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Self-Monitoring and Consumer Behavior

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Abstract

In the present research, the relationship between the psychological construct of self-monitoring (Snyder, 1974) and consumer behavior is investigated. The word association study undertaken for the present paper was deliberately unstructured. This type of methodology provides respondents with a context free environment in which contents of fruit and vegetable knowledge structures can be elicited. This is the first such study that examines self-monitoring in a free-recall situation, and the results are instructive in providing more information on the specific nature of self-monitoring effects. Furthermore, the results of this study demonstrate a relationship between two sub-disciplines of psychology, namely self-monitoring (Snyder, 1974) and decision-making (Damasio, 1994; Epstein, 1997; Hammond, 1996).

Keywords

Self-Monitoring, Decision-Making, Word Association, Consumer Behavior

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Self-Monitoring and Consumer Behavior

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In the present research, the relationship between the psychological construct of self-monitoring (Snyder, 1974) and consumer behavior is investigated. The word association study undertaken for the present paper was deliberately unstructured. This type of methodology provides respondents with a context-free environment in which contents of fruit and vegetable knowledge structures can be elicited. This is the first such study that examines self-monitoring in a free-recall situation, and the results are instructive in providing more information on the specific nature of self-monitoring effects. Furthermore, the results of this study demonstrate a relationship between two sub-disciplines of psychology, namely self-monitoring (Snyder, 1974) and decision-making (Damasio, 1994, Epstein, 1997; Hammond, 1996). Key words: Self-Monitoring, Decision-Making, Word Association, and Consumer Behavior

Introduction

In the present research, the relationship between the psychological construct of self-monitoring (Snyder, 1974) and consumer behavior is investigated. The word association study undertaken for the present paper was deliberately unstructured. This type of methodology provides respondents with a context-free environment in which contents of fruit and vegetable knowledge structures¹ can be elicited. This is the first such study that examines self-monitoring in a free-recall situation, and the results are instructive in providing more information on the specific nature of self-monitoring effects. Furthermore, the results of this study demonstrate a relationship between two sub-disciplines of psychology, namely self-monitoring (Snyder, 1974) and decision-making (Damasio, 1994, Epstein, 1997; Hammond, 1996).

The psychological construct of self-monitoring, introduced by Snyder (1974), has been studied extensively, and has been consistently shown to influence human behavior in a variety of settings (Gangestad & Snyder, 1985a&b; also see Snyder, 1991, for a review). Snyder argued that the population, generally speaking, can be divided into two

¹ The research presented in this paper formed part of the author's doctoral dissertation, which involved an investigation of several psychological factors affecting consumer perceptions of fresh fruits and vegetables. The use of fresh produce, which are termed everyday consumption items, is appropriate, given that the theory of self-monitoring, as proposed by Snyder (1974) does not suggest that only high-image products, such as sunglasses and cars, will invoke the self-monitoring effect. Rather, no distinction is made between low- and high-image products in terms of eliciting the self-monitoring effect for consumers (Snyder, 1974).

groups: High self-monitors (HSM's), who use the behavior of others as guides to how they should conduct themselves, and low self-monitors (LSM's), who use their inner beliefs, values, attitudes and other personal attributes as guides to behavior.

It has been suggested that HSM's are particularly concerned with the image of themselves that they present to others, and tend to use situational and interpersonal specifications to ascertain how they should behave in given situations. They therefore adopt different behaviors for different situations, depending upon the social cues evident in each context. It follows from this that HSM's are likely to show noticeable situation-to-situation changes in behavior (Snyder, 1974, 1987). Research findings tend to support this idea, with HSM's showing marked changes in behavior, relative to situational cues of appropriateness (Snyder, 1991).

