of prediction is low. One limitation of the Residual Method, however, is that the abstraction of the data and the multitude of regressions performed may introduce some level of noise. Technically, both methods should produce equivalent results, which Chapter VII substantiates by showing that whether the Standard Method or the Residual Method is employed the relationship between product identification and the routes of value influence is essentially the same. In that analysis, the specific product investigated is strongly influenced by human values and thus the Standard Method is appropriate because the difference among the sub-groups' Multiple Rs is substantial. However, human values weakly influence automobile ownership and possibly sunglasses ownership, and therefore the Residual Method was chosen for the current analysis.

The Residual Method was used to examine the product meaning approach hypothesis separately for Smaller Family Cars, Larger Family Cars, and sunglasses, and accordingly the hypothesis is tested three times (the other car class ownerships are skewed beyond repair and thus are not analysed). For each regression, factor scores were entered instead of the individual items. Human values comprised 15 factors, car tangible attribute importances 5 factors, and sunglasses tangible attribute importances 6 factors. As the Residual Method is anchored in the relative prediction accuracy of the regressions, the absolute accuracy of prediction is less critical, and therefore, unlike Study 1 a step-wise entrance of independent variables was not needed. Thus, all independent variables were entered simultaneously (e.g., full-entry method). The regressions performed are listed below.

Smaller Family Car Residual Method

- The 5 automobile tangible attribute importance factors were regressed onto each one of the 15 human value factors.
- The residuals from the preceding regression analyses (e.g., 15 human value factors minus their co-variation with automobile tangible attribute importances)

were regressed onto the percentage of the individual's automobile ownerships that were Smaller Family Cars. For each individual, the residual of the regression indicates how accurately the direct influence of human values predicts his or her Smaller Family Car ownership and will be termed the "Smaller Family Car DIR".

- The 15 human value factors (full variance) were regressed onto the residual of the preceding analysis (e.g., Smaller Family Car ownership minus the direct influence of human values). For each individual, the residual of the regression indicates how accurately the indirect influence of human values predicts his or her Smaller Family Car ownership and will be termed the "Smaller Family Car IIR".

Larger Family Car Residual Method

- The 5 automobile tangible attribute importance factors were regressed onto each one of the 15 human value factors.
- The residuals from the preceding regression analyses (e.g., 15 human value factors minus their co-variation with automobile tangible attribute importances) were regressed onto the percentage of the individual's automobile ownerships that were Larger Family Cars. For each individual, the residual of the regression indicates how accurately the direct influence of human values predicts his or her Larger Family Car ownership and will be termed the "Larger Family Car DIR".
- The 15 human values factors (full variance) were regressed onto the residual of the preceding analysis (e.g., Larger Family Car ownership minus the direct influence of human values). For each individual, the residual of the regression indicates how accurately the indirect influence of human values predicts his or her Larger Family Car ownership and will be termed the "Larger Family Car IIR".

Sunglasses Residual Method

- The 6 sunglasses tangible attribute importance factors were regressed onto each one of the 15 human value factors.
- The residuals from the preceding regression analyses (e.g., 15 human value factors minus their co-variation with sunglasses tangible attribute importances) were regressed onto the price the individual paid for their current pair of sunglasses. For each individual, the residual of the regression indicates how accurately the direct influence of human values predicts his or her Sunglasses ownership and will be termed the “Sunglasses DIR”.
- The 15 human values factors (full variance) were regressed onto the residual of the preceding analysis (e.g., price paid for current pair of sunglasses minus the direct influence of human values). For each individual, the residual of the regression indicates how accurately the indirect influence of human values predicts his or her sunglasses ownership and will be termed the “Sunglasses IIR”.

Due to the large number of regressions performed, the factors that may affect the regressions’ stability and integrity were only examined for a small, randomly selected pool of ten regressions. A visual inspection of the residual plots for the pool of regressions indicated each did not deviate substantially from linearity and was homoscedastic, and an inspection of the normal probability plots indicated that the distributions were essentially normal. Concerning all the regressions, as the independent variables are human value and tangible attribute importance scores from un-rotated factor analyses, a perusal of the correlation matrix confirmed that the factors are un-correlated. Finally, the minimum subject-to-variable ratio that has been suggested ranges from 10 to an absolute minimum of 4 respondents per variable, for which each regression in the current study easily exceeds.

Also due to the large number of regressions performed in the Residual Method, only the results of the final two regressions, those used to separate individuals based on strength of their direct influence (DIR) and indirect influence (IIR), are reported (see Table 24 on page 204). Across the three product classes, both routes of value influence appear stronger than that found in Study 1 but they failed to reach significance. The failure to reach significance, however, is likely a result of the large number of independent variables. Moreover, unlike Study 1, the direct route is stronger than the indirect route, though the outcome is probably due to less product ownership variance being available for the indirect regression to predict given that it attempts to predict product ownership once the direct influence of human values is removed. For that reason principally, the Multiple Rs reported in Table 24 should be interpreted cautiously. As a whole, the absolute strengths of the regressions are not crucial. What is important is whether for each individual, and for each product, the direct influence regression (DIR) or the indirect influence regression (IIR) yielded a more accurate prediction of each individual's product ownership, and whether those predictions are related to meaning and judgement preferences in the direction hypothesised in the product meaning approach. Those determinations are now reported for each product: Smaller Family Cars, Larger Family Cars and sunglasses.

Smaller Family CarsFamily CarsFamily CarsFamily Cars

The separation of the sample according to whether their Smaller Family Car DIR or Smaller Family Car IIR more accurately predicted their Smaller Family Car ownership resulted in 67 respondents for whom the DIR was a superior predictor of their Smaller Family Car ownership (direct influence group), and 65 for whom the IIR was superior (indirect influence group). The average meaning and judgement preferences for these two groups are presented in Figure 5 (beginning on page 205) and compared with a 2(direct influence group versus indirect influence group) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) mixed ANOVA, which showed that overall that the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale (mean of 5.42 versus 4.30)

($F(1,130)=93.7$, $p<.001$, $MS_{\text{error}}=.89$) and that the main effect was complicated by a significant interaction effect ($F(1,130)=3.8$, $p<.05$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the hypothesis, the significant interaction confirms that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for the indirect influence group than for the direct influence group.

Larger Family Cars Family Cars Family Cars Family Cars

The re-separation of the sample according to whether their Larger Family Car DIR or Larger Family Car IIR more accurately predicted their Larger Family Car ownership resulted in 65 respondents for whom the Larger Family Car DIR was a superior predictor of their Larger Family Car ownership (direct influence group), and 67 for whom the Larger Family Car IIR was superior (indirect influence group). As an important note, these two groups are not the same two groups that are referred to in the previous paragraph. The readers will recall that the Residual Method was performed separately for each product (e.g., Smaller Family Cars, Larger Family Cars and sunglasses) and hence the sample was divided anew for each product tested. The average meaning and judgement preferences for the Larger Family Car direct and indirect groups are presented in Figure 5 (beginning on page 205) and compared with a 2(direct influence group versus indirect influence group) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) mixed ANOVA, which showed that overall the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale (mean of 5.42 versus 4.30) ($F(1,130)=97.1$, $p<.001$, $MS_{\text{error}}=.87$) and that the main effect was complicated by a significant interaction effect ($F(1,130)=6.6$, $p<.05$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the hypothesis, the significant interaction confirms that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for the indirect influence group than for the direct influence group.

Sunglasses

The re-separation of the sample according to whether their Sunglasses DIR or Sunglasses IIR more accurately predicted their sunglasses ownership resulted in 47 respondents for whom the Sunglasses DIR was a superior predictor of their sunglasses ownership (direct influence group), and 45 for whom the Sunglasses IIR was superior (indirect influence group). The average meaning and judgement preferences for these two groups are presented in Figure 5 (beginning on page 205) and compared with a 2(direct influence group versus indirect influence group) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) mixed ANOVA, which showed that overall the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale (mean of 5.21 versus 4.48) ($F(1,89)=28.5$, $p<.001$, $MS_{\text{Error}}=.90$) and that the interaction was complicated by a significant interaction effect ($F(1,89)=8.2$, $p<.01$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the hypothesis, the significant interaction confirms that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for the indirect influence group than for the direct influence group.

Thus, overall the results of the Residual Method regressions and ANOVAs support the product meaning approach hypothesis for each product examined: Smaller Family Cars, Larger Family Cars and sunglasses. An individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence.

II. Product Ownership and the Direct and Indirect Influences of Human Values

One limitation of the previous analysis linking meaning and judgement

preferences with the direct and indirect influences of human values is that other factors could be affecting the prediction of product ownership other than the purported constructs. Given that in the Residual Method individuals were divided into groups based on how well human values directly or indirectly predicted their product ownerships, the conclusions are vulnerable to other factors that confound the accuracy of prediction.

One such factor is product ownership itself as conceivably the higher prediction rates for some individuals and lower for others could be due in part to what product they owned. Of particular concern is if the level of product ownership affected whether the direct influence regression (DIR) or indirect influence regression (IIR) yielded a more accurate prediction of product ownership for those individuals who had a higher (or lower) level of product ownership. For instance, as Smaller Family Cars are probably the most utilitarian product, the regression analysis representing the indirect influence of human values on product ownership (IIR) could have more easily predicted the product ownership of Smaller Family Car owners than non-owners. Conversely, the regression analysis representing the direct influence of human values (DIR) could have more easily predicted the product ownership of Smaller Family Car non-owners than owners. Consequently, in the separation of the sample into two groups based on the relative prediction accuracy of their DIR and IIR, the composition of the indirect influence group would be biased toward Smaller Family Car owners, the composition of the direct influence group would be biased toward Smaller Family Car non-owners, and the meaning and judgement preferences of both groups could be biased accordingly. The same bias could have affected the Larger Family Car ownership regressions and the sunglasses regressions, though possibly in the opposite directions given that both products are more symbolic than Smaller Family Cars.

In either case, the support of the product meaning approach hypothesis could be due to the level of product ownership unequally contributing to the predictive power of the direct and indirect influence regressions (the DIR and IIR), the formation of the value influence groups, and the conclusion that the groups differ in their meaning and judgement preferences in the directions hypothesised. If the level of the product

ownership is unequally contributing to the predictive power of the direct and indirect influence regressions and the formation of the value influence groups, then the groups should differ in their mean levels of product ownership. However, the mean proportion of Smaller Family Cars owned by the Smaller Family Cars indirect influence group was .47 and for the Smaller Family Cars direct influence group was .51, a non-significant difference ($t=-.6$, $df=132$, $p=.57$, two-tailed). The mean proportion of Larger Family Cars owned by the Larger Family Cars indirect influence group was .36 and for the Larger Family Cars direct influence group was .37, also a non-significant difference ($t=-.04$, $df=132$, $p=.97$, two-tailed). Finally, the mean price paid for sunglasses by the sunglasses indirect influence group was 84.60 and for the sunglasses direct influence group was 57.50, a difference that approached significance ($t=1.6$, $df=91$, $p=.11$, two-tailed).

Overall, the non-significant differences suggest that product ownership was not contributing to the differential predictive power of the direct and indirect influences of human values, and thus the locus of the prediction was likely human values and tangible attribute importances. Given that possibility, addressing whether global difference in human values and tangible attribute importances contribute to the relative predictive power of the direct and indirect influence regressions is useful. As proposed in Chapter IV, the direct route should be associated with an overall value relevance and Chapter VII assesses the possibility more thoroughly, but presently, the forced-distribution response format of the human value measure means that value relevance could not emerge as rating all human values highly. The sum of value ratings is the same for all respondents and therefore overall ratings of human values cannot affect the creation of the value influence groups nor their confirmed meaning and judgement preferences.

However, a global effect might be possible with tangible attribute importances as they were rated with an open distribution. Thus, to examine whether an overarching preference for tangible attribute importances contributed to the formation of the value influence groups, the mean rating each respondent gave to the automobile tangible attribute importances was calculated, as was the mean rating each respondent gave to the sunglasses tangible attribute importances. The mean rating

given to automobile tangible attribute importances by the group whose indirect influence of human values more accurately predicted their Smaller Family Car ownership was 6.92, and the mean rating given by the group whose direct influence of human values more accurately predicted their Smaller Family Car ownership was 6.85; a non-significant difference ($t=-.4$ $df=133$, $p=.66$, two-tailed). The mean rating given to automobile tangible attribute importances by the group whose Larger Family Car ownership was more strongly predicted by the indirect influence of human values was 6.99 and the mean rating given by the direct influence group was 6.79; also a non-significant difference ($t=-1.1$ $df=133$, $p=.26$, two-tailed). Finally, the mean rating given to sunglasses tangible attribute importances by the group whose sunglasses ownership was more strongly predicted by the indirect influence of human values was 5.90, and the mean rating given by the direct influence group was 6.18; a non-significant difference ($t=-1.1$ $df=92$, $p=.25$, two-tailed).

Thus, differences in overall ratings of tangible attribute importance and human values and overall levels of product ownerships do not appear to contribute to the differential predictive power of human values, the formations of the direct and indirect influence groups, and the conclusions that the groups differ in their meaning and judgement preferences in the directions hypothesised in the product meaning approach.

Stage 1: Tangible attribute importances (TAIs) regressed onto human values (HVs).

Stage 2: Residual of Stage 1 regressed onto product ownership (PO).

Stage 3: Human values regressed onto residual of Stage 2.

Figure 4. Venn diagrams representing the regression stages that achieved the prediction of the direct and indirect influences of human values.

Notes:

■ = predicted variance.
■ = residual.

HVs = Human values.
PO = Product ownership.
TAIs = Tangible attribute importances.

Table 24. Multiple Rs from regressing human values directly and indirectly (via tangible attribute importances) onto product ownerships.

PRODUCT OWNERSHIP	DIRECT VALUE INFLUENCE ¹	INDIRECT VALUE INFLUENCE ²
Smaller Family Cars	.30 F(15,119)=.8, p=.70	.18 F(15,119)=.3, p=.99
Larger Family Cars	.27 F(15,119)=.6, p=.86	.13 F(15,119)=.2, p=.99
Sunglasses	.35 F(15,79)=.8, p=.71	.16 F(15,79)=.1, p=.99

Notes:

1 = regression of human values (minus their co-variation with tangible attribute importances) onto product ownership.

2 = regression of human values (full variance) onto product ownership (minus the direct influence of human values).

Figure 5. Means of meaning and judgement scales for groups formed according to the route of value influence that more accurately predicted their Smaller Family Car, Larger Family Car, and sunglasses ownerships.

Note: Scale of 1-7, 'Strongly Disagree' to 'Strongly Agree'.

Figure 5. Means of meaning and judgement scales for groups formed according to the route of value influence that more accurately predicted their Smaller Family Car, Larger Family Car, and sunglasses ownerships (continued).

Note: Scale of 1-7, 'Strongly Disagree' to 'Strongly Agree'.

DISCUSSION

Consistent with the product meaning approach hypothesis, the current study showed that an individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence. The pattern was replicated for two classes of cars and sunglasses. Major methodological and conceptual limitations of the study are reviewed in depth in Chapter VIII, such as the correlational rather than experimental design, and the overly general conceptual model. Presently, however, three issues are addressed: Feldman and Lynch's (1988) consistency argument, the finding that the level of product ownership did not differentially affect the direct and indirect influence regressions, and the generic form of the meaning and judgement scales.

Firstly, the discussion in Chapter III that the "consistency" argument did not easily apply to Study 1 with its categorical behavioural measure applies even less to the current analysis. The readers will recall that some critics of the survey method often level a "consistency" argument that the participants may rate the items on a scale simply to appear consistent with their responses on another scale, and not because they represent their actual preferences. Feldman and Lynch (1988) argue that an association found between attitudes and behaviour could be due to respondents completing the behaviour measure to be consistent with the attitude measure. However, as suggested in Chapter III, that kind of bias is most likely to occur when the behaviour is measured on a metric scale, and hence seems implausible that respondents would list automobiles they have never owned. Conceivably, however, respondents might over- or under-estimate the price they paid for their sunglasses. Besides the categorical nature of the behavioural measure, the analytical procedures used in the study also make Feldman and Lynch's (1988) consistency argument incompatible with the pattern of results. To conclude that individuals rate the human values and tangible attribute importances simply to appear consistent with their product ownership, one would have to assume that half

the respondents rated both tangible attribute importances and human values to appear consistent with their product ownership whereas the other half rated only human values to appear consistent with product ownership. Moreover, the former group would coincidentally have had to rate utilitarian meaning and piecemeal judgement more highly and the latter group symbolic meaning and affective judgement more highly, which seems unlikely. Instead, human values and tangible attribute importances are probably used in these consumers' product evaluation and selection or are closely tied to what is.

A second issue of the current study important to address is the finding that the direct and indirect influence groups did not differ in their levels of product ownership, and therefore that product ownership itself did not affect the formation of the direct and indirect value influence groups nor the conclusion that the groups differ in meaning and judgement preferences in the directions hypothesised in the product meaning approach. Moreover, the analysis also showed that the value influence groups did not differ in overall levels of tangible attribute importances, and the forced-distribution format of the human value measure meant that the groups also could not differ in overall importances of human values. Thus, the way the value influence groups must differ is their relationships among specific human values, tangible attribute importances and product ownerships. The finding seems to suggest that individuals applying human values directly in product evaluation are applying only the relevant values, and likewise, those applying human values through tangible attribute importances only apply preferences relevant to the product being considered.

The finding that the value influence groups did not differ in their overall levels of product ownership not only engenders confidence in the product meaning approach hypothesis a point made previously is also reinforced. The readers might recall that in Chapter IV the argument was made that psychological functions of the value-attitude-behaviour system should not be assessed solely by measuring how individuals prefer different items (e.g., symbolic or instrumental values, symbolic or instrumental products), but rather the routes of value influence should also be measured. The point was made as a criticism to Prentice (1987) because the two

functions may or may not correspond to differences in preferred values, attitudes and products. Often those holding instrumental or expressive functions may prefer the same products because many products can be valued for either their utilitarian or symbolic properties. The criticism also echoes Katz' (1960) original claim that the benefit of thinking about functions is that it recognises that individuals may like the same objects but for completely different reasons. Thus, the finding that the direct and indirect influence groups did not differ in their product ownerships seems to suggest that at least for Smaller Family Cars, largely family cars and sunglasses, individuals can attend to different meanings, make different judgements and apply their values through different routes and yet still own the same product. However, to conclude that human values never influence preferences for some products through a particular route would obviously be overly simplistic, and so the issue is addressed again in Chapter VIII.

A third issue of the current study important to address is that the overall design of the study rested on the observation in Study 2 that individuals tended to prefer the same meaning and judgement for both automobiles and sunglasses. As the present study instructs respondents to indicate their preferred meanings and judgements for "products in general", to link these preferences to the direct and indirect influences of human values on the ownership of cars and sunglasses, these general preferences must translate to specific consumer behaviours. The finding highlights what is a major limitation of the current study, not obtaining meaning and judgement preferences for a specific context. One could claim that the meaning and judgement preferences consumers used when selecting their current cars and sunglasses differ from those stated in the survey. After all, the survey was completed some time after the actual purchase. Nevertheless, the current study did find that generalised meaning and judgement preferences were associated with the direct and indirect influences of human values in the directions hypothesised in the product meaning approach, which does seem to suggest that consumers' generalised meaning and judgement preferences translate to specific contexts and products, though other interpretations are reviewed in Chapter VIII. The next chapter, however, examines the five product meaning approach propositions.

CHAPTER VII. STUDY 4: EXAMINATION OF PROPOSITIONS

The discussion in Chapter IV of cross-product consistency and psychological function leads to five propositions:

PROPOSITION 1: Individuals have a cross-product tendency to attend to the same product meanings, use the same type of judgement, and apply human value criteria through the same route.

PROPOSITION 2: Greater psychological identification with a product is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

PROPOSITION 3: Greater value relevance is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

PROPOSITION 4: Instrumental human values serve an instrumental psychological function and therefore a preference for instrumental values should be associated with the indirect influence of human values.

PROPOSITION 5: Terminal human values serve an expressive psychological function and therefore a preference for terminal values should be associated with the direct influence of human values.

The readers would recall that the propositions were made informally and that the psychological function propositions, in particular, were made with deference to the product meaning approach hypothesis that an individual's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective

judgement should be greater when his or her human values have an indirect influence (via tangible attribute importances) on product preference than when his or her human values have a direct influence. The investigation of the product meaning approach hypothesis was made at a more general level of product meaning that included psychological function along with content. For instance, the symbolic meaning scale items of “To what extent would you want your chosen product to be: Most compatible with the image you have of yourself” and “I prefer a product that reflects who I am” measure a preference for an expressive psychological function and particularly the needs for social-approval and self-consistency. Moreover, the utilitarian meaning preference items “I think it is important to select the most practical product” and “When deciding on whether or not to buy a product I think about how useful it will be” also appear to measure a preference for an instrumental psychological function, though not as certain as the symbolic meaning items. Consequently, Study 3’s use of the meaning and judgement preference scales to support the product meaning approach hypothesis has some implications for what psychological function each route of value influence and attentions to product meanings may serve. Nevertheless, some specific propositions were made that sought to supplement the overly structural product meaning approach with an impetus or drive factor.

Thus, given that the functional propositions in particular were made in deference to the product meaning approach hypothesis, the assessments of the propositions are carried out informally and without the aim of validating the propositions conclusively, but rather of making a tentative first few steps towards such conclusions. So, both the making of the propositions and their examinations are in the spirit of exploration, and should be viewed as such. Given the spirit, the present study’s examination of the propositions does not develop a new survey nor does it conduct an experiment. Rather, the propositions are assessed by reviewing the results of Studies 1-3 in greater detail, by re-analysing the data collected in Studies 1-3, by analysing data collected in Studies 1-3 but not previously used, and by analysing a fourth data set (e.g., Ng et al., 1982).

The examinations of the propositions will proceed on an elemental basis, that is,

only two or three components of each proposition are examined at a time to gradually, but comprehensively, evaluate each proposition. Given the piece by piece procedure, a graphical summary is provided in Figure 6 (on page 213) and Figure 7 (on page 214), which illustrates what each analysis in Study 4 seeks to show and how, in combination with the results from the first three studies, each proposition is fully examined. The dots connected by lines show which studies and analyses established, or will establish, the association among the components. For example, line (a) in Figure 6 comprises dots connecting human values, tangible attribute importances and product ownership and indicates that Study 1 showed human values influence product ownership via tangible attribute importances. Likewise, line (f) comprises dots connecting human values, tangible attribute importances, product ownership and low product identification and shows that Study 4: Analysis Two will assess whether low product identification is associated with the indirect influence of human values. Readers are encouraged to preview what each analysis in the chapter seeks to show (Study 4: lines d-k in both figures). Additionally, the figures report which data set is used to make each assessment.

		DIRECT ROUTE				EXPRESSIVE FUNCTION			
	<u>Sample</u>	<u>Human Values</u>	<u>Product Ownership</u>	<u>Symbolic Meaning</u>	<u>Affective Judgement</u>	<u>Terminal Values</u>	<u>High Value Relevance 1</u>	<u>High Value Relevance 2</u>	<u>High Product Identification</u>
(a) Study 1:	No.1	λ ----- λ							
(b) Study 2:	No.2			λ ----- λ					
(c) Study 3:	No.3	λ ----- λ		----- λ ----- λ					
(d) Study 4: A1	No.2			λ ----- λ cross-product consistency					
(e) Study 4: A1	No.3	λ ----- λ cross-product consistency							
(f) Study 4: A2	No.1	λ ----- λ		-----	-----	-----	-----	-----	λ
(g) Study 4: A3	No.2			λ ----- λ	-----	-----	-----		λ
(h) Study 4: A3	No.2					λ ----- λ			
(i) Study 4: A3 Ng et al						λ -----	-----	-----	λ
(j) Study 4: A4	No.2			λ ----- λ	-----				λ
(k) Study 4: A4	No.1	λ ----- λ		-----	-----	-----			λ

Figure 7. Summary of studies and analyses which examined criteria, meaning, judgement and function of the direct route of value influence.

Notes:

Value relevance1 = number of values listed on open-ended questions of values important to themselves or New Zealander but not listed on Rokeach Value Survey.

Value relevance2 = mean rating of all Rokeach Value Survey items.

ANALYSIS ONE: CROSS-PRODUCT CONSISTENCY

In Chapter IV, the rationale was offered that if human values inform consumer choices then the abstractness and generality of human values would result in product preferences that are relatively consistent across products not only in how they reinforce important values but also their meaning, judgement and routes of value influence. So, Proposition #1 stated that individuals should have a cross-product tendency to attend to the same product meanings, make the same judgement, and apply human values directly or indirectly via tangible attribute importances.

Study 2 did find that preferences for attending to an automobile's utilitarian meaning and making a piecemeal judgement was correlated .67 with preferences for attending to sunglasses' utilitarian meaning and making a piecemeal judgement. Similarly, preferences for attending to an automobile's symbolic meaning and making an affective judgement was correlated .64 with preferences for attending to sunglasses' symbolic meaning and making an affective judgement. Moreover, when automobiles were evaluated, the correlation between the Utilitarian Meaning and Piecemeal Judgement Scale and the Symbolic Meaning and Affective Judgement Scale was -.34 and the same negative relationship was found when sunglasses were evaluated ($r = -.22$). The negative relations are also evident across products, with the automobile Symbolic Meaning and Affective Judgement Scale correlated -.19 with the sunglasses Utilitarian Meaning and Piecemeal Judgement Scale, and the automobile Utilitarian Meaning and Piecemeal Judgement Scale correlated -.21 with the sunglasses Symbolic Meaning and Affective Judgement Scale. Both sets of correlations, the positive correlations of the same scale across products and the negative correlations of different scales across products, suggest that individuals have cross-product consistency in their meaning and judgement preferences, and thus the aim of the current analysis is to examine cross-product consistency in routes of human value influence.

The readers might recall that Study 3 examined the product meaning approach hypothesis using a Residual Method in which a series of regressions were calculated

culminating in two final regressions: one representing the direct influence of human values on product ownership (DIR) and the other the indirect influence via tangible attribute importances (IIR). Individuals were separated into two groups according to whether their direct (DIR) or indirect influence (IIR) regression more accurately predicted their product ownership (e.g., whether the absolute value of their Direct Influence Residual or Indirect Influence Residual was lower). The calculation of the regressions and division of the sample was carried out three times: once for Smaller Family Car ownership, again for Larger Family Car ownership, and finally for sunglasses ownership. Table 25 (beginning on page 218) summarises the number of respondents who were placed into each value influence group for each product tested (As a side note; the number of individuals placed into these groups differs slightly from that reported in Study 3 as Study 3 eliminated some respondents whose meaning and judgement preferences were unavailable).

If the proposition is correct, then each individual should have tended to be placed into the same value influence group for each product. The examination of whether that occurred is made on a pair-wise basis, firstly comparing the value influence groups formed from the Smaller Family Car ownership regressions with the groups formed from the Larger Family Car ownership regressions, then comparing Smaller Family Car ownership groups with the sunglasses ownership groups, and finally comparing the Larger Family Car ownership groups with the sunglasses ownership groups. A small number of respondents owned both automobiles and sunglasses, and thus the two pair-wise examinations made across the product categories (e.g., between Smaller Family Car ownership and Sunglasses ownership, and between Larger Family Car ownership and Sunglasses ownership) should be interpreted with caution.

Table 25 (beginning on page 218) reports the cross-tabulation of the Larger Family Car influence groups and the Smaller Family Car influence groups. Of the 70 respondents for whom the DIR was a superior predictor of their Smaller Family Car ownership, the Larger Family Car ownership of 55 of them was also more strongly predicted by their DIR whereas the remaining 15 were more strongly predicted by the IIR. Of the 65 respondents for whom the IIR was a superior predictor of their

Smaller Family Car ownership, the Larger Family Car ownership of 52 of them was also more strongly predicted by their IIR whereas the remaining 13 were more strongly predicted by the DIR. Thus, in total 107 respondents were placed into the same value influence group in both product conditions whereas 28 were not, a significant difference in the binomial distribution (observed probability=.79, $p < .0001$, one-tailed). Table 25 (beginning on page 218) also reports the cross-tabulation of the Sunglasses influence groups and the Smaller Family Car influence groups. In total 30 respondents were placed into the same value influence group in both product conditions whereas 21 were not, a difference in the expected direction but that only approached significance in the binomial distribution (observed probability=.41, $p = .12$, one-tailed). Finally, Table 25 (beginning on page 218) reports the cross-tabulation of the Sunglasses influence groups and the Larger Family Car influence groups. In total 29 respondents were placed into the same value influence group in both product conditions whereas 22 were not, a difference in the expected direction but that only approached significance (observed probability=.41, $p = .20$, one-tailed).

Overall, the comparison between the Smaller Family Cars and Larger Family Cars value influence groups provided the strongest support of the proposition that individuals tend to apply their human values through the same routes across products. The comparisons between Smaller Family Cars and sunglasses and between Larger Family Cars and sunglasses yielded results in the expected directions but failed to reach significance. However, the statistical powers of the tests were .29 for the comparison of the Smaller Family Cars groups with the sunglasses groups, .29 for the comparison of the Larger Family Cars groups with the sunglasses groups, and 1.0 for the comparison between Smaller Family Cars and Larger Family Cars. Thus, given that the two tests failing to reach significance are also those with powers far below the .80 criterion suggested by Cohen (1988), the non-support of the proposition is probably due to the small sample sizes.

Table 25. Cell counts and cross-tabulations of individuals whose direct and indirect influences of human values more accurately predicted their Smaller Family Cars, Larger Family Cars and sunglasses ownerships.

Total number of individuals placed into value influence groups for each product.

	<u>Indirect Influence Group</u>	<u>Direct Influence Group</u>
Smaller Family Cars	65	70
Larger Family Cars	67	68
Sunglasses	47	45

Cross-tabulation of Larger Family Cars value influence groups with Smaller Family Cars influence groups.

		Larger Cars Influence Group		TOTALS
		<u>Indirect</u>	<u>Direct</u>	
Smaller Cars Influence Group	<u>Indirect</u>	52	13	Same Group = 107 * Different Group = 28 *
	<u>Direct</u>	15	55	

Note: * = Significant difference between cell sizes (observed probability=.79, $p < .0001$, one-tailed).

Table 25. Cell counts and cross-tabulations of individuals whose direct and indirect influences of human values more accurately predicted their Smaller Family Cars, Larger Family Cars and sunglasses ownerships (continued).

Cross-tabulation of sunglasses value influence groups with Smaller Family Cars influence groups.

		Sunglasses Influence Group		<u>TOTALS</u>
		<u>Indirect</u>	<u>Direct</u>	
Smaller Cars Influence Group	<u>Indirect</u>	14	12	Same Group = 30 * Different Group = 21 *
	<u>Direct</u>	9	16	

Note: * = Non-significant difference between cell sizes (observed probability=.41, p=.12, one-tailed).

Cross-tabulation of sunglasses value influence groups with Larger Family Cars influence groups.

		Sunglasses Influence Group		<u>TOTALS</u>
		<u>Indirect</u>	<u>Direct</u>	
Larger Cars Influence Group	<u>Indirect</u>	14	13	Same Group = 29 * Different Group = 22 *
	<u>Direct</u>	9	15	

Note: * = Non-significant difference between cell sizes (observed probability=.41, p=.20, one-tailed).

ANALYSIS TWO: PRODUCT IDENTIFICATION

The current analysis examines Proposition #2 that greater psychological identification with a product is a feature of an expressive psychological function and therefore is associated with the direct influence of human values.

The examination of the proposition is only made on red meat consumption because, as discussed in Chapter III, red meat plays an important role in the expression of the self-concepts and identities. The readers may recall that several sociologists and anthropologists have argued that red meat more so than white meat has potent symbolic meaning, which refers to masculine identity and social power values (Adams, 1990, 1994; Fiddes, 1989; Heisley, 1990; Twigg, 1983). For example, Heisley's (1990) study found that meat, particularly red meat, symbolises masculinity and strength whilst fruits, vegetables and grains generally symbolise femininity and weakness. Similarly, Fiddes (1989) examination of historical texts, modern scientific analyses and meat merchandising sources uncovered a consistent theme of meat representing the domination of males over females, Anglos over non-Anglos, and humans over nature, animals and the environment. Fiddes (1989) concluded, "what meat exemplifies, more than anything, is an attitude: the masculine world view that ubiquitously perceives, values, and legitimates hierarchical domination of nature, of women, and of other men and, as its corollary, devalues less domineering modes of interaction between humans and with the rest of nature"(p. 210).

Whatever the precise symbolic meaning of red meat may be, those individuals for whom red meat symbolises important elements of their self-concepts (e.g., gender identity, power values, etc.) should feel greater psychological affiliation or identification with red meat, and consequently should tend to express their human values directly given that the direct route serves to express one's self-concepts and identities. Moreover, the psychological identification with red meat would probably be at the expense of a rationale, unemotional, and piecemeal evaluation of red meat's tangible attributes such as its nutritional qualities. As Fiddes (1991) suggests, meat

“is integrated into a structure of social values that may have nothing to do with the principles of nutrition” (p. 14; original quote from Le Gros Clark, 1968, p.69).

Thus, the influence that psychological identification has on the consumption of red meat may be negatively related to the influence that tangible attribute importances have on the consumption of red meat, and consequently the proposition that psychological identification is a feature of the direct route of value influence can be divided into two propositions;

1) Tangible attribute importances should predict red meat consumption more strongly for low meat identifiers than for high meat identifiers.

2) The indirect influence of human values (via tangible attribute importances) on red meat consumption should be stronger for low meat identifiers than for high meat identifiers whereas the reverse should be true for the direct influence of human values.

Concerning the analysis of the propositions, readers may recall from Chapter VI that two methods are available for comparing the strengths of the direct and indirect influences of human values as a function of third variable such as meaning and judgement preference or, in the current instance, meat identification: the Standard Method and the Residual Method. In the Standard Method, participants would be divided into two groups based on their scores on the third measure and then for each group two regressions would be performed; the first would regress human values alone onto product preference and the second would regress tangible attribute importances onto product preference (Block 1) followed by human values (Block 2). By comparing the Multiple Rs for each regression and block, a determination can be made about which group has the stronger direct influence of human values and which group has the stronger indirect influence and whether those groups are the ones consistent with the proposition. The Standard Method is advantageous because it maintains a closeness to the original data and easily interpretable, but the Standard Method's limitations are that the two groups may not be similarly heterogeneous and

the overall influence of human values may be low, making a comparison of the groups' Multiple Rs tenuous. In the Residual Method, a series of regressions is calculated that culminate in two regressions representing the direct and indirect influences of human values, respectively. By separating individuals according to which regression more accurately predicted their product preference, a determination can be made about whether each group differs on the third measure such as meaning and judgement preference or meat identification. The Residual Method is advantageous because it calculates the regressions on a single sample rather than sub-groups that may differ in their heterogeneity and the Residual Method uses residuals to gauge prediction accuracy rather than the Multiple Rs. However, the multitude of regressions performed in the Residual Method introduces some level of noise.

Technically, both methods should produce equivalent results, but Study 3 used the Residual Method to examine the product meaning approach hypothesis because human values were expected to weakly influence automobile and sunglasses ownerships. However, readers may recall that Study 1 showed that human values strongly influenced red meat consumption (especially through the direct route). Thus, both methods are appropriate for examining how the direct and indirect influences of human values on red meat consumption are associated with psychological identification, and both methods will be used to 1) verify that both methods do in fact yield similar results, and 2) enable a more comprehensive examination of the propositions.

For both the Standard Method and Residual Method examinations of the propositions, the data set used was Sample No. 1 and the measure of red meat identification was the 10-point bipolar adjective scale question instructing respondents to indicate the extent they are a “vegan (a person who eats vegetables, grains, etc. but no animal or seafood/fish products) versus an omnivore (a person who eats vegetables, grains, etc. and most animal and seafood/fish products)”. Whilst the item may appear to only measure meat eating behaviour, evidence that it measures identity comes from its strong correlation with the number of times in the three days prior to responding to the survey the participant had eaten red meat ($r=.38$,

$df=301$, $p<.001$, one-tailed) and weak correlation with the number of times in the three days prior to responding to the survey the participant had eaten white meat ($r=.05$, $df=301$, $p=.21$, one-tailed). Both red and white meat consumption should be equally correlated with omnivoreness as omnivoreness makes no distinction among types of meat; an omnivore is a person who eats any type of meat. Thus, the lack of a correlation with white meat consumption seems to support the claim made by Twigg (1983) and others (Adams, 1990, 1994; Fiddes, 1989; Heisley, 1990) that red meat is more central to meat identification than white meat.

Standard MethodMethodMethodMethod

Sample No. 1 was divided into two groups at the mean of the meat identification scale (mean of 7.9, $SD=2.4$), resulting in 206 high meat identifiers and 99 low meat identifiers. For each group, two regressions were performed; the first regressed human value factor scores onto red meat consumption, and the second regressed tangible attribute importance factor scores onto red meat consumption (Block 1) followed by human value factor scores onto the remaining red meat consumption variance (Block 2). In both regressions, the independent variables were entered on a step-wise basis to conserve degrees of freedom and the criteria required for entrance relaxed from $p<.05$ to $p<.10$ to enable a (slightly) more robust solution (see Chapter III for a fuller explanation of the entrance criteria). The detailed results of the regressions are reported in Table 26 (on page 227), but the summary Table 27 (on page 228) will be the focus of the inquiry.

Beginning with the left portion of the summary table, the two-block regressions, the far left column reports the Multiple Rs from regressing tangible attribute importances onto red meat consumption (Block 1). As expected, tangible attribute importances predicted the red meat consumption for low meat identifiers more strongly than for high meat identifiers (.22 versus .00). The second column from left reports the Multiple Rs from regressing human values onto the remaining red meat consumption variance not already accounted by tangible attribute importances (Block 2). The “Change in R” column reports the extent human values could predict product preference beyond tangible attribute importances, and so represents the

influence of human values that does not flow through tangible attribute importances (the direct route). As expected, the direct route is stronger for high meat identifiers than for low meat identifiers (.36 versus .08). The Multiple Rs from regressing human values only onto product preference is reported in the “human values only” column. The far right column marked “HVs via Tangible Attribute Importances” is the total influence of human values (the “Human Value Only” column) minus the “Change in R” from the two-block regression. The column represents the influence of human values on product preference that does flow via tangible attribute importances (the indirect route). As expected, the indirect route is stronger for low meat identifiers than for high meat identifiers (.14 versus .00).

Thus, the results of the Standard Method analysis support the propositions that tangible attribute importances predict red meat consumption more strongly for low meat identifiers than for high meat identifiers, and that the indirect route of value influence is stronger for low meat identifiers than for high meat identifiers whereas the reverse is true for the direct route.

Residual MethodMethodMethodMethod

Given that examination using the Standard Method supported the propositions, the aim of the current section is to replicate the findings using the Residual Method. In Stage 1, tangible attribute importances regressed onto human values, which leaves residuals in which the co-variation of tangible attribute importances is removed from human values. Stage 2 then regresses these residuals onto red meat consumption. That regression, therefore, represents the direct influence of human values as the influence via tangible attribute importances is excluded. For each individual, the residual of that regression showed how accurately the direct influence of human values predicts their red meat consumption and thus is called the Direct Influence Residual (DIR). To detect how accurately the indirect influence of human values can predict each individual's red meat consumption, Stage 3 regresses the original, full-variance human values onto the DIR. As the DIR does not contain the direct influence of human values, any further influence of human values on that residual must occur indirectly via tangible attribute importances. Thus, that regression shows

how accurately the indirect influence of human values can predict each individual's red meat consumption and is called the Indirect Influence Residual (IIR).

As the Residual Method is anchored in the relative prediction accuracy of the regressions, the absolute accuracy of prediction is less critical, and therefore, unlike the Standard Method, a step-wise entrance of independent variables was not needed. Thus, all independent variables were entered simultaneously (i.e., full entry). Moreover, the procedure generates more than 20 regression equations and so only the results of the final two regressions, those used to separate individuals based on strength of their direct influence (DIR) and indirect influence (IIR), are reported. The Multiple R from the direct influence regression was a reasonable .29 ($F(13,296)=2.0$, $p<.05$) whereas the Multiple R from the indirect influence regression was .07 ($F(13,296)=.1$, $p=.99$). However, the low strength of the indirect regression is probably due to less red meat consumption variance being available for the indirect regression to predict given that it attempts to predict red meat consumption once the direct influence of human values is removed.