In contrast to this, LSM's tend to use their values, beliefs and attitudes as guides for behavior, and place considerably less emphasis on situational cues. They are not concerned with altering their behavior to 'fit in' to any given situation. That is, they are concerned to act in accordance with their inner beliefs and dispositions, and will therefore show situation-to-situation consistency in behavior. These individuals should therefore show strong consistency between inner states and behavior, and research findings have tended to support this claim (Snyder, 1987).

As stated above, the present research is focussed upon consumer behavior, and the role that self-monitoring plays in this context. In this respect, Snyder suggests that LSM's will focus on quality-based characteristics in order to express inner values and attitudes. HSM's, on the other hand, wishing to present a particular image to others, will focus on image-related product characteristics when evaluating a product. In other words, LSM's will choose consumer items based upon purported quality characteristics inherent in these products, while HSM's will focus on image, or value-expressive characteristics when evaluating consumer items.

According to Snyder and DeBono (1985, p. 588),

to the extent that an advertisement allows high self-monitoring individuals to perceive that a given product has the potential to be used to create or enhance an image, they should react favorably to it..... By contrast, low self-monitoring individuals typically do not attempt to mold their behavior to fit situational and interpersonal considerations. Instead, these individuals tend to guide their behavioral choices on the basis of information from relevant inner sources, such as attitudes, feelings and dispositions..... Unlike their high self-monitoring counterparts, low self-monitoring individuals are less concerned with the images they project to others in social situations; instead, they are more concerned that their behavior in social contexts be an accurate reflection of their underlying attitudes, values and dispositions. As such, they may be particularly responsive to advertisements that feature appeals to a product's quality.

Research findings have tended to support this notion, demonstrating at least a moderate relation between self-monitoring style and differential attention to product characteristics (DeBono & Harnish, 1988; DeBono & Packer, 1991; DeBono & Rubin 1995; DeBono & Snyder, 1989; DeBono & Telesca, 1990; Johar and Sirgy, 1991; Shavitt et al, 1992; Snyder & DeBono, 1985).

Validity of conceptual link between self-monitoring behavior and product attributes

With respect to the present discussion on self-monitoring, it has been stated above that many of the findings relating self-monitoring and consumer behavior are moderate (Zuckerman, Gioioso & Tellini, 1988). That is to say, the findings of a relationship between self-monitoring and product characteristics have not been consistently strong. Careful analysis of the findings of several of these studies revealed that the strongest results were obtained when the relation between self-monitoring and the terms 'image' and 'quality' were investigated (DeBono & Packer, 1991; DeBono & Rubin, 1995; Snyder & DeBono, 1985), although it is the case that the findings of DeBono and Packer (1991) were mixed, with some findings not reaching significance.

One explanation for the 'moderate' (Zuckerman et al., 1988) findings obtained in some self-monitoring studies relates to terminology used by different theorists. With respect to the notion of categorization of these terms, a possibly troubling aspect of these theories is the equivalence in meaning given to the various terms used to describe image- and quality-based characteristics of products.

It is the case that some self-monitoring researchers choose to investigate the relationship between self-monitoring and social identity versus utilitarianism (Johar & Sirgy, 1991; Shavitt, 1992; Shavitt et al., 1992), whereas others choose to label social identity and utilitarianism, image and quality (DeBono & Rubin, 1995, Snyder & DeBono, 1985, DeBono & Telesca, 1990, although DeBono and Telesca use the term value-expressive, rather than utilitarianism). Still others label the categories of social identity and utilitarianism as form and function (DeBono & Snyder, 1989, Lammers, 1990).

It is not immediately apparent, however, that each of these terms ('form', 'image', 'social identity' and 'value-expressiveness', on the one hand, and 'function', 'quality', and 'utilitarianism', on the other hand) are, in fact, interchangeable. That is, there does not appear to have been a research focus on testing the assumption that the various terms used by self-monitoring theorists to refer to the product characteristics are transposable.