Having calculated the DIR and IIR to represent the direct and the indirect influence of human values respectively, the next stage separated the sample into two groups according to whether the DIR or the IIR more accurately predicted their red meat consumption, resulting in 155 respondents for whom the DIR was a superior predictor of their red meat consumption (direct influence group), and 155 for whom the IIR was superior (indirect influence group). A t-test of their meat identification showed that the direct influence group did identify more strongly as meat eaters than the indirect influence group, but that the difference was not significant (mean of 7.88 versus 7.84, $t=-.1$, $df=308$, $p=.46$, one-tailed). Given that the Residual Method introduces some level of noise due to the multitude of regressions performed, the pattern of relations between meat identification and the direct and indirect influences of human values on red meat consumption that the Standard Method uncovered may be present in the Residual Method but obscured. Thus, comparing the extreme ends of the meat identification scale should provide a clearer account. Those individuals scoring between 4 and 7 on the 10-point meat identification scale were excluded and a new t-test calculated, which confirmed that the direct influence group identified

more strongly as meat eaters than the indirect influence group (mean of 8.83 versus 8.31, $t=-1.8$, $df=233$, $p<.05$, one-tailed).

Overall, both the Standard Method and Residual Method yielded similar, but not identical, results supporting the proposition that greater psychological identification is a feature of the direct route of value influence.

Table 26. Detailed results from regressing tangible attribute importances and human values onto the red meat consumption of low and high meat identifiers.

TWO-BLOCK REGRESSION ONTO RED MEAT CONSUMPTION

Identity Group	BLOCK 1			BLOCK 2			
	Tangible Attribute Importances		Mult. R for Block 1	Human Values		Multiple R for Block 1 and 2	Change in R
	Factors Entered ^t	Beta		Factors Entered ^t	Beta		
Low Meat Identity	FACTOR1	-.21	.22 * F= 4.7 df=1,97	FACTOR3	-.21	.30 ** F= 4.7 df=2,96	.08 *
High Meat Identity	[none]		.00	FACTOR6 FACTOR10 FACTOR2 FACTOR1 FACTOR9	-.21 -.18 -.17 .13 .11	.36 **** F=6.0 df=5,198	.36****

HUMAN VALUES ONLY REGRESSION ONTO RED MEAT CONSUMPTION

Identity Group	Human Values		Mult. R
	Factors Entered ^t	Beta	
Low Meat Identity	FACTOR3	-.22	.22 * F = 5.0 df= 1,97
High Meat Identity	FACTOR6 FACTOR10 FACTOR2 FACTOR1 FACTOR9	-.21 -.18 -.17 .13 .11	.36 **** F=6.0 df=5,198

Notes:

* p<.05

** p<.01

*** p<.001

**** p<.0001

^t = only factors significant at the p<.10 level were entered.

Table 27. Summary of Multiple Rs from two-block and human values only regression onto the red meat consumption of low and high meat identifiers.

RED MEAT CONSUMPTION	TWO-BLOCK REGRESSION			Human Values Only	HVs via Tangible Attribute Importances ^t
	Block 1	Block 2			
	Tangible Attribute Importances	Human Values	Change In R		
Low Meat Identity	.22 *	.30 ***	.08 *	.22 *	.14
High Meat Identity	.00	.36 *****	.36*****	.36 *****	.00

Notes:

* p<.05

** p<.01

*** p<.001

***** p<.0001

^t = test of significance unavailable.

Block 1 = tangible attribute importances onto product preference.

Block 2 = human values onto remaining product preference not already accounted by tangible attribute importances.

Change in R = indicates direct influence of human values.

HVs via Tangible Attribute Importances = indicates indirect influence of human values and are calculated by subtracting Change in R from Human Values Only.

ANALYSIS THREE: VALUE RELEVANCE

The current analysis examines Proposition #3 that greater value relevance is a feature of an expressive psychological function and so is associated with the direct influence of human values. The measures of value relevance will be discussed shortly, but presently readers are advised that because the measures of value relevance are only contained in Study 2 and the abilities to measure the direct and indirect influences of human values on product preference are only in Study 1 and Study 3, assessing whether value relevance is associated with the direct and indirect influences of human values is not possible. Therefore, only the association between value relevance and meaning and judgement preferences are examined, and Proposition #3 is restated as:

PROPOSITION 3 (restated): Value relevance is a feature of an expressive psychological function and therefore greater value relevance should be associated with a preference for symbolic meaning and an affective judgement and lesser value relevance should be associated with a preference for utilitarian meaning and a piecemeal judgement.

Given that Study 3 showed that meaning and judgement preferences were associated with the direct and indirect influences of human values in the directions hypothesised in the product meaning approach, any current analysis that shows value relevance is associated with meaning and judgement preferences would suggest that value relevance is probably associated with the direct and indirect influences of human values (though other interpretations are reviewed in the discussion). The current analysis also associates value relevance with terminal values as the suggestion was made that both value relevance and terminal values serve an expressive psychological function. The relation between instrumental and terminal values and instrumental and expressive psychological functions are examined more thoroughly in Analysis Four.

Value Relevance and Meaning and Judgement Preference and Judgement Preference Preference Preference

The readers might recall that the responses to the Rokeach Value Survey cannot tap value relevance because the rating procedure forces a distribution and thus cannot distinguish those individuals that might, if given the opportunity, rate all the values more highly than other individuals. To measure human values in a way that can tap value relevance without being redundant to the Rokeach Value Survey, the survey in Study 2 contained two open-ended questions immediately following the Rokeach Value Survey; “Referring to the values listed on the previous page, do you feel that there are some values that are important to you but do not appear in the list? If so, what are they?” and “Can you think of other values that may be important to New Zealanders but are not listed”. Some human values important to the respondents but not included in the Rokeach Value Survey were Supporting Success, Health, Spirituality, Community, Being Your Own Person, and Adaptability, and some human values believed to be important to New Zealanders but not in the Rokeach Value Survey were Family Cohesiveness, Ethnic Identity, Pride in Work, Green Image and Having a Positive Attitude.

If human values in general are important to a respondent then he or she should be motivated to fill out the open-ended question of the human values that are important to him or her, and should also be aware of the values important to typical New Zealanders. Consequently, no matter whether the human values respondents listed were in the open-ended question about human values important to themselves or in the open-ended question about human values important to New Zealanders, the more human values respondents listed the greater the probability that human values in general are important to them (e.g., value relevant). Thus, value relevance was indexed as the total number of human values listed in both open-ended questions ($\text{mean}=.78$, $\text{SD}=1.66$). The number of listed values ranged from 0 to 8, but most of the respondents listed none, resulting in a highly skewed scale ($\text{skewness}=2.6$). Thus, the skewness of the variable was corrected to the more acceptable level of 1.5 by taking the variable’s square root. The calculation resulted in a new mean of .44 ($\text{SD}=.77$).

As Study 2 instructed respondents to rate the meaning and judgement items twice, the first referring automobiles and the second to sunglasses, value relevance is examined against meaning and judgement preferences for each product. In consumer considerations of automobiles, 90 participants rated the Utilitarian Meaning and Piecemeal Judgement Scale more highly than the Symbolic Meaning and Affective Judgement Scale and 17 participants rated the reverse. A t-test showed that those who rated symbolic meaning and an affective judgement more highly than utilitarian meaning and a piecemeal judgement also scored higher in the value relevance index and that those preferring utilitarian meaning and a piecemeal judgement scored lower (skewness corrected mean of .87 versus .34, $t=-2.7$, $df=105$, $p<.01$, one-tailed). However, the relatively low number of respondents in the latter group ($n=17$) suggests that the results should be interpreted with some degree of caution.

In consumer considerations of sunglasses, 73 respondents rated the Utilitarian Meaning and Piecemeal Judgement Scale higher than the Symbolic Meaning and Affective Judgement Scale and 36 respondents rated the reverse. A t-test showed that those who rated symbolic meaning and an affective judgement more highly than utilitarian meaning and a piecemeal judgement also scored higher in the value relevance index and that those preferring utilitarian meaning and a piecemeal judgement scored lower (skewness corrected mean of .63 versus .29, $t=-2.3$, $df=107$, $p<.01$, one-tailed). Thus, although the number of respondents in the automobile symbolic meaning and affective judgement group is small, the number of respondents in the sunglasses symbolic meaning and affective judgement group is acceptable, and thus the proposition that greater value relevance should be associated with a preference for symbolic meaning and an affective judgement and lesser value relevance should be associated with a preference for utilitarian meaning and a piecemeal judgement can be cautiously accepted.

Value Relevance and Instrumental and Terminal Values
 Relevance and Instrumental and Terminal Values
 Relevance and Instrumental and Terminal Values
 Instrumental and Terminal Values

The aim of the current section is to assess whether preferences for instrumental

and terminal values are associated with value relevance. In Proposition #3, greater value relevance is suggested to be a feature of an expressive psychological function, and in Proposition #5, terminal values are suggested to serve an expressive function. Thus, both value relevance and terminal values represent an expressive function and should be positively associated. Moreover, in Proposition #4 instrumental values are suggested to serve an instrumental psychological function, and that the expressive and instrumental functions are in opposition, a weaker value relevance should be associated with a preference for instrumental values.

Unlike the examination of value relevance and meaning and judgement preference, the inquiry of value relevance and instrumental and terminal value preference uses two indices of value relevance. The first index is the same as that used in the previous analysis; the number of values listed on the open-ended questions of values important to the respondent or to New Zealanders but not listed in the Rokeach Value Survey. If value relevance and terminal values both represent an expressive psychological function and instrumental values and low value relevance both represent an instrumental function, then a preference for terminal values to instrumental values should be associated with a higher score on the index of value relevance, whereas a preference for instrumental values to terminal values should be associated with a lower value relevance score. To make the assessment, for each individual in Sample No. 2 the mean rating he or she gave to the 18 instrumental values was calculated as was the mean rating he or she gave to the 18 terminal values. Individuals were then placed into two groups according to which was higher; 46 respondents preferred instrumental values to terminal values and 64 respondents preferred terminal values to instrumental values. The mean number of values listed on the open-ended questions for the instrumental value group was .28 (skewness corrected) and for the terminal value group was .53 (also skewness corrected); a significant difference ($t=1.7$, $df=108$, $p<.05$, one-tailed). Thus, as expected, those emphasising terminal values scored higher in value relevance whereas those emphasising instrumental values scored lower.

A second index of value relevance that can be associated with instrumental and terminal value preferences is the mean rating the individual gave to all the Rokeach

Value Survey items. Those individuals who rate the values on the Rokeach Value Survey more highly should also tend to prefer terminal values to instrumental values, and conversely those who rate the values less in importance should prefer instrumental values to terminal values. Unfortunately, all three studies in the current thesis employed a forced-distribution response format to the Rokeach Value Survey and therefore the mean rating is the same for all individuals. Consequently, a different data set was used, Ng et al. (1982), which obtained Rokeach Value Survey preferences for student samples in nine East Eurasian and Pacific Insular countries. As that study instructed participants to rate the values on a 9-point scale of importance, the responses are suitable for the current purpose. In the interest of consistency with the previous analysis, all non-New Zealand respondents were excluded.

To test the proposition that a preference for terminal values is associated with a greater preference for all human values, firstly for each individual the mean rating he or she gave to the 18 instrumental values was calculated as was the mean rating he or she gave to the 18 terminal values. Individuals were then placed into two groups according to which was higher; 48 respondents preferred instrumental values to terminal values and 42 respondents preferred terminal values to instrumental values. Next, the mean rating each individual gave to all 36 human values (both instrumental and terminal combined) was calculated and the groups compared. As expected, the group that preferred terminal values to instrumental values rated all human values significantly higher than the group that preferred instrumental values to terminal values (mean of 7.1 versus 6.7)($t=2.1$, $df=88$, $p<.05$, one-tailed).

Overall, the current set of analyses confirm that greater value relevance is associated with a preference for terminal values to instrumental values and with a preference for symbolic meaning and an affective judgement to utilitarian meaning and a piecemeal judgement, whereas lower value relevance is associated with a preference for instrumental values to terminal values and with a preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement.

ANALYSIS FOUR: INSTRUMENTAL AND TERMINAL VALUES

Given that Analysis Three showed that value relevance is related to meaning and judgement preferences and instrumental and terminal values, the current analysis more thoroughly examines instrumental and terminal values. Proposition #4 was that instrumental human values serve an instrumental psychological function and therefore a preference for instrumental values should be associated with the indirect influence of human values, and Proposition #5 was that terminal human values serve an expressive psychological function and therefore a preference for terminal values should be associated with the direct influence of human values.

The current analysis first probes the association between instrumental and terminal values and meaning and judgement preferences, and then examines the routes through which instrumental and terminal values influence product preference.

Instrumental and Terminal Values and the Meaning and Judgement Preferences

The aim of the current section is to examine whether meaning and judgement preferences co-vary with instrumental and terminal value preferences. However, as shown repeatedly throughout Part II of the current thesis, the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is robust and therefore can probably only be modified slightly, not reversed, by terminal values. Thus, support for Proposition #4 would be found if the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater for those individuals preferring instrumental values to terminal values. Conversely, support for Proposition #5 would be found if the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was weaker for those individuals preferring terminal values to instrumental values.

The examination of the meaning and judgement elements of Propositions #4 and #5 are made with Sample No. 2 because respondents indicated their meaning and

judgement preferences for both automobiles and sunglasses. The participants were divided into two groups according to which they rated higher; the 18 instrumental values or the 18 terminal values. Forty-six respondents preferred instrumental values to terminal values and 64 respondents preferred terminal values to instrumental values. These two groups' meaning and judgement preferences for automobiles are shown in Figure 8 (on page 251) and were compared with a 2(instrumental group versus terminal group) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) mixed ANOVA, which resulted in a significant main effect (the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale ($F(1,98)=135.0$, $p<.001$, $MS_{\text{Error}}=1.34$) and a significant interaction effect ($F(1,98)=13.4$, $p<.001$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the propositions, the significant interaction confirms that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is greater for the group that prefers instrumental values to terminal values, and that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is weaker for the group that prefers terminal values to instrumental values.

The two groups were also compared on their meaning and judgement preferences for sunglasses (see Figure 8 on page 251). A 2(instrumental group versus terminal group) x 2(Utilitarian Meaning and Piecemeal Judgement Scale versus Symbolic Meaning and Affective Judgement Scale) mixed ANOVA showed that the Utilitarian Meaning and Piecemeal Judgement Scale was rated more highly than the Symbolic Meaning and Affective Judgement Scale ($F(1,105)=22.6$, $p<.001$, $MS_{\text{Error}}=1.49$) and that the factors significantly interact ($F(1,105)=13.6$, $p<.001$). As the test variables were ordered into the SPSS ANOVA procedure such that the interaction made the appropriate comparison vis-à-vis the propositions, the significant interaction confirms that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is greater for the group that prefers instrumental values to terminal values, and that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is

weaker for the group that prefers terminal values to instrumental values.

Instrumental and Terminal Values and the Direct and Indirect Routes

Having shown that instrumental and terminal value preferences are related to meaning and judgement preferences for both automobiles and sunglasses, the current section examines the remaining elements of Propositions #4 and #5; whether instrumental and terminal values are associated with the indirect and direct influences of human values respectively. Instrumental and terminal values may manifest in the value influence routes in one of two ways. Firstly, instrumental and terminal values may operate through separate routes to influence product preference; instrumental values may operate through the indirect route and terminal through the direct. The second way instrumental and terminal values may manifest in the routes is that individuals who prefer one type of value to the other may apply all their human values (both instrumental and terminal) directly or indirectly; those individuals who prefer terminal values to instrumental may tend to apply all their human values directly, whereas those who prefer instrumental values to terminal values may tend to all apply their human values indirectly via tangible attribute importances. Both possible manifestations are examined utilising Sample No. 1, which allows comparison with the findings of the attribute-mediation approach test (Study 1) and provides the most diverse exploration (given that it comprises eight product classes ownerships). Whether instrumental and terminal values operate through separate routes is examined first, followed by whether individuals preferring one type of value to the other tend to apply all their values directly or indirectly.

To examine whether instrumental and terminal values operate through separate routes, the regression procedure used in Study 1 to examine the attribute-mediation approach hypotheses was performed on instrumental and terminal values separately. To review: two regression analyses were performed for each of the eight product classes: three automobile ownerships (Smaller Cars, Larger Cars, Luxury Cars), three overseas holiday destination groups (Major Cities, Prestige and Structured, Safe and Tropical), and two types of meat consumption (red and white). In the first regression analysis, human values alone were regressed onto product preference.

The second regression analysis entered tangible attribute importances onto product preference (Block 1), then entered human values onto the remainder of product preference variance (Block 2).

Thus, as the human values alone regression and two-block regression were performed on each of the eight product classes and separately with instrumental and terminal values, the following 32 regressions were performed:

- Instrumental values were regressed onto Smaller Family Car ownership.
- Instrumental values were regressed onto Larger Family Car ownership.
- Instrumental values were regressed onto Luxury Car ownership.
- Instrumental values were regressed onto holidaying at Major Cities destinations.
- Instrumental values were regressed onto holidaying at Prestige and Structured destinations.
- Instrumental values were regressed onto holidaying at Safe and Tropical destinations.
- Instrumental values were regressed onto red meat consumption.
- Instrumental values were regressed onto white meat consumption.
- Terminal values were regressed onto Smaller Family Car ownership.
- Terminal values were regressed onto Larger Family Car ownership.
- Terminal values were regressed onto Luxury Car ownership.
- Terminal values were regressed onto holidaying at Major Cities destinations.
- Terminal values were regressed onto holidaying at Prestige and Structured destinations.
- Terminal values were regressed onto holidaying at Safe and Tropical destinations.
- Terminal values were regressed onto red meat consumption.
- Terminal values were regressed onto white meat consumption.
- The automobile tangible attribute importances were regressed onto participants' Smaller Family Car ownerships (Block 1), followed by instrumental values

(Block 2).

- The automobile tangible attribute importances were regressed onto participants' Larger Family Car ownerships (Block 1), followed by instrumental values (Block 2).
- The automobile tangible attribute importances were regressed onto participants' Luxury Car ownerships (Block 1), followed by instrumental values (Block 2).
- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Major Cities destinations (Block 1), followed by instrumental values (Block 2).
- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Prestige and Structured destinations (Block 1), followed by instrumental values (Block 2).
- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Safe and Tropical destinations (Block 1), followed by instrumental values (Block 2).
- The food tangible attribute importances were regressed onto participants' red meat consumption (Block 1), followed by instrumental values (Block 2).
- The food tangible attribute importances were regressed onto participants' white meat consumption (Block 1), followed by instrumental values (Block 2).
- The automobile tangible attribute importances were regressed onto participants' Smaller Family Car ownerships (Block 1), followed by terminal values (Block 2).
- The automobile tangible attribute importances were regressed onto participants' Larger Family Car ownerships (Block 1), followed by terminal values (Block 2).
- The automobile tangible attribute importances were regressed onto participants' Luxury Car ownerships (Block 1), followed by terminal values (Block 2).
- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Major Cities destinations (Block 1), followed by terminal values (Block 2).
- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Prestige and Structured destinations (Block 1), followed by terminal values (Block 2).

- The holiday destination tangible attribute importances were regressed onto participants' holidaying at Safe and Tropical destinations (Block 1), followed by terminal values (Block 2).
- The food tangible attribute importances were regressed onto participants' red meat consumption (Block 1), followed by terminal values (Block 2).
- The food tangible attribute importances were regressed onto participants' white meat consumption (Block 1), followed by terminal values (Block 2).

If instrumental and terminal values do operate through separate routes, the degree of product preference variance each can account for when mediating and not mediating through tangible attribute importances should vary. For example, when terminal values are examined, if Block 2 of the two-block regression can explain a significant amount of product preference variance after the influence of tangible attribute importances have been removed, then terminal values may operate through the direct route. The interpretation would be validated if the terminal value only regressions were strong as it would show that the influence occurs directly. Moreover, when instrumental values are examined, if Block 2 of the two-block regression cannot explain a significant amount of product preference variance after the influence of tangible attribute importances have been removed, then instrumental values may operate through the indirect route. The interpretation would be validated if the instrumental value only regressions were strong as it would show that all the influence occurs indirectly via tangible attribute importances.

Before reporting the results of the 32 regressions, three issues are of note. Firstly, like Study 1 human value and tangible attribute importance factor scores were entered into the regressions instead of the full items. Automobile tangible attribute importances comprised 5 factors, holiday destination tangible attribute importances 6 factors and food tangible attribute importances 6 factors. However, the 13 human value factors uncovered in Study 1 could not be used in the current analysis because in Study 1 instrumental and terminal values were factor analysed conjointly, and consequently the instrumental and terminal values are intermixed

within the 13 factors. As the current procedure enters instrumental and terminal values into separate regressions, instrumental and terminal values must be factor analysed separately. The 18 instrumental values were grouped through factor analysis (principal components extraction with no rotation) resulting in 7 factors accounting for 58% of the variance, and the reduction of the 18 terminal values resulted in 6 factors accounting for 61% of the variance. Both factor analyses met the four criteria that help ensure a stable factor structure: a minimum sample size of 100 to 200 (Comrey, 1978), a minimum ratio of participants to variables of between 2:1 and 10:1 (Gorsuch, 1983; Nunnally, 1978), a minimum ratio of participants to factors 2:1 (Cattell, 1978) and a minimum ratio of variables to factors of 6:1 (Cattell, 1978). Thus, for the 16 regressions entering terminal values, the 6 terminal value factors were entered, and for the 16 regressions entering instrumental values, the 7 instrumental factors were entered.

A second issue of note is that as the number of human value factors in these regression analyses is much less than in the full human values factor analysis in Study 1 (6 or 7 versus 13), the degrees of freedom lost is acceptable and a step-wise entrance of independent variables not necessary. Thus, all independent variables were entered simultaneously (i.e., full entry method). A third issue of note is that the following factors that may affect the stability and integrity of the regression analyses were examined: linearity, homoscedacity, normality of error terms, multi-collinearity and a low subject-to-variable ratio (Hair, Anderson, Tatham & Black, 1992). A visual inspection of the residual plots indicated each regression equation did not deviate substantially from linearity and was homoscedastic. An inspection of the normal probability plots suggested that the distributions were essentially normal. Moreover, as the independent variables are human value and tangible attribute importance scores from un-rotated factor analyses, a perusal of the correlation matrix confirmed that multi-collinearity is not an impediment. Finally, the minimum subject-to-variable ratio suggested ranges from 10 to an absolute minimum of 4 respondents per variable, for which each regression in the study easily exceeds.

The Multiple Rs of the instrumental and terminal value regression analyses and their significance are summarised in Table 28 (on page 252)(the beta weights for the

independent variables are not reported). Referring to the “Change in R” column in the two-block regressions, instrumental values did significantly predict Luxury Car ownership and red meat consumption beyond that predicted by tangible attribute importances, whereas terminal values only predicted red meat consumption beyond tangible attribute importances. Thus, the direct influence of instrumental values is slightly stronger than the direct influence of terminal values. Referring to the “Human Values Only” column, instrumental values could significantly predict Luxury Car ownership, Prestige and Structured holidaying, and red meat consumption, whereas terminal values could only predict red meat consumption. The far right-hand column reports the influence of human values on product preference that occurs via tangible attribute importances, and shows that instrumental and terminal values are similar in strength, except Prestige and Structured holiday destinations in which the indirect route of instrumental values is slightly stronger than the indirect route of terminal values (.21 versus .15).

Overall, instrumental and terminal values do not appear to operate through separate routes. Instrumental values seem to have a slightly stronger influence on product preference than terminal values, but the influence is evenly split between the direct and indirect routes. For example, for the two product classes that instrumental values alone could significantly predict product preference but terminal values did not, that is, Luxury Cars and Prestige and Structured holiday destinations, for the former product the increased influence of instrumental values occurs through the direct route whereas for the latter product the increased influence occurs via tangible attribute importances.

Thus far in assessing Propositions #4 and #5, the analyses have shown that instrumental and terminal are associated with separate meaning and judgement preferences but do not appear to operate through separate routes. The results may appear incongruent except that another avenue exists for how instrumental and terminal values may manifest in the value influence routes. Rather than instrumental and terminal values being applied differentially, individuals who prefer one value type to the other may tend to express all their values (both instrumental and terminal) through the respective routes.

Thus, the current section examines whether individuals who prefer one type of value to the other tend to express all their human values through separate routes by dividing individuals into two groups based on relative strengths of their direct and indirect routes of value influence, and then comparing the groups' instrumental and terminal value preferences. Those individuals for whom the direct influence of all their human values more accurately predicts their product preference should prefer terminal values to instrumental values, and those individuals for whom the indirect influence of all their human values more accurately predicts their product preference should prefer instrumental values to terminal values. Unfortunately, the Residual Method used in Study 3 for separating individuals into two groups according the relative predictive power of the direct and indirect influences of human values was unfeasible for the current analysis that uses Sample No. 1. Study 3 only comprised three product classes (Smaller Family Cars, Larger Family Car and sunglasses), which was manageable given that the Residual Method employed for each product required 17 regression analyses. Sample No. 1 comprises eight product class ownerships (e.g., Smaller Family Car ownership, Larger Family Car ownership, Luxury Car ownership, holidaying at Major Cities destinations, holidaying at Prestige and Structured destinations, holidaying at Safe and Tropical destinations, red meat consumption, and white meat consumption), and consequently using the Residual Method for the current analyses would require more than one-hundred regressions (obviously unmanageable).

Discriminant analysis is more appropriate for the current purpose than the Residual Method because discriminant analysis can focus on product ownership at the product-category level (e.g., automobiles, overseas holiday destinations, and meat types) rather than the product class level and thus substantially reduce the number of analyses. In the investigation of each product category, individuals would be separated into groups based their most frequently purchased product class. For instance, in the automobile category, individuals would be placed into three groups based on whether they had owned more Smaller Family Cars, Larger Family Cars or luxury cars. Following the separation of the sample, two discriminant analyses would be performed which attempt to predict these ownership groups: one of the

analyses would assess the direct influence of human values and the other the indirect influence. Using the results of these two discriminant analyses, a determination can be made whether, for each individual, the direct route or indirect route yielded a stronger prediction of their most frequently purchased car class. If the propositions are correct, then for those individuals for whom the direct influence discriminant analysis accurately predicted their most frequently purchased car class but the indirect influence discriminant analysis did not, terminal values should be preferred to a greater extent than terminal values are preferred by those individuals for whom the indirect influence discriminant analysis accurately predicted their most frequently purchased car class but the direct influence discriminant analysis did not. Conversely, for those individuals for whom the indirect influence discriminant analysis accurately predicted their most frequently purchased car class but the indirect influence discriminant analysis did not, instrumental values should be preferred to a greater extent than instrumental values are preferred by those individuals for whom the direct influence discriminant analysis accurately predicted their most frequently purchased car class but the indirect influence discriminant analysis did not. The discriminant analysis and separation of the sample would be carried out again for the individuals' most frequently visited holiday destination and again for their most frequently consumed meat.

Despite the advantage of the discriminant analysis in requiring fewer analyses than the Residual Method, one limitation of discriminant analysis for the current purpose is that the direct and indirect influences of human values cannot be determined with precision. Discriminant analysis does not allow residuals to be used as the dependent variable (readers would recall that in the third stage of the Residual Method human values are regressed onto the residual of product ownership after the direct influence of human values has been removed). Due to the limitation, the discriminant analysis that is meant to represent the direct route of value influence will enter human values to predict the individual's most frequently purchased product class, whereas the discriminant analysis that is meant to represent the indirect route of value influence will enter tangible attribute importances to predict the individual's most frequently purchased product class. Theoretically, at least, the relative predictive power of an individual's tangible attribute importances verses

their human values should be similar, but not identical, to the relative predictive power of their indirect versus direct routes of value influence. The procedure is not as precise as the Residual Method and caution is warranted when interpreting the results (a caution that will be more fully discussed in the next section).

Given the limitation of the discriminant analysis procedure, the propositions are restated as the following; for those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, terminal values should be preferred to a greater extent than terminal values are preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the human value discriminant analysis did not. Conversely, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, instrumental values should be preferred to a greater extent than instrumental values are preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not.

The propositions are examined for each of the three product categories: automobiles, overseas holidaying and meat types.

Automobile OwnershipOwnershipOwnershipOwnership

For the automobile category, the separation of respondents into their most frequently purchased car class resulted in 136 Smaller Family Car owners, 66 Larger Family Car owners, and 20 Luxury Car owners. The first discriminant analysis entered the 13 human value factors to predict each individual's most frequently owned car class. The readers might recall from Study 1 that the 13 human value factors intermixed instrumental and terminal values. As the suggestion is now made that instrumental and terminal values are not applied differentially, but that individuals who prefer one value type to the other may tend to express all their

values (both instrumental and terminal) through the respective routes, both instrumental and terminal values must be used as predictors. The discriminant analysis yielded two functions neither of which were significant (Function 1: Eigenvalue=.07, df=26, p=.51)(Function 2: Eigenvalue=.05, df=12, p=.60). The non-significance of the functions does not necessarily imply that no group memberships could be predicted by the functions; the significance refers to the ability of the functions to predict the group memberships of the entire sample. Overall, 45% of the group memberships could be correctly predicted by the human value factors, significantly better than chance (Press's Q=13.7, p<.01) though the significance of the Press's Q may be affected by the large sample size. The Box's M for the analysis (M=230.4, p=.34) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices. The second discriminant analysis entered the 5 automobile tangible attribute importance factors to predict each individual's most frequently owned car class, which produced two functions (Function 1: Eigenvalue=.25, df=10, p<.001)(Function 2: Eigenvalue=.02, df=4, p=.36). Both functions together could predict 57% of the automobile class ownerships, significantly better than chance (Press's Q=56.9, p<.01). The Box's M for the analysis (M=65.6, p<.001) is significant, indicating that the groups may not meet the requirement in discriminant analysis of equal co-variance matrices. For both discriminant analyses, the sample size exceeded the recommended 20 respondents per independent variable (Hair, Tatham & Black, 1992), and as the human value and tangible attribute importance factors were not rotated, a perusal of the correlation matrix confirmed that multi-collinearity is not an obstacle.

Following the computation of the human values and tangible attribute importances discriminant analyses, individuals were divided into four groups based on which analysis (or analyses) more accurately predicted their most frequently purchased automobile class. The division resulted in 37 respondents for whom the human value discriminant analysis correctly predicted their most frequently purchased car class but the tangible attribute importance discriminant could not (termed the "human values group"), 64 respondents that the tangible attribute importance discriminant analysis predicted their most frequently purchased car class but the human value discriminant did not (termed the "tangible attribute importances

group”), 59 respondents for whom both analyses predicted their most frequently purchased car class (termed the “both group”), and 62 respondents that neither predicted their most frequently purchased car class.

Before comparing instrumental and terminal value preferences for these groups, instrumental and terminal value scores were calculated for each individual. The instrumental value score was the mean rating the individual gave to the 18 instrumental values and the terminal value score was the mean rating the individual gave to the 18 terminal values. The mean instrumental and terminal value scores for the three groups that one or both of the discriminant analyses correctly predicted their most frequently purchased car class are presented in Figure 9 (beginning on page 253). As speculating a pattern of preferences for the group for which both human values and tangible attribute importances predicted their most frequently purchased car class is problematic, only the human value group and tangible attribute importance group are compared. Consistent with the propositions, for those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased car class but the tangible attribute importance discriminant analysis did not, terminal values were preferred to a greater extent than instrumental values were preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased car class but the human value discriminant analysis did not (mean of 2.15 and SD of .18 versus mean of 2.08 and SD of .15, $t=2.0$, $df=99$, $p<.05$, one-tailed). Conversely, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased car class but the human value discriminant analysis did not, instrumental values were preferred to a greater extent than terminal values were preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased car class but the tangible attribute importance discriminant analysis did not (mean of 2.0 and SD of .15 versus mean of 1.91 and SD of .18, $t=-2.6$, $df=99$, $p<.01$, one-tailed).

Overseas Holidaying

For the overseas holidaying product category, the separation of respondents into their most frequently visited destination group resulted in 137 respondents for Major Cities, 10 for Prestige and Structured, and 40 Safe and Tropical destinations. The first discriminant analysis entered the 13 human value factors to predict each individual's most frequently visited holiday destination, and yielded two non-significant functions (Function 1: Eigenvalue=.13, df=26, p=.20)(Function 2: Eigenvalue=.06, df=12, p=.64). These two functions correctly predicted 51% of the group memberships, significantly better than chance (Press's Q=25.6, p<.01) though the significance of the Press's Q may be affected by the large sample size. The Box's M for the analysis (M=236.9, p<.001) is significant, indicating that the groups may not meet the requirement in discriminant analysis of equal co-variance matrices. The second discriminant analysis entered the 6 holiday destination tangible attribute importance factors to predict each individual's most frequently visited holiday destination, and produced two non-significant functions (Function 1: Eigenvalue=.08, df=12, p=.07)(Function 2: Eigenvalue=.03, df=5, p=.38) which together could predict 44% of the group memberships, significantly better than chance (Press's Q=9.3, p<.01). The Box's M for the analysis (M=59.3, p=.20) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices.

The division of the sample based on the relative prediction accuracy of the tangible attribute importance discriminant analysis and the human value discriminant analysis resulted in 55 respondents for whom the human value discriminant analysis correctly predicted their most frequently visited destination but the tangible attribute importance discriminant could not (the human values group), 41 respondents that the tangible attribute importance discriminant analysis predicted their group membership but the human value discriminant did not (the tangible attribute importances group), 40 respondents for whom both analyses predicted their group membership (the both group), and 51 respondents that neither predicted their group membership.

The means on instrumental and terminal values for the first three groups are

reported in Figure 9 (beginning on page 253). As speculating a pattern of preferences for the group for which both human values and tangible attribute importances predicted their most frequently visited destination is problematic, only the human value group and tangible attribute importance group are compared. Consistent with the propositions, for those individuals for whom the human value discriminant analysis accurately predicted their most frequently visited holiday destination but the tangible attribute importance discriminant analysis did not, terminal values were preferred to a greater extent than terminal values were preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently visited holiday destination but the human value discriminant analysis did not (mean of 2.14 and SD of .16 versus mean of 2.05 and SD of .13, $t=3.1$, $df=94$, $p<.01$, one-tailed). Conversely, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently visited holiday destination but the tangible attribute importance discriminant analysis did not, instrumental values were preferred to a greater extent than instrumental values were preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently visited holiday destination but the tangible attribute importance discriminant analysis did not (mean of 2.01 and SD of .16 versus mean of 1.92 and SD of .14, $t=-2.8$, $df=99$, $p<.01$, one-tailed).

Meat ConsumptionConsumptionConsumptionConsumption

For the meat product category, the separation of respondents into their most frequently consumed meat type resulted in 129 in the red meat group and 174 in the white meat group. Those who consumed equal amounts of each were placed in the white meat group. The first discriminant analysis entered the 13 human value factors to predict each individual's most frequently consumed meat type, and yielded a significant function (Eigenvalue=.09, $df=13$, $p<.05$) that correctly predicted 62% of the group memberships, significantly better than chance (Press's Q=17.6, $p<.01$). The Box's M for the analysis (M=94.8, $p=.50$) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices. The second discriminant analysis entered the 6 food tangible attribute importance

factors to predict each individual's most frequently consumed meat type, and resulted in a significant function ($\text{Eigenvalue}=.05$, $\text{df}=12$, $p<.05$) that predicted 61% of the group memberships, significantly better than chance ($\text{Press's } Q=14.8$, $p<.01$). The Box's M for the analysis ($M=15.4$, $p=.82$) is non-significant, indicating that the groups meet the requirement in discriminant analysis of equal co-variance matrices. The division of the sample based on the relative prediction accuracy of the tangible attribute importance discriminant analysis and the human value discriminant analysis resulted in 58 respondents for whom the human value discriminant analysis correctly predicted their most frequently consumed meat type but the tangible attribute importance discriminant could not (the human values group), 56 respondents that the tangible attribute importance discriminant analysis predicted their group membership but the human value discriminant did not (the tangible attribute importances group), 129 respondents for whom both analyses predicted their group membership (the both group), and 60 respondents that neither predicted their group membership.

The means on instrumental and terminal values for the first three groups are reported in Figure 9 (beginning on page 253). As speculating a pattern of preferences for the group for which both human values and tangible attribute importances predicted their most frequently visited destination is problematic, only the human value group and tangible attribute importance group are compared. Contrary to the propositions, for those individuals for whom the human value discriminant analysis accurately predicted their most frequently consumed meat type but the tangible attribute importance discriminant analysis did not, terminal values were preferred to same the extent that terminal values were preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently consumed meat type but the human value discriminant analysis did not (mean of 2.09 and SD of .16 versus mean of 2.11 and SD of .14, $t=-.6$, $\text{df}=112$ $p=.27$, one-tailed). Likewise, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently consumed meat type but the tangible attribute importance discriminant analysis did not, instrumental values were preferred to the same extent that instrumental values were preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently consumed

meat type but the tangible attribute importance discriminant analysis did not (mean of 1.96 and SD of .15 versus mean of 1.98 and SD of .16, $t=.5$, $df=112$, $p=.32$, one-tailed).

Overall, the examination of instrumental and terminal values showed that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is greater for the group that prefers instrumental values to terminal values, and that the preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement is weaker for the group that prefers terminal values to instrumental values. The results of the discriminant analyses and related procedures for automobile and overseas holidaying are consistent with the propositions that for those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, terminal values should be preferred to a greater extent than terminal values are preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the human value discriminant analysis did not. Conversely, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, instrumental values should be preferred to a greater extent than instrumental values are preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not. Why the pattern did not emerge in meat consumption is uncertain but possible causes are reviewed in the discussion section.

Figure 8. Means of meaning and judgement scales for groups formed according to instrumental and terminal value preference.

Note: Scale of 1-7, "Strongly Disagree" to "Strongly Agree".

Table 28. Summary of Multiple Rs from regressing tangible attribute importances and instrumental and terminal human values onto product preferences.

INSTRUMENTAL VALUES					
PRODUCT PREFERENCE	TWO-BLOCK REGRESSION			Human Values Only	HVs via Tangible Attribute Importances ^t
	Tangible Attribute Importances	Human Values	Change In R		
<u>Automobile Ownership</u>					
Smaller Cars	.47 ***	.49 ***	.02	.21	.19
Larger Cars	.41 ***	.44 ***	.03	.16	.13
Luxury Cars	.22 *	.32 **	.10*	.24 *	.14
<u>Overseas Holidaying</u>					
Major Cities	.27 *	.34 *	.07	.21	.14
Prestige and Structure	.30 **	.37 ***	.07	.28 *	.21
Safe and Tropical	.23	.29	.07	.17	.10
<u>Meat Consumption</u>					
Red Meat	.18	.30 **	.12 *	.27 **	.15
White Meat	.16	.24	.08	.16	.08

TERMINAL VALUES					
PRODUCT PREFERENCE	TWO-BLOCK REGRESSION			Human Values Only	HVs via Tangible Attribute Importances ^t
	Tangible Attribute Importances	Human Values	Change In R		
<u>Automobile Ownership</u>					
Smaller Cars	.47 ***	.49 ***	.02	.19	.17
Larger Cars	.41 ***	.43 ***	.02	.20	.18
Luxury Cars	.22 *	.28 *	.06	.21	.15
<u>Overseas Holidaying</u>					
Major Cities	.27 *	.31	.04	.20	.16
Prestige and Structure	.30 **	.31	.01	.16	.15
Safe and Tropical	.23	.26	.03	.16	.13
<u>Meat Consumption</u>					
Red Meat	.18	.29 *	.11 *	.25 *	.14
White Meat	.16	.24	.08	.16	.08

Notes:

* p<.05

** p<.01

*** p<.001

^t = test of significance unavailable.

Figure 9. Average instrumental and terminal value preferences for groups formed according to the ability of human values and tangible attribute importances to predict automobile ownership, overseas holidaying and meat consumption.

Notes:

Scale of human value preference 1-3, “Least Important” to “Most Important”.

HV Group = Human values discriminant analysis correctly predicted their product purchase but tangible attribute importances discriminant analysis did not. (automobile ownership n=37) (overseas holidaying n=55) (meat types n=129)

HV and TAI Group = Both human values discriminant analysis and tangible attribute importances discriminant analysis correctly predicted their product purchase. (automobile ownership n=59) (overseas holidaying n=40) (meat types n=129)

TAI Group = Tangible attribute importances discriminant analysis correctly predicted their product purchase but human values discriminant analysis did not. (automobile n=64) (overseas holidaying n=41) (meat types n=56).

Figure 9. Average instrumental and terminal value preferences for groups formed according to the ability of human values and tangible attribute importances to predict automobile ownership, overseas holidaying and meat consumption (continued).

Notes:

Scale of human value preference 1-3, “Least Important” to “Most Important”.

HV Group = Human values discriminant analysis correctly predicted their product purchase but tangible attribute importances discriminant analysis did not. (automobile ownership n=37) (overseas holidaying n=55) (meat types n=129)

HV and TAI Group = Both human values discriminant analysis and tangible attribute importances discriminant analysis correctly predicted their product purchase. (automobile ownership n=59) (overseas holidaying n=40) (meat types n=129)

TAI Group = Tangible attribute importances discriminant analysis correctly predicted their product purchase but human values discriminant analysis did not. (automobile ownership n=64) (overseas holidaying n=41) (meat types n=56).

DISCUSSION

The discussion briefly reviews each finding and their support for the propositions, and the next chapter presents a more thorough critique of the propositions and findings, and integrates the results of all four studies.

With Study 2 having shown that individuals tend to prefer the same meanings and judgements for both automobiles and sunglasses, Analysis One only examined whether individuals also tended to apply their human values through the same route. Analysis One found that the Residual Method employed in Study 3 to examine the product meaning approach hypothesis did tend to place individuals into the same value influence group for Smaller Family Cars, Larger Family Cars and possibly sunglasses though the small number of respondents owning both cars and sunglasses limited the powers of the tests. Thus, whilst one could claim that Study 2's finding of cross-product consistency in meaning and judgement preference was due to the participant rating the sunglasses meaning and judgement items to appear consistent with his or her responses to the automobile meaning and judgement items, such a critique could not explain Analysis One's finding that individuals tended to use the same value influence routes because individuals were placed into groups based on whether, compared with other individuals, the direct or indirect influence of human values more accurately predicted their product ownerships. The relativity of the group formation meant that each respondent had little direct control over which group he or she was placed.

As mentioned, the strongest cross-product consistency in value influence routes was found when comparing products within the same categories (e.g., Smaller Family Cars and Larger Family Cars) and the weakest cross-product consistency was found when comparing products in different categories (e.g., Smaller Family Cars and sunglasses, and Larger Family Cars and sunglasses). Whilst the small number of respondents owning both cars and sunglasses could have limited the statistical power of the tests made across product categories, an alternative explanation, is the fact that Smaller Family Cars and Larger Family Cars are similar products and so cross-product consistency should be high, whereas cars and sunglasses are dissimilar and

therefore the low consistency is expected. Nevertheless, whether the low cross-product consistency was due to the dissimilarity of cars and sunglasses or to the small number of respondents owning both, the cross-product consistency found between Smaller Family Cars and Larger Family Cars is certain, as is the cross-product consistency in meaning and judgement preferences. Thus, support was found for the reasoning that if human values inform consumer choices then the abstractness and generality of human values would result in product preferences that are relatively consistent across products not only in how they reinforce important values but also their meanings, judgements and routes of influence.

Analysis Two examined the proposition that greater psychological identification with a product is a feature of an expressive psychological function and therefore is associated with the direct influence of human values. Red meat consumption was the only product investigated due to red meat's strong tie to gender identity and dominance values and Study 1 showing that red meat consumption was strongly and directly influenced by human values. Those individuals who do not identify with red meat or do so moderately should consume red meat based on an inspection of its tangible attributes such as nutritional qualities, whereas those individuals who strongly identify with red meat should consume it based on its symbolic meaning and ability to express and reinforce their self-concepts and identities. As expected, tangible attribute importances predicted red meat consumption more strongly for low meat identifiers than for high meat identifiers, and the indirect influence of human values (via tangible attribute importances) on red meat consumption was stronger for low meat identifiers than for high meat identifiers whereas the reverse was true for the direct influence of human values. Despite the finding, evidence that greater product identification is a feature of the direct route of value influence is still marginal given that only one product was investigated and that a statistical replication of the Residual Method and Standard Method regression procedures failed to provide thoroughly consistent results. Specifically, the Residual Method replicated the Standard Method results only once the middle third of identifiers was removed. Whilst the Residual Method is superior to the Standard Method because the analyses are performed on a single sample and differences among individuals can be uncovered even when the absolute magnitude of prediction is low, the multitude

of regressions calculated does introduce some level of noise and therefore uncovering a pattern may only be possible when comparing the extreme ends of a scale.

Analysis Three examined the proposition that greater value relevance is a feature of an expressive psychological function and therefore is associated with the direct influence of human values. One index of value relevance was the number of human values the respondents listed in two open-ended questions about the human values important to themselves or what they believed are important to New Zealanders but that are not listed in the Rokeach Value Survey. The analysis showed that, for both automobile and sunglasses meaning and judgement preferences, those individuals who scored higher on that index of value relevance also preferred symbolic meaning and an affective judgement to utilitarian meaning and a piecemeal judgement, and that those individuals who scored lower in value relevance preferred utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement.

Nevertheless, an alternative explanation is that the number of human values respondents listed in the open-ended questions is not measuring value relevance, but rather, those individuals preferring symbolic meaning and an affective judgement have human value preferences that are not included in the Rokeach Value Survey, and that those individuals preferring utilitarian meaning and a piecemeal judgement have human value preferences that are adequately represented in the Rokeach Value Survey. However, those individuals who listed a greater number of values in the open-ended questions also tended to prefer terminal values to instrumental values, and those individuals who listed fewer values preferred instrumental values to terminal values. Therefore, if the alternative explanation was correct, then a preference for terminal values to instrumental values should not be associated with any other measure of value relevance. In contrast, a subsequent analysis showed that those individuals preferring terminal values to instrumental values also tended to rate all human values (both instrumental and terminal combined) more highly, and that those individuals preferring instrumental values to terminal values tended to rate all human values as less important. Thus, a preference for terminal values is associated

with a greater importance of the Rokeach Value Survey items and the listing of more values in the open-ended questions, which suggests that the number of human values listed in the open-ended questions is measuring value relevance, and that greater value relevance is associated with a preference for symbolic meaning and an affective judgement to utilitarian meaning and a piecemeal judgement, whereas lesser value relevance is associated with a preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement. Given that Study 3 showed that meaning and judgement preferences are associated with the direct and indirect influences of human values in the direction hypothesised in the product meaning approach, the conclusion that greater value relevance is a feature of the direct route of value influence seems reasonable.

Analysis Four examined the propositions that instrumental human values serve an instrumental psychological function and therefore a preference for instrumental values should be associated with the indirect influence of human values, and that terminal human values serve an expressive psychological function and therefore a preference for terminal values should be associated with the direct influence of human values. Results showed that whether consumers were indicating their meaning and judgement preferences for automobiles or sunglasses, instrumental values were associated with a stronger preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement, whereas terminal values were associated with a weaker preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement. The results also showed that instrumental and terminal values do not appear to influence product preference through separate routes. Rather, individuals with a relative preference for terminal values tend to apply all their values (both instrumental and terminal) directly and those with a relative preference for instrumental values tend to apply all their values indirectly. Specifically, for those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, terminal values were preferred to a greater extent than terminal values are preferred by those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the human

value discriminant analysis did not. Conversely, for those individuals for whom the tangible attribute importance discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not, instrumental values were preferred to a greater extent than instrumental values are preferred by those individuals for whom the human value discriminant analysis accurately predicted their most frequently purchased product class but the tangible attribute importance discriminant analysis did not.

However, the conclusion that individuals with a relative preference for terminal values tend to apply all their values (both instrumental and terminal) directly and those with a relative preference for instrumental values tend to apply all their values indirectly is tentative for two reasons. First and most important, the discriminant analyses did not partial out the direct and indirect influences of human values on product ownership. The discriminant analysis that was meant to represent the direct route of human values entered human values to predict each individual's most frequently purchased product class, whereas the discriminant analysis that was meant to represent the indirect route of human values entered tangible attribute importances to predict each individual's most frequently purchased product class. Theoretically at least, the relative ability of an individual's tangible attribute importances and human values to predict his or her product preference should be similar, but not identical, to the relative ability of his or her indirect and direct influences of human values, though verification of such a claim is not possible.

A second reason the conclusion that individuals with a relative preference for terminal values tend to apply all their values (both instrumental and terminal) directly and those with a relative preference for instrumental values tend to apply all their values indirectly is tentative is that the relationship was found for automobile ownership and overseas holidaying, but not for meat consumption. A possible cause for the meat consumption result may have been that the symbolic meaning of red meat interacted with instrumental and terminal value preferences. For automobiles and overseas holidaying, instrumental values would likely be associated with the indirect route of value influence because instrumental values represent the individuals' preference for a wide range of "actions" and the utilitarian meanings of

automobiles and overseas holiday destinations probably refer to each product's ability to control and manipulate the environment. Thus, the action represented in instrumental values is matched with the action in the utilitarian meanings of these products. Red meat, however, cannot manipulate and control the environment because it simply satisfies an internal need, and therefore, the control and manipulation of the environment instrumental values usually show are not in red meat's utilitarian meaning, but in its symbolic. Most simply, red meat symbolises control and manipulation of the environment because the initial procurement of red meat, that is, the killing of animals, requires control and manipulation in the extreme senses of the words (e.g., Adams, 1990, 1994; Fiddes, 1989; Twigg, 1983). Thus, if the control and manipulation of the environment that utilitarian meaning usually represents is contained in red meat's symbolic meaning rather than its utilitarian, then the usual association between instrumental values and utilitarian meaning (and terminal values and symbolic meaning) may be reversed or cancelled.

Though a definitive statement cannot be made about the legitimacy of that explanation of why instrumental and terminal values were not associated with the direct and indirect influences of human values on meat consumption, one assessment can be made that would shed some light on the interpretation. If red meat differs from the automobile classes, the overseas holiday destinations, and possibly from white meat, by its symbolic meaning referring to the control and manipulation of the environment to which instrumental values attune, then the owners and consumers of the respective products should have specific instrumental and terminal value preferences; the groups formed according to their most frequently purchased car class should not differ in their instrumental and terminal value preferences, nor should the groups formed according to their most frequently visited holiday destination. However, the groups formed according to their meat consumption should differ, with heavy consumers of red meat preferring instrumental values more than heavy consumers of white meat.

The instrumental and terminal value preferences of the groups are presented in Table 29 (on page 262). As expected, the three automobile class groups do not differ in their instrumental and terminal value preferences, nor do the three holiday

destination groups. However, those individuals consuming more red meat than white meat prefer instrumental values more than those individuals consuming more white meat than red meat. Similarly, those individuals consuming more white meat than red meat should prefer terminal values more than those individuals consuming more red meat than white meat. However, caution is warranted in interpreting the results given that the power of the meat type test is much stronger than the power of the automobiles and overseas holidaying tests (see final column in table). Nevertheless, it does appear that red meat, or any product with action-oriented symbolic meaning, does not make a good specimen for using the instrumental and terminal dichotomy to illustrate the instrumental and expressive functions of the indirect and direct routes. Beyond the suggestion, however, other implications are discussed in the next chapter.

The pulling together of these diversified findings and those of Studies 1, 2 and 3 is undertaken in the next chapter.

Table 29. Instrumental and terminal value preferences for groups formed according to most frequently purchased product classes.

Most Frequently Purchased Automobile Class					
Value Preferences	Larger			Test of Difference	Power
	Smaller Family Cars (n=136)	Family Cars (n=66)	Luxury Cars (n=20)		
Instrumental	1.96	1.97	1.97	$F(2,219)=.18, p=.84$	.08
Terminal	2.11	2.09	2.12	$F(2,219)=.56, p=.57$	.145

Most Frequently Visited Holiday Destination					
Value Preferences	Prestige and Safe and			Test of Difference	Power
	Major Cities (n=137)	Structure (n=10)	Tropical (n=40)		
Instrumental	1.96	1.99	1.95	$F(2,184)=.22, p=.80$	.088
Terminal	2.11	2.08	2.11	$F(2,184)=.13, p=.88$	.071

Most Frequently Consumed Meat Type					
Value Preferences	Larger		Test of Difference	Power	
	Red Meat (n=129)	White Meat (n=174)			
Instrumental	1.99	1.95	$t=2.1, df=301, p<.05, one-tail$	.69	
Terminal	2.08	2.11	$t=-1.8, df=301, p<.05, one-tail$	.49	

CHAPTER VIII. DISCUSSION AND CONCLUSION

The current chapter first reviews the main hypotheses of the attribute-mediation approach and product meaning approach and their examinations in Studies 1-3, then reviews the various propositions and their investigations in Study 4, and finally, outlines the conceptual model's qualifications, limitations and implications for human value theory and consumer research.

CONCEPTUAL MODEL AND RESULTS OF STUDIES 1-3

The traditional approach to the influences of human values on consumer choices (e.g., Scott and Lamont's (1973), Gutman's (1982) and Lindberg, Garling and Montgomery's (1989) attribute-mediation approach) and the product meaning approach were examined over three studies; Study 1 found that the attribute-mediation approach could not fully account for the influence of human values on product preference (Hypothesis 1) and that the inability was greatest for products, such as red meat and overseas holiday destinations, that are likely assessed on their intangible attributes of symbolic meanings and aesthetics (Hypothesis 2). The second and third studies tested whether the two routes of value influence uncovered in Study 1, that is, the route proposed in the attribute-mediation approach and the alternative, direct route, result from consumers evaluating different product meanings and making different types of judgements. Study 2 developed scales that measure the general public's product meaning and judgement preferences, and Study 3 associated the meaning and judgement preferences with the influence of human values on the ownerships of automobiles and sunglasses; confirming the product meaning approach hypothesis that a consumer's preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement was greater when his or her human values have an indirect influence on product preference (e.g., via the importance of the product's tangible attributes) than when his or her human values have a direct influence.

Despite Study 3's support for the product meaning approach hypothesis, the overall design of that study rested on the observation from Study 2 that consumers tended to prefer the same type of meaning and judgement for both automobiles and sunglasses. Study 3 instructed respondents to indicate their preferred meanings and judgements for "products in general", and therefore to link the preferences to the direct and indirect influences of human values on the ownership of cars and sunglasses, the general meaning and judgement preferences were assumed to translate to specific consumer behaviours. Thus, a major limitation of Study 3 was not obtaining meaning and judgement preferences at the time of actual product evaluation and purchase. One could claim that the meaning judgement preferences consumers used when selecting their current cars and sunglasses differ from those stated in the survey. After all, the survey was completed some time after the actual purchase. Consequently, whether meaning and judgement preferences are being applied in these specific contexts cannot be certain.

One way to be satisfied that meaning and judgement preferences affect how human values influence product preference is to experimentally isolate and manipulate the kind of product meaning to which consumers attend and the kind of judgement they make, and then gauge how that manipulation affects the strengths of the value influence routes. As reviewed in Chapter IV, some experimental studies have isolated and manipulated the kind of product meaning to which consumers attend and examined how that manipulation affected the relationship between attribute importances and product preference or affected the relationship between attitudes and product preference (e.g., Shavitt, 1990; Shavitt, Lowrey & Han, 1992; Snyder & DeBono, 1985; Spivey, Munson & Locander, 1983). Spivey, Munson and Locander's (1983) experiment, for example, showed that the attention to symbolic meaning was associated with the increased influence of intangible attribute importances (e.g., each consumer's preferred product images) on product preference whereas the attention to utilitarian meaning was associated with the increased influence of tangible attribute importances on product preference. Thus, given the existing experimental evidence, a future study of human values that manipulated the kind of product meaning to which consumers attend might show that the attention to

utilitarian meaning results in the increased influence of tangible attribute importances on product preference and that human values influence those tangible attribute importances, and that the attention to symbolic meaning results in the increased direct influence of human values given that intangible attributes closely tie human values and product preference.

However, as discussed in Chapter IV, such potential experimental evidence would be of limited benefit. Only the less important issue of whether product meaning (or judgement) affects the routes of value influence would be addressed; what would not be addressed is whether human values are, in fact, influencing tangible attribute importances, product preference and the attention to product meaning. To show that human values cause another component human values must be manipulated so that changes in tangible attribute importances, meaning and judgement preferences and product preferences can be observed. The requirement, however, is the crux of the problem; few experimental methods can manipulate an individual's human value preferences. The most well-established of the methods is Rokeach's (1973) value self-confrontation procedure that informs participants that two of their important values are logically inconsistent and are different from those of an important reference group. Rokeach argues that the information creates a state of self-dissatisfaction, and that consequently participants will alter one of their values to make it consistent with the other human value and to the human values of the reference group. Moreover, participants alter specific attitudes and behaviours to bring them in line with the new human value importance. Nevertheless, the value self-confrontation procedure is unsuitable for the investigation of the product meaning approach to value influence because the motivations aroused in the procedure (e.g., social approval and self-consistency) would interact with the value influence routes, that is, the value self-confrontation procedure would probably be successful in manipulating the values of those individuals attending to symbolic meaning, holding an expressive psychological function, and following the direct route, but would have little success for those individuals attending to the utilitarian meaning, holding an instrumental psychological function, and following the indirect route. Given that Study 1 showed the indirect route was the predominant mode, the value self-confrontation procedure can apparently only manipulate the human values

of a small subset of participants.

Thus, future research should develop a method that can experimentally isolate and manipulate the human values of most participants, and use that method to test the product meaning approach to value influence. The development of such an experimental product to test of product meaning approach is perhaps the most important direction for further research because the evidence produced in Studies 1-3, as correlational evidence, is sound correlational evidence for several reasons. Firstly, though Studies 1 and 3 differed in their level of analysis each yielded similar results. Study 1 found that products assumed to be assessed primarily on their tangible attributes were most strongly influenced by the indirect route of human values whereas products assumed to be assessed on their intangible attributes of symbolic meaning and aesthetics were most strongly influenced by the direct route of human values. Similarly, Study 3 found that the preference for utilitarian meaning (located in tangible attributes) and a piecemeal judgement to symbolic meaning (an intangible attribute) and an affective judgement was greater when human values had an indirect influence (via tangible attribute importances) on product preference than when human values had a direct influence. Thus, whether at the level of the product or at the level of the individual, Studies 1 and 3 showed that the indirect route corresponds to the evaluation of tangible attributes and the direct route to the evaluation of intangible attributes such as symbolic meaning.

A second reason the correlational evidence produced in Studies 1-3 is sound correlational evidence is that Feldman and Lynch's (1988) "consistency" argument is not very germane. Feldman and Lynch argue that an association found between attitudes and behaviour could be due to participants completing the behaviour measure simply to appear consistent with their responses to the attitude measure. However, such a bias is most likely to occur when the behaviour is measured on a metric scale, and so is only possible in the meat consumption section of Study 1 and the sunglasses section of Study 3. Respondents listing a make and model of an automobile they do not own or holiday destinations they have never visited seem implausible. Moreover, participants responding to the human value and tangible attribute importance measures simply to appear consistent with their product

ownerships also seems unlikely, for to explain the pattern of results shown in Study 3 it would have to be concluded that half the participants rated both tangible attribute importances and human values to appear consistent with their product ownerships whereas the other half rated only human values to appear consistent with their product ownerships. Additionally, the former group would, coincidentally, have rated utilitarian meaning and piecemeal judgement more highly and the latter group symbolic meaning and affective judgement more highly. Each of these improbabilities implies, though not definitively, that the association found among human values, tangible attribute importances, product preference and meaning and judgement preferences is not an artefact of the survey method but is instead indicative of consumers' cognitive structures.

A third reason the correlational evidence produced in Studies 1-3 is sound correlational evidence is that unlike an experimental design the survey method allowed the broadest range of phenomena to be considered. The broad range was encouraged by using comprehensive lists of human values and tangible attribute importances and by indexing product preference as actual product purchase and ownership. The latter not only encouraged a naturalistic investigation but also a stringent one by requiring from consumers more than an indication of their product attitude or liking, but a commitment of their resources such as money, time to purchase, and so on. Using participants from the general population also encouraged a broad range of phenomena, with the demographic characteristics of each sample being diverse. Taken together, Studies 1-3 surveyed 702 members of the public.

A final reason the correlational evidence produced in Studies 1-3 is sound correlational evidence is that most associations were found for more than one product. For instance, in Study 1, the acceptance of the attribute-mediation approach hypotheses was due to a consistent pattern of relations emerging across eight product classes, and in Study 3 the acceptance of the product meaning approach hypothesis was due to the same pattern of relations emerging within each of three product classes. Moreover, most components, that is, human values, tangible attribute importances, product preference and meaning and judgement preferences, were associated with more than one other component. The coverage is most plain in the

summary figures in Chapter VII (see Figure 6 and Figure 7 on pages 213 and 214). For instance, in Study 2, meaning and judgement preferences were associated with each other, in Study 3, meaning and judgement preferences were associated with the value influence routes, and in Study 4, meaning and judgement preferences were associated with preferences for instrumental and terminal values and value relevance. Similarly, in Study 1, the value influence routes were examined by themselves, in Study 3, the value influence routes were associated with meaning and judgement preferences, and in Study 4, the value influence routes were associated with product identification and instrumental and terminal value preferences.

CONCEPTUAL MODEL AND RESULTS OF STUDY 4

Besides modelling the cognitive structure through which human values operate when consumers attend to utilitarian and symbolic meanings and make piecemeal and affective judgements, several propositions were made that consumers have a cross-product tendency to prefer the same meanings, judgements and routes of value influence, and that each route of value influence serves a specific psychological function. Concerning the latter, the propositions were made that when consumers attend to symbolic meaning and directly apply their human values, the application serves an expressive psychological function (e.g., social approval or self-consistency), and hence should be associated with greater psychological identification with the product, greater importance assigned to human values overall (e.g., value relevance), and a preference to terminal values to instrumental values. Conversely, when consumers attend to utilitarian meaning and indirectly apply their human values via tangible attribute importances, the application serves an instrumental psychological function (e.g., utility maximisation and control of the environment), and hence should be associated with weaker psychological identification with the product, weaker value relevance, and a preference for instrumental values to terminal values.

Regarding the cross-product consistency proposition, Study 2 found that consumers tended to prefer the same meaning and judgement for both automobiles and sunglasses, and Study 4 found that consumers tended to use the same route of

value influence for automobiles and sunglasses, though the certainty of that conclusion was restricted by the low statistical power of the tests. Study 4 also found that tangible attribute importances and the indirect route of value influence more accurately predicted the red meat consumption of weak meat identifiers than high meat identifiers, whereas the direct route of value influence more accurately predicted the red meat consumption of high meat identifiers than weak meat identifiers. Nevertheless, support for the proposition that high product identification is a feature of the direct route of value influence is still marginal given that only one product was investigated and that a statistical replication of the Residual Method and Standard Method failed to provide identical results.

Study 4 also found that higher scores on the value relevance indices were associated with preferences for symbolic meaning, an affective judgement, and terminal values, and that lower value relevance scores were associated with preferences for utilitarian meaning, a piecemeal judgement, and instrumental values. Moreover, careful consideration of possible alternative interpretations of the value relevance measures suggested that the value relevance measures are indeed measuring “value relevance”. Study 4 also found that a preference for instrumental values was associated with a stronger preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement, whereas a preference for terminal values was associated with a weaker preference for utilitarian meaning and a piecemeal judgement to symbolic meaning and an affective judgement. Additionally, Study 4 found that instrumental and terminal values do not appear to operate through separate routes, but that individuals who prefer instrumental values to terminal values tend to apply all their values (both instrumental and terminal) indirectly whereas those who prefer terminal values to instrumental values tend to apply all their values directly. The pattern was found for automobiles and overseas holidaying but contrary to expectations did not emerge for meat consumption, possibly due to red meat’s action and dominance symbolism (a possibility that will be re-addressed shortly).

Overall, though psychological function was not the primary focus of the current thesis, the support of the propositions does suggest that the indirect route serves an

instrumental psychological function and the direct route serves an expressive psychological function. However, the support is only suggestive because the investigation was insufficient, not only for the reasons mentioned in the preceding paragraphs, but more crucially, because the investigation failed to directly examine the needs and motivations that underlie the psychological functions. The instrumental psychological function indicates that the product or other object fulfils the user's need to control his or her environment efficiently and effectively, whereas the expressive psychological function indicates that the product fulfils the user's need to express his or her self-concepts and identities, particularly his or her need for social-approval and self-consistency. These needs and motivations were not examined directly or comprehensively. Instead, possible indicators were relied on such as product identification, value relevance and instrumental and terminal values. Therefore, whether the needs and motivations underlie the indicators and the value influence routes cannot be certain.

As an example of a study that does examine the underlying needs, the readers may recall Beggan's (1991) experiment that induced control deprivation on participants and found that those who generally felt in control their environment (e.g., had a high internal locus of control) increased the importance of possessions that give control, whereas the inducement of control deprivation did not affect the importance of possessions for those participants with an external locus of control. Thus, that kind of association of the need for control with product preference allows the safe conclusion that the increase in the importance of possessions for internal locus of control participants shows that the possessions serve an instrumental psychological function. In contrast, the studies in the current thesis merely associated product preference with utilitarian meaning, which presumably signals that the product serves a need for control (and associated product preference with symbolic meaning, which presumably signals that the product serves a need for self-consistency or social approval).

Despite exceptional studies like Beggan's (1991), most previous studies of the psychological functions of attitudes or of the value-attitude-behaviour system have not directly investigated the underlying needs and motivations. Instead, researchers

tend to assume that the psychological functions underlying attitudes or the value-attitude-behaviour system are the same as those underlying self-monitoring (e.g., Mellema & Bassili, 1995; Snyder & DeBono, 1985), product meanings (e.g., Prentice, 1987; Spivey, Munson & Locander, 1983), certain kinds of appeals (e.g., Maio & Olsen, 1995) or the individual's written thoughts (e.g., Maio & Olsen, 1994; Shavitt, Lowrey & Han, 1992). Study 4 is an improvement on those studies for several reasons. The first is that Study 4 assessed the psychological functions with constructs that are (somewhat) conceptually related to the functions, such as product identification, value relevance, and to a lesser extent, instrumental and terminal values. For instance, the studies of Mellema and Bassili (1995) and Snyder and DeBono (1985) used self-monitoring an indicator of psychological function but self-monitoring is so far removed from the psychological function it presumably represents that even the researchers disagree about the psychological functions underpinning it.

A second reason Study 4 is an improvement on previous studies of the psychological functions of attitudes or of the value-attitude-behaviour system is multiple indicators of the psychological functions were used: value relevance, product identification, and instrumental and terminal values. The relations of the indicators to the direct and indirect influences of human values on product preference and to meaning and judgement preferences were not only in the anticipated directions, they were also consistent with each other. For instance, a stronger preference for terminal values was associated with higher scores on the value relevance measures and with the direct route of value influence, the latter of which was associated with greater identification with the product. Thus, greater stronger product identification, stronger value relevance and a preference for terminal values are probably measuring the same underlying construct, possibly an expressive psychological function. The same consistency was also found for instrumental values, weaker value relevance, weaker product identification and the indirect route of human values.

A final reason Study 4 is an improvement on previous studies of psychological function and product preference is that an instrumental attitude was operationalised

as tangible attribute importances, which consequently is a real representation of the attitude object. The readers may recall that Prentice (1987) was unable to establish that the instrumental psychological function spans the breadth of the value-attitude-behaviour system, possibly because she measured an instrumental attitude on a semantic-differential scale of the object's real and unreal attributes, when more likely, an instrumental function is founded in consumer concerns about the product's real and tangible rewards and costs.

FURTHER EMPIRICAL RESEARCH AND ISSUES FOR CONCEPTUAL AND THEORETICAL DEVELOPMENT

Notwithstanding the support of the product meaning approach to value influence produced in Studies 1-4, before any firm confidence can be held in the approach further research needs to address four major methodological limitations of the studies carried out in the present thesis;

- Future research should measure consumers' meaning and judgement preferences at the time of actual product evaluation and purchase and determine whether these preferences are associated with the direct and indirect influences of human values on product preference.
- Future research should associate meaning and judgement preferences more definitely with the value influence routes by manipulating the kinds of product meanings to which consumers attend and the kind of judgement they make, and then gauge the impact on the value influence routes.
- Future research should examine directly the needs and motivations underlying the instrumental and expressive psychological functions and determine whether the needs underlie the value influence routes.
- Most crucially, future research should establish a causal role for human values, if an appropriate method can be devised.

Research addressing the methodological limitations of Studies 1-4 should also refine and qualify the conceptual framework of the product meaning approach. Given that one aim of the thesis was to develop a conceptual model that was broad enough to apply to most contexts, the consequence of that aim is that the model is ambiguous and overly simplistic in two areas; 1) the model's elements and operational definitions, and 2) the model's applicability and performance. The remaining discussion is devoted primarily to these conceptual issues, followed by a short section on theoretical development.

Issues for Conceptual Development

Most in need of clarification are the elements and levels of elements that play the pivotal roles in human values influencing product preference through two separate routes. Conceivably, only one or two elements cause human values to operate through two routes and the other elements vary as a function of those elements. For instance, the product meanings to which consumers attend may affect how the product is judged, the psychological function the product serves and the route through which human values operate. Similarly, the conceptual model is founded in an assumption that the levels of the elements always occur together, that is, that utilitarian meaning is always located in tangible attributes evaluated with a piecemeal judgement and that serve an instrumental psychological function, whereas symbolic meaning is located in a particular configuration of tangible attributes evaluated in an affective judgement and that serve an expressive function. The assumption is obviously overly general. For example, whilst symbolic meaning may tend to be found on the product-whole and a particular configuration of tangible attributes, occasionally symbolic meaning may be found in independent, tangible attributes. For items of jewellery, for example, the attribute of "14-karat gold" may have the same symbolic meaning no matter the jewellery's other features. The prospect, therefore, reveals another oversimplification upon which the conceptual model was founded; Holbrook and Moore's (1981), Keaveney and Hunt's (1992) and McCracken's (1988) claim that intangible attributes such as symbolic meaning and aesthetics violate the assumption in expectancy-value theory that consumers evaluate each attribute one at a time. Generally, when consumers evaluate a product's

intangible attributes the product's tangible attributes are consequently evaluated in a Gestalt-like, holistic judgement, but in instances when symbolic meaning is found in independent, tangible attributes, expectancy-value theory may adequately explain how consumers decide which products to purchase.

Due to these possible exceptions in how meaning, judgement and tangible and intangible attributes are related, further research should determine which elements and levels of elements are essential to the bifurcation of value influence. Whilst such a determination might be made by re-analysing the data collected in Studies 1-4, an experimental procedure is preferable because it could more rigorously control the levels and presence of the elements and thus more precisely gauge their effect on the value influence routes. The outcome of the experimentation and reduction of elements would be a more parsimonious conceptual model, but equally important, tighter operational definitions and distinctions among the elements and levels of elements would also be advanced. Concerning these latter points, the rationale that formed the basis of much of the product meaning approach was the elements' similarity and conceptual overlap; rationale that is most apparent in Figure 1 (on page 21). The figure illustrates how human values influence product preference via tangible attribute importances when consumers attend to utilitarian meaning because tangible attribute importances and utilitarian meaning are conceptually similar; both are concrete, objective and means-oriented. Similarly, human values influence product preference directly when consumers attend to symbolic meaning because symbolic meaning and human values are similar; both are abstract, subjective and affective. However, now that the merit of the general approach has been empirically supported by the studies carried out for the thesis, differences among the elements and differences between the levels of elements should be more tightly defined. A pertinent example of each is provided.

Two elements most in need of further differentiation in their operational definitions are psychological function and product meaning. Chapter IV reviewed the wide range of research and theories concerning product meaning and attempted to draw a firm line with psychological function by emphasising that psychological function is a sub-feature of product meaning and that other sub-features were

content, location on the product, breath, affectivity, and so on. Nevertheless, the attempt at demarcation was unsatisfactory, and one result was that the measures of product meaning preference implicitly measure psychological function preference. For instance, the symbolic meaning scale items of “To what extent would you want your chosen product to be: Most compatible with the image you have of yourself” and “I prefer a product that reflects who I am” not only measure the attention to symbolic meaning but also clearly measure an expressive psychological function. Thus, conceptual improvement of the model could be achieved by defining and measuring psychological function preference separately from product meaning preference, perhaps by measuring the needs and motivations underlying the functions (e.g., social approval, self-consistency, control of environment) instead of the consequences of those needs (e.g., consumers’ preferences for products that are consistent with the images they have of themselves or that they wish others to have of them).

The element with levels most in need of further clarification and differentiation is product meaning. The distinction between utilitarian and symbolic meaning can be tenuous, not so much when contemplating extreme cases (e.g., family heirlooms versus hand tools), but rather when considering the many products with both utilitarian and symbolic meanings (e.g., automobiles, overseas holidays, etc.). Further conceptual research should address the issue more completely than addressed in the thesis, but a useful starting point is Kilbourne’s (1991) discrimination that “the term symbolic possession is not intended to imply that there is not symbolism in functional possession. Rather it is intended here to refer to possession in which the symbolic takes precedence over the functional” (p. 450).

One analysis in Study 4 seems to provide a good illustration of Kilbourne’s (1991) distinction. The readers might recall that the discriminant analyses taken to represent the direct and indirect influences of human values found that instrumental and terminal values do not appear to influence product preference through separate routes, but that individuals who preferred instrumental values to terminal values tended to apply all their values (both instrumental and terminal) indirectly whereas those who preferred terminal values to instrumental values tended to apply all their

values directly. The pattern was found for automobiles and overseas holidaying but contrary to expectations did not emerge for meat consumption. One interpretation offered for the meat result was that the action and dominance symbolism of red meat interacted with the value influence routes, that is, that the control and manipulation of the environment instrumental values usually indicate are not in red meat's utilitarian meaning, but in its symbolic. Red meat symbolises control and manipulation of the environment because the initial procurement of red meat (e.g., the killing of animals) requires control and manipulation in the extreme senses of the words (e.g., Adams, 1990, 1994; Fiddes, 1989; Twigg, 1983). However, consumers' procurement of red meat from grocery stores and restaurants does not require the control and manipulation of the environment in any substantial way, nor does red meat enable consumers to control and manipulate their environments, yet those meanings remain with red meat for reasons speculated by Adams (1990, 1994) and Fiddes (1989) (these reasons are outside the scope of the present thesis though the finding in Study 4 that instrumental values were preferred most by those consuming the greatest amount of red meat is consistent with the claim that red meat has action-oriented symbolic meaning to which consumers attend and evaluate). The central issue is that the reference to control and manipulation in red meat's symbolic meaning, rather than its utilitarian meaning, suggests that red meat is more about thinking about action and control than it actually enables action and control. Thus, at the point that "thinking about doing" is more important to consumers than "actually doing" the difference between utilitarian meaning and symbolic meaning is most visible. Moreover, though red meat may have symbolic meanings that refer to action and control, the essential "state-ness" of symbolic meaning remains. The readers might recall that a unique characteristic of symbolic meaning, in contrast to utilitarian meaning, is that symbolic meaning is not tied to product use or performance. States of existence such as possessing, reflecting or displaying are enough to reap expressive benefits. Thus, consumers can purchase red meat for its action and control symbolic meanings, but the benefits they obtain, aside from the physiological ones, arise from possessing, reflecting and displaying.

Besides clarifying the model's elements and operational definitions, conceptual development of the product meaning approach should attempt to qualify the kinds of

products and consumers for whom the approach is most suited. Perhaps the most critical limitation of the conceptual model and its investigation in Studies 1-4 is that the characteristics of the product that affect the direct and indirect influences of human values were not adequately taken into account. For instance, Study 1 examined the influences of human values on product preferences for a range of products, but the tangible and intangible characteristics of those products were only assumed from the assertions and findings of other researchers. Study 2 did measure consumer preferences for the utilitarian and symbolic meanings of automobiles and sunglasses, but having only two products is insufficient for drawing any firm conclusions, and may have affected Study 3's finding that consumers applying their human values through the indirect route did not differ in their overall levels of product ownerships from those consumers applying their human values through the direct route. Clearly, more symbolic products exist than sunglasses (e.g., family heirlooms, photographs, etc.) and more utilitarian products exist than automobiles (e.g., tools, etc.), and therefore to expect that human values never influence preferences for some products through a particular route is unrealistic.

Consequently, an appropriate direction for further research is to define the parameters of the products that affect whether human values tend to influence product preference directly or indirectly. One way such conceptual development could be achieved is Shavitt's (1990) product classification procedure in which participants are instructed to write advertisements for a specific product. Shavitt categorises the advertisements according to which psychological function they represent, but that procedure could be adapted easily to product meanings and possibly judgements. Thus, with the parameters of each product clearly defined, the direct and indirect influences of human values on product preference could be neatly tied to the specific product characteristics associated with an increase in the strength of one route compared with the other, with the increase in the strengths of both routes, or with the decrease in the strengths of both routes. Obviously, that hindmost outcome would have the most serious implications for a conceptual model that is not adequately context-specific, and would signal the need to investigate whether human values influence product preference through routes other than those outlined by the product meaning approach, or do not influence product preference at all for some

types of products.

Along with defining the parameters of the product that affect the applicability of the conceptual model, differences among individual consumers should be considered more fully. The conceptual model did acknowledge some differences and proposed that consumers have a cross-product tendency to prefer the same meaning, judgement and route of value influence. The rationale for that proposition was that if human value preferences inform consumer choices, then the abstractness and generality of human values would result in product preferences that are relatively consistent across products not only in how they reinforce important values but also their meanings, judgements and routes of influence. Though Study 4 found support for that proposition, the rationale unpinning the proposition is still weak for it does not adequately address what human values are associated with each route, why those human values cause individuals to use a particular route, and why individuals differ in those human values. An attempt was made at addressing the first question, such as Study 1's finding that Maturity values (e.g., Inner Harmony, Self-respect, Broad-minded, etc.) tended to influence product preference directly and were preferred by those individuals who tended to use the direct route, whereas security values (e.g., Family Security, National Security) were preferred by those individuals who tended to use the indirect route. Likewise, Study 4 found that instrumental and terminal values do not appear to operate through separate routes, but rather that individuals preferring one type of value to the other, tend to all their values through a specific route. Nevertheless, why maturity values, security values and instrumental and terminal values compel individuals to follow a particular route needs to be addressed further, both empirically and theoretically, as does why individuals differ in their support of those values.

A similar criticism can be made of the value relevance proposition; why do individuals differ in the extent they find human values overall important? The topic is addressed by Wojciszke (1989) who, as discussed in Chapter I, argues that people vary in the extent they incorporate human values into their ideal self-concept. In particular, those whom he terms "idealists" are characterised by their claim that they use human values more frequently to judge themselves and others and make

behavioural choices. However, Wojciszke does not explain why individuals differ in the extent they incorporate human values into their ideal self-concept in the first instance. The construct of value relevance is important for future research to address for two reasons. The first is the fact that the human values measure used in the predictions of product ownerships (e.g., the Rokeach Value Survey) had a forced-distribution response format, and therefore those individuals high in value relevance could not express their value relevance in their responses to the Rokeach Value Survey any more than those individuals low in value relevance could express their general preferences. Nevertheless, the other indices of value relevance were associated with the direct influence of human values, which means that although individuals high in value relevance could not manifest that preference in their responses to the Rokeach Value Survey, their value ratings still predicted their product ownership directly better than individuals low in value relevance. A second reason that the construct of value relevance is important for future research to address is that whilst value relevance is a quantitative variable, the effect it has on the value influence routes appears qualitative; with the increase of value relevance the individual's preferred route shifts from the indirect route to the direct route. The qualitative difference among individuals that the product meaning approach to value influence offers no explanation for, although unlike other consumer choice models such as expectancy-value theory, the product meaning approach does at least allow for the difference.

Another area for conceptual development of the product meaning approach to value influence is whether individuals can apply their human values through both routes simultaneously. In the investigation of the conceptual model in Studies 1-4, an assumption was made that the two routes of value influence are mutually exclusive when, more likely, individuals use both routes simultaneously. Katz' (196) attitude function theory, for instance, suggests that an individual's attitude can serve any number and combination of functions, and the same might be true for the value influence routes and their psychological functions. However, the Residual Method employed in Study 3 to measure the direct and indirect influences of human values on product preference separated individuals into two groups according to whether their DIR or IIR more accurately predicted their product preferences. The division

did not consider those individuals whose DIR and IIR were relatively equal, and consequently placed those particular individuals into separate groups based on minor differences. The discriminant analyses performed in Study 4 were more realistic because they separated individuals into four groups; those for whom the human values' discriminant analysis correctly predicted their most frequently purchased product class but the tangible attribute importance discriminant could not, those for whom the tangible attribute importance discriminant analysis predicted their most frequently purchased product class but the human values discriminant could not, those for whom both analyses predicted their most frequently purchased product class, and those for whom neither predicted their most frequently purchased car class. Despite the discriminant analyses allowance for individuals to use any combination of the value influence routes, when Study 4 examined instrumental and terminal value preferences those individuals who used both routes equally or used neither route were excluded. That kind of exclusion and the Residual Method's separating some individuals based on minor differences probably does not affect the major conclusions regarding the sample as a whole, but it does obscure three possible reasons why some individuals have minor differences in the strengths of their direct and indirect routes of value influence: these individuals may use both routes equally, these individuals may use neither route, or alternatively, these individuals may use some third route not previously considered. Therefore, future empirical research should investigate each individual's use of the value influence routes in a way that does not force mutual exclusivity and that considers those individuals who appear to use both routes equally.

The extent individuals actually apply their human values through both routes equally is difficult to assess from the studies conducted in the thesis. In some analyses that did not force mutual exclusivity, such as the discriminant analyses just discussed, the routes were equal in strength for a subset of participants, but in other analyses that also did not force mutual exclusivity, the routes were negatively related for the sample as a whole. For example, Study 2 found a negative correlation between a preference for utilitarian meaning and a piecemeal judgement and a preference for symbolic meaning and an affective judgement. One explanation offered for the negative correlation between the two types of judgements was

Mittal's (1988) and Zajonc's (1984) claim that although piecemeal judgements (e.g., what Mittal terms "Information Processing Mode" or what Zajonc terms a "cognitive judgement") and affective judgements are separate processes, the judgements are likely to be negatively related because an affective judgement can be made more readily than an IPM/cognitive judgement, making the latter unnecessary when an affective judgement is strong. Though Zajonc's (1984) claim that an affective judgement precedes a cognitive judgement has also been made by other researchers and approaches (e.g., Mittal, 1988; Smith & Nelson, 1984), the claim has not been without criticism (e.g., Lazarus, 1982) and therefore an interesting avenue for further research is how and why meaning, judgement and the routes of value influence are, or are not, negatively related.

Issues for Theoretical Development

As the aim of the thesis was to develop a conceptual model of how consumers' choice of products may be influenced by the human values that they endorse, the directions suggested for further research are primarily methodological and conceptual, such as the establishment of a causal role of human values, and the qualification of the model's elements and operational definitions. However, the product meaning approach to value influence obligates further theoretical development, particularly of the needs and motivations that underlie the value influence routes and how those needs and motivations compel consumers to apply their human values. Addressing the deeper, psychological motivations and needs such as control of the environment, social approval and self-consistency, would provide a productive avenue for changing the product meaning approach from a conceptual model to a theoretical one as it could harness the already extensive theory concerning those specific psychological needs (e.g., Adler, 1929; Seligman, 1975).

Another topic for theoretical development is one that was a core emphasis of the product meaning approach, that is, that the value-attitude-behaviour system is not monolithic seems to have at a minimum, two subsystems, one loosely connecting human values, tangible attribute importance attitudes, and behaviour, and the other tightly connecting human values, intangible attribute importance attitudes and

behaviour. The latter might be so tight that the attitude component (e.g., intangible attribute importance) does not need to be measured to evaluate the impact of the route. Nevertheless, as intangible attribute importances were not measured for any studies in the thesis, future research should include intangible attribute importances, such as a consumer's preferred product images, to detect whether they mediate the influences of human values on product preference when consumers attend to symbolic meaning. Given that the measure of symbolic meaning preference used in Studies 2 and 3 explicitly referred to product images (e.g., "To what extent would you want your chosen product to be: Most compatible with the image you have of yourself" and "The image a product portrays is an important part of my decision whether or not to buy it") any future study that measured and modelled intangible attribute importances would probably find that they perform in the way suggested in the product meaning approach.

The emphasis in the product meaning approach that the value-attitude-behaviour system is not monolithic concerned how human value preferences are applied in behavioural decisions, but that emphasis may hold for how human values are acquired, that is, not only may human values be applied through two routes, they may also be acquired through two routes. The readers would recall that Rokeach (1968, 1973) and Feather (1975, 1982) suggest that human values are formed through the abstraction of positive and negative experiences with specific objects, and that the process of abstraction results in a hierarchical network between human values and evaluative beliefs about the object. Moreover, once the human value preferences are formed, the values can then be generalised to new human values, consequences and attributes, resulting in the expansion of the hierarchical network at both the object and human value extremities. Even Kahle (1983), who does not base his contentions on expectancy-value theory, nevertheless suggests that human values develop from the abstraction of specific experiences with objects. However, as Rokeach's and Feather's theories of value acquisition, in particular, are based on expectancy-value theory, then Rokeach's and Feather's theories may not fully explain value acquisition because theories of value application that are based on expectancy-value theory (e.g., the attribute-mediation approach) cannot fully explain value application. Study 1 showed most clearly that the route of value influence

based on expectancy-value theory (e.g., via tangible attribute importances) could not fully account for influence of human values on consumer choices.

Thus, the central question is whether the alternative, direct route of value application uncovered in Study 1 developed in the product meaning approach is also an alternative mode of value acquisition. The question is for future researchers to tackle but in the interest of jump-starting that research, one difference between the two routes of value acquisition, if that is what they are, may be the indirect acquisition of human values from the abstraction of positive and negative outcomes of specific experiences (e.g., the expectancy-value approach) versus the direct acquisition of human values from reference groups or the values idealised meanings. In the indirect mode, the ability of human values to define long-term goals may account for their acquisition from specific experiences with objects, and application in a careful and deliberate piecemeal judgement that seeks to maximise the rewards and minimise the punishments of interacting with objects (e.g., an instrumental function). In the alternative, direct mode, the ability of human values to define and mark groups and refer to general ideals may account for their direct, already abstracted, acquisition from groups with which the individual identifies, and their application in a spontaneous and affective judgement onto objects that symbolise those groups or ideals and which results in product identification.

As an example of each route of value acquisition and application, consider a cellular telephone and the human value of Accomplishment. Some consumers may associate the value of Accomplishment with a cellular telephone because they have used a cellular telephone in the past and found that it increased work performance and efficiency. Other consumers, however, may associate the value of Accomplishment with a cellular phone because a group with which they identify (e.g., Yuppies) are distinct from other groups by 1) their support of the value of Accomplishment and 2) their use of cellular phones. Thus, when the Accomplishment value is activated in the evaluation of a new, but similar, product to cellular phones, the former group will attend to the product's utilitarian meaning to assess whether the product will increase work performance and efficiency and the group will apply the Accomplishment value carefully and in a piecemeal judgement

to ensure that the product they purchase has the greatest possibility of providing accomplishing rewards. The latter group, however, will attend to the new product's symbolic meaning to assess whether 1) the symbolic meaning refers to the value of Accomplishment, and/or 2) whether the product also marks and defines Yuppies. If the product meets one or both of the criteria, the group will apply the value of Accomplishment holistically, spontaneously and affectively, and will feel a sense of identification the product. Therefore, a fruitful area for theoretical development could be the adapting of the product meaning approach to value influence to a product meaning approach to value acquisition. If both routes of value influence were also routes of value acquisition, then the conceptual model developed in the present thesis to explain the influences of human values on consumer choices might be a general framework of how human values influence the evaluations of a wide range of mental and physical objects.

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APPENDICES

Appendix One. Cover letter and survey for Study 1.

Appendix Two. Automobile coding scheme.

Appendix Three. Cover letter and survey for Study 2.

Appendix Four. Cover letter and survey for Study 3.

Note: Font sizes of cover letters and surveys reduced to fit on page.

Appendix One: Cover letter and survey for Study 1.

VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wanaga o te Upoko o te Ika a Maui

VALUES AND CONSUMER BEHAVIOUR STUDY

You are cordially invited to participate in a survey of New Zealanders' values and consumption behaviour. The purpose of this study is to investigate the relationship between a person's values and their product preferences. The results are expected to uncover both the relationships for specific products as well as those that transcend products.

Your voluntary involvement is important for it will help achieve a more balanced and representative view. If you choose to participate, I would be grateful for your completing the enclosed questionnaire (allow 20 to 30 minutes). This questionnaire is not a test and there are no right or wrong answers. What matters is your own personal opinion.

Please return the completed questionnaire in the enclosed pre-paid envelope, preferably by December 15, 1993. If you decide not to participate, I would appreciate your passing it along to another member in your household who is at least 18 years of age.

This is an anonymous questionnaire so please do not put your name anywhere on it. Your responses will be grouped together with those of other participants for purposes of analysis.

If you would like to receive a summary of the results or if you have any questions regarding this survey, please feel free to ring me at (04) 472-1000 x8229.

Thank you for your help.

Sincerely,

Michael W. Allen

PhD Student
Easterfield Building Room 507

DEPARTMENT OF PSYCHOLOGY

P.O. Box 600, Wellington, New Zealand, Telephone 0-4-471-5373, Facsimile 0-4-496-5402

Version 1

This page is a survey of people's value systems. Therefore, there are no right or wrong answers. The best answer is your own personal opinion.

First, read through the list and select the **13 most** important values to you. Do this by placing an "X" in the first column.

Next, read through the list again and pick the **13 least** important values. Do this by placing an "X" in the second column.

13 Most 13 Least
Important Important

_____	_____	A comfortable life (a prosperous life)
_____	_____	A sense of accomplishment (lasting contribution)
_____	_____	A world at peace (free of war and conflict)
_____	_____	A world of beauty (beauty of nature and the arts)
_____	_____	Ambitious (hard working, aspiring)
_____	_____	An exciting life (a stimulating, active life)
_____	_____	Broadminded (open-minded)
_____	_____	Capable (competent, effective)
_____	_____	Cheerful (light-hearted)
_____	_____	Clean (neat, tidy)
_____	_____	Courageous (standing up for your beliefs)
_____	_____	Equality (community, equal opportunity for all)
_____	_____	Equity (each person rewarded according to how much contribution he or she has made)
_____	_____	Family security (taking care of loved ones)
_____	_____	Forgiving (willing to pardon others)
_____	_____	Freedom (independence, free choice)
_____	_____	Happiness (contentedness)
_____	_____	Helpful (working for the welfare of others)
_____	_____	Honest (sincere, truthful)
_____	_____	Imaginative (daring, creative)
_____	_____	Independent (self-reliant, self-sufficient)
_____	_____	Inner harmony (freedom from inner conflict)
_____	_____	Intellectual (intelligent, reflective)
_____	_____	Logical (consistent, rational)
_____	_____	Loving (affectionate, tender)
_____	_____	Mature love (sexual and spiritual intimacy)
_____	_____	National security (protection from attack)
_____	_____	Obedient (dutiful, respectful)
_____	_____	Pleasurable (enjoyable, leisurely life)
_____	_____	Polite (courteous, well-mannered)
_____	_____	Responsible (dependable, reliable)
_____	_____	Salvation (saved, eternal life)
_____	_____	Self-controlled (restrained, self-disciplined)
_____	_____	Self-determination (ability to determine one's destiny)
_____	_____	Self-respect (self-esteem)
_____	_____	Social recognition (respect, admiration)
_____	_____	Social justice (fairness, no discrimination)
_____	_____	Social Power (position of authority and importance)
_____	_____	True friendship (close companionship)
_____	_____	Wisdom (a mature understanding of life)

*Please make sure you selected 13 items in each column then go to next page.

Below is a list of characteristics which you may or may not believe that products in general should have.

First, read through the list and select the **11 most** important characteristics to you personally. Do this by placing an "X" in the first column.

Next, read through the list again and pick the **11 least** important characteristics to you. Do this by placing an "X" in the second column.

11 Most 11 Least
Important Important

A product should be...

_____	_____	unique
_____	_____	traditional
_____	_____	stylish
_____	_____	sophisticated
_____	_____	simple
_____	_____	setting me in a good mood when I use it
_____	_____	safe to use
_____	_____	quiet
_____	_____	prestigious
_____	_____	practical/functional
_____	_____	popular
_____	_____	pleasurable
_____	_____	pleasant to my senses
_____	_____	of highest reputation
_____	_____	of minimal environmental impact
_____	_____	new on the market
_____	_____	modern
_____	_____	innovative
_____	_____	inexpensive
_____	_____	in a wide variety
_____	_____	healthy
_____	_____	familiar
_____	_____	exciting
_____	_____	efficient
_____	_____	easy to use
_____	_____	durable/long lasting
_____	_____	dependable
_____	_____	consistent with what friends and family want
_____	_____	compatible with how I like to think of myself
_____	_____	common/widely used
_____	_____	comfortable/secure
_____	_____	beautiful
_____	_____	an expression of my personality
_____	_____	a new experience for me

* Please make sure you checked 11 items in each column then go to the next page.

Automobile Purchase Portion

Thinking about automobiles in general, please rate how important each of the following characteristics are to you when deciding on a possible automobile purchase.

Please use a scale of 1 to 10, with 1 meaning it is "not at all important" up to 10, meaning it is "very important". Place your answer in the column marked "Importance" and be sure to answer every item.

	Not At All Important											Very Important
	[_____]											
	1	2	3	4	5	6	7	8	9	10		
<u>Importance</u>												
_____ style												
_____ spacious interior												
_____ smooth riding												
_____ safety												
_____ quality workmanship												
_____ prestigious												
_____ luxurious interior												
_____ low pollution emission												
_____ large engine												
_____ large body size												
_____ inexpensive												
_____ high gas mileage/kilometres per litre												
_____ high speed capabilities												
_____ heating												
_____ road handling												
_____ few repairs needed/low maintenance												
_____ reliability												
_____ compact												
_____ comfort												
_____ colour												
_____ air conditioning (cooling)												
_____ advanced engineering												

Q1. What is the make and model of the automobile you own now? (e.g., "Toyota Corolla" or "Honda CRX") (Write "none" if not applicable.)

Q2. What were the makes and models of the TWO automobiles you owned prior to the one you own now? (Write "none" if not applicable.)

Holiday Destination Portion

Thinking about travel holiday destinations, please rate how important each of the following characteristics are to you when deciding on possible holiday destination areas.

Please use a scale of 1 to 10, with 1 meaning it is "not at all important" up to 10, meaning it is "very important". Place your answer in the column marked "Importance" and be sure to answer every item.

Not At All Important					Very Important				
[_____]									
1	2	3	4	5	6	7	8	9	10

Importance

- _____ Wilderness, rugged
- _____ Tropical
- _____ Stimulating
- _____ Sophisticated restaurants & hotels
- _____ Shopping
- _____ Scenic
- _____ Safe
- _____ Relaxing
- _____ Refreshing
- _____ Ordinary
- _____ Night life
- _____ Museums, galleries, theatre
- _____ Many activities/things to do
- _____ Luxurious/Prestigious
- _____ Intellectually interesting
- _____ Inexpensive
- _____ Historical
- _____ Has theme park(s)
- _____ Great beaches
- _____ Few tourists, non-commercial
- _____ Exciting
- _____ Educational
- _____ Authentic native culture
- _____ A place for a planned/structured holiday
- _____ A place to have all your needs attended to
- _____ A unique place
- _____ A good place for tramping

Holiday Destination Portion (continued)

Over the past 5 years, how many times have you been on holiday to each of the following destinations? Answer by writing your response on the line next to the destination. Note: only include those places where you actually had some degree of control over where you went. In other words, if your parents or spouse made the decision to go to this place without your input then do not include it in this list.

- _____ Lake Taupo
- _____ Australia's Gold Coast
- _____ Bali
- _____ Brisbane
- _____ Cairns and area
- _____ Club Med -- Lindeman Island (Australia)
- _____ Fiji
- _____ Great Barrier Reef Islands
- _____ Melbourne
- _____ New Caledonia
- _____ Niue
- _____ Norfolk Island
- _____ Northern Territory (Australia)
- _____ Papua New Guinea
- _____ Perth and area
- _____ Rarotonga
- _____ Sydney
- _____ Tahiti/French Polynesia
- _____ Tasmania
- _____ Tonga
- _____ Vanuatu
- _____ Western Samoa

Holiday Destination Portion (continued)

Below are two lists. The first list names 21 holiday destination areas while the second list contains attributes that may describe these destinations. Please indicate which two of the 21 destinations listed below you consider to be the best for each of the attributes. Respond by placing the number that corresponds to that destination on the line for first choice or second choice for that attribute. Please be sure to fill in every line.

1. Australia's Gold Coast	13. Northern Territory (Aus.)
2. Bali	14. Perth and area
3. Brisbane	15. Rarotonga
4. Cairns and area	16. Sydney
5. Club Med -- Lindeman Island	17. Tahiti/French Polynesia
6. Fiji	18. Tasmania
7. Papua New Guinea	19. Tonga
8. Great Barrier Reef Islands	20. Vanuatu
9. Melbourne	21. Western Samoa
10. New Caledonia	
11. Niue	
12. Norfolk Island	

FIRST	SECOND	
<u>CHOICE</u>	<u>CHOICE</u>	

_____	_____	Wilderness, rugged
_____	_____	Tropical
_____	_____	Stimulating
_____	_____	Sophisticated restaurants & hotels
_____	_____	Shopping
_____	_____	Scenic
_____	_____	Safe
_____	_____	Relaxing
_____	_____	Refreshing
_____	_____	Ordinary
_____	_____	Night life
_____	_____	Museums, galleries, theatre
_____	_____	Many activities/things to do
_____	_____	Luxurious/Prestigious
_____	_____	Intellectually interesting
_____	_____	Inexpensive
_____	_____	Historical
_____	_____	Has theme park(s)
_____	_____	Great beaches
_____	_____	Few tourists, non-commercial
_____	_____	Exciting
_____	_____	Educational
_____	_____	Authentic native culture
_____	_____	A place for a planned/structured holiday
_____	_____	A place to have all your needs attended
_____	_____	A unique place
_____	_____	A good place for tramping

Supermarket Food Purchasing Portion

Thinking about your supermarket food purchase decisions, please rate how important each of the following characteristics are to you when deciding on possible food products to purchase.

Please use a scale of 1 to 10, with 1 meaning it is "not at all important" up to 10, meaning it is "very important". Place your answer in the column marked "Importance" and be sure to answer every item.

Not At All Important					Very Important				
[_____]									
1	2	3	4	5	6	7	8	9	10

Importance

- _____ unusual/not commonly used
- _____ traditional
- _____ tasty
- _____ sweet
- _____ spicy
- _____ sour
- _____ sophisticated/up market
- _____ simple
- _____ salty
- _____ safe to eat
- _____ popular
- _____ organically grown
- _____ nutritious/high in vitamins and minerals
- _____ nice aroma
- _____ new product on market
- _____ made of high quality ingredients
- _____ low environmental impact to produce
- _____ low in fat
- _____ looks appealing
- _____ inexpensive
- _____ high in protein
- _____ gourmet
- _____ flavoursome
- _____ exotic/from another culture
- _____ easy to prepare
- _____ easy to obtain
- _____ crunchy
- _____ bland

Food Purchasing Portion (continued)

Q1. For each of the items listed below, please indicate approximately how many times over the past 3 days you ate this food.

	Number Times Last 3 Days
Red meat (e.g., beef)	_____
White meat (e.g., chicken, pork, etc.)	_____
Seafood/Fish	_____
Dairy products (e.g., milk, eggs, cheese, etc.)	_____

Q2. Using the scale below, how much do you consider yourself a **vegan** (a person who eats vegetables, grains, etc. but no animal or seafood/fish products) versus an **omnivore** (a person who eats vegetables, grains, etc., and most animal and seafood/fish products)? Please circle your response.

Vegan 1 2 3 4 5 6 7 8 9 10 **Omnivore**

Q3. Which one of the following types of eaters do you consider yourself to be. Circle one response.

1. Omnivore -- Eats most animal and seafood/fish products in addition to vegetables, grains, etc..
2. Dairy and Fish Vegetarian -- Eats dairy and seafood/fish but no white or red meat.
3. Ova-Lacto Vegetarian -- Eats dairy products but no seafood/fish, white or red meat.
4. Vegan -- Eats absolutely no animal products including dairy, seafood/fish, white and red meat.
5. Other: Specify _____

Demographic Portion

Q1. Which of the following categories contains your age? (Circle your response)

1. Under 20 years
2. 20 to 29 years
3. 30 to 39 years
4. 40 to 49 years
5. 50 to 59 years
6. More than 60

Q2. What is your gender?

1. Male
2. Female

Q3. Which of the following categories contains your highest level of education completed?

1. No qualifications
2. Higher school or leaving certificate/bursary
3. Technical/Trade certificate
4. Undergraduate work
5. Bachelors degree
6. Postgraduate work
7. Postgraduate degree

Q4. What is your ethnicity?

1. New Zealander (non-Maori)
2. New Zealander (Maori)
3. Pacific Islander
4. Asian
5. Other (Specify: _____)

Thank you for your participation!

This questionnaire was naturally limited in scope and in the number of questions that can be asked. If you would like to comment further on any of the matters that have been raised or perhaps ones that were overlooked, please feel free to write in the space overleaf. Thank you once again.

Appendix Three: Cover letter and survey for Study 2.

VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wanaga o te Upoko o te Ika a Maui

Dear Wellington Region Resident,

We invite you to participate in a survey about values and consumer behaviour. Your opinions and insights can help us gain a better understanding of how people decide on which products to buy. Since your name has been chosen at random from the telephone directory, your voluntary involvement is important for it can help achieve a balanced and representative view of the attitudes of Wellingtonians.

If you choose to complete the questionnaire it will probably take you about 15 minutes. If you decide not to participate, we would appreciate your passing it along to another member in your household who is at least 18 years of age.

This is an anonymous questionnaire so please do not put your name anywhere on it. When we look at the responses, all of the participants will be grouped together. This questionnaire is not a test and there are no right or wrong answers. What matters to us is your own personal opinion.

In your next available moment could you complete the questionnaire and return it in the enclosed pre-paid envelope, preferably by 28 November 1994.

We have spent a lot of time developing this questionnaire and we hope that you find it interesting. There is room on page 5 for you to comment further on any of the points that were raised. If you would like to receive a summary of the results or if you have any questions, please feel free to ring me at (04) 472-1000 ext. 8095.

Thank you for your help. We appreciate your time and effort in completing the survey.

Sincerely,

A handwritten signature in black ink that reads "Michael W. Allen".

Michael W. Allen

PhD Student
Easterfield Building Room 508

DEPARTMENT OF PSYCHOLOGY

P.O. Box 600, Wellington, New Zealand, Telephone 0-4-471-5373, Facsimile 0-4-496-5402

Version 1

The purpose of this study is to learn how people decide on what products to buy. In this part of the survey, we are interested in how people decide on an **AUTOMOBILE**. Please answer the questions below on the assumption that you are about to purchase an **AUTOMOBILE**. If you strongly agree with a statement, circle the 7, if you strongly disagree circle the 1. You may choose any number between 1 and 7.

Before you make your final selection of an automobile, you would:

Strongly Disagree

Strongly Agree

1. Consider the pros and cons for each automobile	1	2	3	4	5	6	7
2. Think a lot about yourself as a user of the automobile
(i.e., how you would look, feel, etc.)	1	2	3	4	5	6	7
3. Seek a lot of information about each automobile	1	2	3	4	5	6	7

Keeping in mind the AUTOMOBILE purchasing situation, how much do you agree or disagree with each of the following statements:

Strongly Disagree

Strongly Agree

1. When deciding on whether or not to buy an automobile I think about how useful it will be	1	2	3	4	5	6	7
2. The instant I see an automobile I know if I like it	1	2	3	4	5	6	7
3. The image an automobile portrays is an important part of my decision whether or not to buy it	1	2	3	4	5	6	7
4. Usually my selection of an automobile is based on a gut feeling	1	2	3	4	5	6	7
5. I believe in exercising self-control and not being impulsive when deciding on an automobile	1	2	3	4	5	6	7
6. I want an automobile that is similar to what my friends have	1	2	3	4	5	6	7
7. I believe in selecting an automobile based on a careful examination of all its features	1	2	3	4	5	6	7
8. I believe in making a responsible and well-considered decision	1	2	3	4	5	6	7
9. I prefer an automobile that reflects who I am	1	2	3	4	5	6	7
10. I think it is important to select the most practical automobile	1	2	3	4	5	6	7
11. I believe in being logical and rational when deciding on an automobile	1	2	3	4	5	6	7

Below are some general goals which you may or may not have in mind while selecting the automobile.

To what extent would you want your chosen automobile to be:

	<u>Strongly Disagree</u>	<u>Strongly Agree</u>
1. An automobile that you can proudly display	1 2 3 4 5 6 7	
2. Something that feels pleasant to your senses(i.e., sight, feel, etc.)	1 2 3 4 5 6 7	
3. Known to be expensive	1 2 3 4 5 6 7	
4. In fashion or in vogue	1 2 3 4 5 6 7	
5. Something that puts you in a good mood when you use it	1 2 3 4 5 6 7	
6. Most compatible with the image you have of yourself	1 2 3 4 5 6 7	

* * *

Below are the same questions you just answered in reference to an automobile. In this part of the survey, however, we are interested in how people decide on a pair of SUNGLASSES. Please answer the questions below on the assumption that you are about to purchase a pair of SUNGLASSES.

Before you make your final selection of a pair of sunglasses, you would:

	<u>Strongly Disagree</u>	<u>Strongly Agree</u>
1. Consider the pros and cons for each pair of sunglasses	1 2 3 4 5 6 7	
2. Think a lot about yourself as a wearer of the sunglasses (i.e., how you would look, feel, etc.)	1 2 3 4 5 6 7	
3. Seek a lot of information about each pair of sunglasses	1 2 3 4 5 6 7	

Keeping in mind the SUNGLASSES purchasing situation, how much do you agree or disagree with each of the following statements:

	<u>Strongly Disagree</u>	<u>Strongly Agree</u>
1. When deciding on whether or not to buy a pair of sunglasses I think about how useful they will be	1 2 3 4 5 6 7	
2. The instant I see a pair of sunglasses I know if I like them	1 2 3 4 5 6 7	
3. The image a pair of sunglasses portrays is an important part of my decision whether or not to buy it	1 2 3 4 5 6 7	
4. Usually my selection of a pair of sunglasses is based on a gut feeling	1 2 3 4 5 6 7	
5. I believe in exercising self-control and not being impulsive when deciding on a pair of sunglasses	1 2 3 4 5 6 7	
6. I want a pair of sunglasses that are similar to what my friends have	1 2 3 4 5 6 7	
7. I believe in selecting a pair of sunglasses based on a careful examination of all their features	1 2 3 4 5 6 7	
8. I believe in making a responsible and well-considered decision	1 2 3 4 5 6 7	
9. I prefer a pair of sunglasses that reflects who I am	1 2 3 4 5 6 7	
10. I think it is important to select the most practical pair of sunglasses	1 2 3 4 5 6 7	
11. I believe in being logical and rational when deciding on a pair of sunglasses	1 2 3 4 5 6 7	

Below are some general goals which you may or may not have in mind while selecting the sunglasses.

To what extent would you want your chosen sunglasses to be:

	<u>Strongly Disagree</u>	<u>Strongly Agree</u>
1. A pair of sunglasses that you can proudly display	1 2 3 4 5 6 7	
2. Something that feels pleasant to your senses(i.e., sight, feel, etc.)	1 2 3 4 5 6 7	
3. Known to be expensive	1 2 3 4 5 6 7	
4. In fashion or in vogue	1 2 3 4 5 6 7	
5. Something that puts you in a good mood when you wear them	1 2 3 4 5 6 7	
6. Most compatible with the image you have of yourself	1 2 3 4 5 6 7	

This page is a survey of people's VALUE SYSTEMS. Since there are no right or wrong answers, the best answer is your own personal opinion. Please follow the three steps listed below.

FIRST, read through the list below.

13 Most Important	13 Least Important	
_____	_____	A comfortable life (a prosperous life)
_____	_____	A sense of accomplishment (lasting contribution)
_____	_____	A world at peace (free of war and conflict)
_____	_____	A world of beauty (beauty of nature and the arts)
_____	_____	Ambitious (hard working, aspiring)
_____	_____	An exciting life (a stimulating, active life)
_____	_____	Broadminded (open-minded)
_____	_____	Capable (competent, effective)
_____	_____	Cheerful (light-hearted)
_____	_____	Clean (neat, tidy)
_____	_____	Courageous (standing up for your beliefs)
_____	_____	Equality (community, equal opportunity for all)
_____	_____	Equity (each person rewarded according to how much contribution they have made)
_____	_____	Family security (taking care of loved ones)
_____	_____	Forgiving (willing to pardon others)
_____	_____	Freedom (independence, free choice)
_____	_____	Happiness (contentedness)
_____	_____	Helpful (working for the welfare of others)
_____	_____	Honest (sincere, truthful)
_____	_____	Imaginative (daring, creative)
_____	_____	Independent (self-reliant, self-sufficient)
_____	_____	Inner harmony (freedom from inner conflict)
_____	_____	Intellectual (intelligent, reflective)
_____	_____	Logical (consistent, rational)
_____	_____	Loving (affectionate, tender)
_____	_____	Mature love (sexual and spiritual intimacy)
_____	_____	National security (protection from attack)
_____	_____	Obedient (dutiful, respectful)
_____	_____	Pleasurable (enjoyable, leisurely life)
_____	_____	Polite (courteous, well-mannered)
_____	_____	Responsible (dependable, reliable)
_____	_____	Salvation (saved, eternal life)
_____	_____	Self-controlled (restrained, self-disciplined)
_____	_____	Self-determination (ability to determine one's destiny)
_____	_____	Self-respect (self-esteem)
_____	_____	Social recognition (respect, admiration)
_____	_____	Social justice (fairness, no discrimination)
_____	_____	Social Power (position of authority and importance)
_____	_____	True friendship (close companionship)
_____	_____	Wisdom (a mature understanding of life)

SECOND, from the list above select the **13 most** important values to you. Do this by placing an "X" in the *first column*.

THIRD, read through the list again and pick the **13 least** important values. Do this by placing an "X" in the *second column*. Remember, when you indicate your least important values you are not saying that the values are unimportant, but rather that they are less important than the other values.

Referring to the values listed on the previous page, do you feel that there are some values that are important to you but do not appear in the list? If so, what are they?

Can you think of other values that may be important to New Zealanders but are not listed?

Demographic Portion

Q1. Which one of the following categories best describes your age? (Circle your response)

1. Under 20 years
2. 20 to 29 years
3. 30 to 39 years
4. 40 to 49 years
5. 50 to 59 years
6. More than 60

Q2. Are you male or female? Male Female

Thank you for your participation!

This questionnaire is naturally limited in scope and in the number of questions that can be asked. If you would like to comment further on any of the matters that have been raised or perhaps ones that were overlooked, please feel free to write in the space below. Thank you once again.

Appendix Four: Cover letter and survey for Study 2.

VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wanaga o te Upoko o te Ika a Maui

Dear Wellington Region Resident,

We invite you to participate in a survey about values and consumer behaviour. Your opinions and insights can help us gain a better understanding of how people decide which products to buy. Since your name has been chosen at random from the telephone directory, your voluntary involvement is important for it can help achieve a balanced and representative view of Wellingtonians.

In your next available moment could you complete the questionnaire and return it in the enclosed pre-paid envelope. If you decide not to participate, we would appreciate your passing it along to another member in your household who is at least 18 years of age.

As a token of our appreciation for your participation, your name will be entered in a lucky draw for a **\$100** gift certificate at a store of your choosing.

Your responses will be kept anonymous and will not be used for any purpose other than for this study. If you would like to receive a summary of the results or if you have any questions, please feel free to ring me at (04) 472-1000 ext. 8095.

Thank you for your help. We appreciate your time and effort in completing the survey.

Sincerely,

Michael Allen
PhD Student in Psychology

CUT HERE AND RETURN THIS PORTION

To be entered into the draw please fill in the information below and return it in the post-paid envelope along with your completed questionnaire.

Also, we will need a small number of participants to interview on a more in-depth basis. Those who are selected will be paid \$15 for an approximately 20 minute interview conducted at their convenience. Would you like to have your name added to this list of possible participants? YES or NO

Name: _____

Address: _____

Phone: _____

Version 1

This page is a survey of people's VALUES. This is not a test and there are no right or wrong answers. The best answer is your own personal opinion. Please follow the three steps listed below.

FIRST, read through the list below.

13 Most Important	13 Least Important	
_____	_____	A comfortable life (a prosperous life)
_____	_____	A sense of accomplishment (lasting contribution)
_____	_____	A world at peace (free of war and conflict)
_____	_____	A world of beauty (beauty of nature and the arts)
_____	_____	Ambitious (hard working, aspiring)
_____	_____	An exciting life (a stimulating, active life)
_____	_____	Broadminded (open-minded)
_____	_____	Capable (competent, effective)
_____	_____	Cheerful (light-hearted)
_____	_____	Clean (neat, tidy)
_____	_____	Courageous (standing up for your beliefs)
_____	_____	Equality (community, equal opportunity for all)
_____	_____	Equity (each person rewarded according to how much contribution they have made)
_____	_____	Family security (taking care of loved ones)
_____	_____	Forgiving (willing to pardon others)
_____	_____	Freedom (independence, free choice)
_____	_____	Happiness (contentedness)
_____	_____	Helpful (working for the welfare of others)
_____	_____	Honest (sincere, truthful)
_____	_____	Imaginative (daring, creative)
_____	_____	Independent (self-reliant, self-sufficient)
_____	_____	Inner harmony (freedom from inner conflict)
_____	_____	Intellectual (intelligent, reflective)
_____	_____	Logical (consistent, rational)
_____	_____	Loving (affectionate, tender)
_____	_____	Mature love (sexual and spiritual intimacy)
_____	_____	National security (protection from attack)
_____	_____	Obedient (dutiful, respectful)
_____	_____	Pleasurable (enjoyable, leisurely life)
_____	_____	Polite (courteous, well-mannered)
_____	_____	Responsible (dependable, reliable)
_____	_____	Salvation (saved, eternal life)
_____	_____	Self-controlled (restrained, self-disciplined)
_____	_____	Self-determination (ability to determine one's destiny)
_____	_____	Self-respect (self-esteem)
_____	_____	Social recognition (respect, admiration)
_____	_____	Social justice (fairness, no discrimination)
_____	_____	Social Power (position of authority and importance)
_____	_____	True friendship (close companionship)
_____	_____	Wisdom (a mature understanding of life)

SECOND, from the list above select the **13 most** important values to you. Do this by placing an "X" in the *first column*.

THIRD, read through the list again and pick the **13 least** important values. Do this by placing an "X" in the *second column*. Remember, when you indicate your least important values you are not saying that the values are unimportant, but rather that they are simply less important than the other values.

The aim of the portion of the survey is to determine the style or manner you use when carrying out different mental tasks. Please answer each question about the way you engage in tasks by circling one of the four possible responses.

<u>Always True</u>	<u>Usually True</u>	<u>Usually False</u>	<u>Always False</u>	
1	2	3	4	I enjoy doing work that requires the use of words.
1	2	3	4	There are some special times in my life that I like to relive by mentally “picturing” just how everything looked.
1	2	3	4	I can never seem to find the right word when I need it.
1	2	3	4	I do a lot of reading.
1	2	3	4	When I’m trying to learn something new, I’d rather watch a demonstration than read how to do it.
1	2	3	4	I think I often use words in the wrong way.
1	2	3	4	I enjoy learning new words.
1	2	3	4	I like to picture how I could fix up my apartment or a room if I could buy anything I wanted.
1	2	3	4	I often make written notes to myself.
1	2	3	4	I like to daydream.
1	2	3	4	I generally prefer to use a diagram rather than a written set of instructions.
1	2	3	4	I like to “doodle”.
1	2	3	4	I find it helps to think in terms of mental pictures when doing many things.
1	2	3	4	After I meet someone for the first time, I can usually remember what they look like, but not much about them.
1	2	3	4	I like to think of synonyms for words.
1	2	3	4	When I have forgotten something I frequently try to form a mental “picture” to remember it.
1	2	3	4	I like learning new words.
1	2	3	4	I prefer to read instructions about how to do something rather than have someone show me.
1	2	3	4	I prefer activities that don’t require a lot of reading.
1	2	3	4	I seldom daydream.
1	2	3	4	I spend very little time attempting to increase my vocabulary.
1	2	3	4	My thinking often consists of mental “pictures” or images.

The purpose of this portion of the survey is to learn about how people decide which products (e.g., automobiles, clothing, food items, etc.) to purchase. We are not interested in how you decide on any particular product, but rather, how you generally go about deciding.

If you strongly agree with a statement, circle 7, if you strongly disagree circle 1. You may choose any number between 1 and 7.

Before you make your final selection of a product, you would:

Strongly Disagree

Strongly Agree

1. Consider the pros and cons for each product	1	2	3	4	5	6	7
2. Think a lot about yourself as a user of the product
(i.e., how you would look, feel, etc.)	1	2	3	4	5	6	7
3. Seek a lot of information about each product	1	2	3	4	5	6	7

How much do you agree or disagree with each of the following statements:

Strongly Disagree

Strongly Agree

1. When deciding on whether or not to buy a product I think about how useful it will be	1	2	3	4	5	6	7
2. The instant I see a product I know if I like it	1	2	3	4	5	6	7
3. The image a product portrays is an important part of my decision whether or not to buy it	1	2	3	4	5	6	7
4. Usually my selection of a product is based on a gut feeling	1	2	3	4	5	6	7
5. I believe in exercising self-control and not being impulsive when deciding on a product	1	2	3	4	5	6	7
6. I would look to my friends or family to see if they liked it	1	2	3	4	5	6	7
7. I believe in selecting a product based on a careful examination of all its features	1	2	3	4	5	6	7
8. I believe in making a responsible and well-considered decision	1	2	3	4	5	6	7
9. I prefer a product that reflects who I am	1	2	3	4	5	6	7
10. I think it is important to select the most practical product	1	2	3	4	5	6	7
11. I believe in being logical and rational when deciding on a product	1	2	3	4	5	6	7

Below are some general goals which you may or may not have in mind while selecting the product.

To what extent would you want your chosen product to be:

**Strongly
Disagree**

**Strongly
Agree**

1. A product that you can proudly display	1	2	3	4	5	6	7
2. Something that feels pleasant to your senses(i.e., sight, feel, etc.)	1	2	3	4	5	6	7
3. Known to be expensive	1	2	3	4	5	6	7
4. In fashion or in vogue	1	2	3	4	5	6	7
5. Something that puts you in a good mood when you use it	1	2	3	4	5	6	7
6. Most compatible with the image you have of yourself	1	2	3	4	5	6	7

Car Selection Criteria

The purpose of this portion of the survey is to learn how people decide on a particular product to purchase. Thinking about **cars** in general, please rate how important each of the following characteristics is to you when deciding a possible car purchase.

Please use a scale of 1 to 10, with 1 meaning it is "not at all important" up to 10, meaning it is "very important".

Not At All
Important

Very
Important

[_____]

1 2 3 4 5 6 7 8 9 10

Importance

- _____ style
- _____ spacious interior
- _____ smooth riding
- _____ safety
- _____ quality workmanship
- _____ prestigious
- _____ luxurious interior
- _____ low pollution emission
- _____ large engine
- _____ large body size
- _____ inexpensive

Importance

- _____ high kilometres per litre
- _____ high speed capabilities
- _____ heating
- _____ road handling
- _____ few repairs needed/low maintenance
- _____ reliability
- _____ compact
- _____ comfort
- _____ colour
- _____ air conditioning (cooling)
- _____ advanced engineering

Ownership and Demographic Portion

- Q1. What is the make, model and year of the car you own now? (e.g., "1993 Toyota Corolla" or "1989 Ford Laser") (Write "none" if not applicable.)

- Q2. What were the makes, models and years of the TWO cars you owned prior to the one you own now?

- Q3. On a scale of 1 to 10, with 1 meaning you “**Do not like it at all**” to 10 meaning you “**Like it very much**”, how much do you like each of the cars listed below?

Toyota Corolla	_____
Honda Accord	_____
Mitsubishi Sigma	_____
Nissan Pulsar	_____

- Q4. Which one of the following categories contains your age? (Circle your response)

1. Under 20 years
2. 20 to 29 years
3. 30 to 39 years
4. 40 to 49 years
5. 50 to 59 years
6. 60 or more

- Q5. What is your occupation? _____

- Q6. Are you male or female? Male Female

Thanks for your participation!