The inability to (as yet) provide a clear conceptual link between the above-mentioned terms weakens the conception of the relation between self-monitoring and consumer behavior. The fact that the various terms used to describe HSM's and LSM's selective attention to particular product characteristics might not be equivalent in meaning, might go some way toward explaining the low to moderate effects found between self-monitoring style and particular attributes of a product.

It might be the case that the behavioral, or product attribute manifestations of the concepts of image and quality have not been sufficiently honed. That is, researchers might not yet be aware of just how HSM's behavior reflects image-orientation, and what product attributes reflect the LSM's emphasis on inner values, beliefs and attitudes.

However, because research findings have been generally supportive of this conception concerning self-monitoring and product attributes, demonstrating at least a moderate relation (Snyder, 1991), it is suggested that the proposed consumer-related behavioral implications of the self-monitoring theory may be justified, but that they may require fine-tuning. It might be the case that, because of the different functions attitudes serve for LSM's, on the one hand, and HSM's, on the other, that these two groups attend

to qualitatively distinct product characteristics. However, the nature of these differences requires more precise, or specific definitions.

Methodological Issues

To this end, the present study seeks to investigate the concepts of image and quality/form and function/ social identity/value–expressiveness, and their relation to self–monitoring. The Word Association Method is an unstructured, qualitative methodology which is beneficial in providing descriptive, relatively context free data (Vicary, 1948; Szalay and Deese (de Groot, 1989, p. 824). It has been utilized in a wide variety of research settings, including interests and attitudes, language acquisition and verbal behavior, memory, demographic factors (such as age and sex) on response repetition, lexical ambiguity, post traumatic stress disorders, the hierarchical positioning of responses, grammar, efficiency in problem solving, cognitive processing and, not surprisingly, market research (Russell & Jenkins, 1954). According to Szalay and Deese (de Groot, 1989, p. 824), 'word associations comprise a method of retrieving information regarding the stimulus object via links in the memory network and are *relatively pure indicators of the way human knowledge is mentally represented*' (my italics). It is also the case that the word association methodology allows for minimal individual biases to occur, thus ensuring that collected data are relatively free from experimenter– and participant–related biases.

In summary, it is suggested that the word association method is an appropriate research methodology for gathering fundamental, descriptive data that is qualitative in nature and that, when this free–response data is sensibly ordered and subjected to a form of data analysis that allows for both qualitative presentation of data (in this study, Systemic Networks were used) and tests of significance to be undertaken, the information thus obtained is extremely useful in providing both descriptive information, and in searching the data for differences in word association response as a function of personality and/or demographic differences (Miles & Huberman, 1994). According to Constat (1992, p. 254), "those who embrace the qualitative orientation make public that which was previously maintained as private in the cognitive, social, and educational lives of the individuals studied."

This method was used in the present study to provide fundamental, qualitative information on the knowledge structures (repositories of information relating to an object) relating to ten fruits and ten vegetables. These knowledge structures could then be analyzed to investigate the nature of purported qualitative differences in word association responses of LSM's and HSM's to fresh produce. This study is innovative in using free-recall methodology to explicate the information that is selectively focussed upon by HSM's, on the one hand, and LSM's, on the other, at a finer level of discrimination than has previously been attempted.

This type of research design produces a myriad of word association responses that must then be categorized in order to make sense of the data. Monk (1983a) has used a Systemic Network Analysis methodology to investigate children's' attitudes towards their peers in a classroom setting. He used a free–response method to gather fundamental data, and sorted and analyzed these data using the network analysis method. From this, he was able to provide detailed explanations regarding the factors that influence children's'

attitudes toward their peers, and was also able to perform statistical (quantitative) analyses to test the strength of these findings. A similar method of data analysis was utilized in the present study, and is described at length in a further section of the report.

It must be stated that, and as discussed above, given the definitional problems associated with the terms function/quality/utilitarianism and their link to LSM's, and the terms image/social identity/value-expressiveness/form and their link to HSM's, specific predictions were not made in this regard. Rather, and as discussed above, an effort was made to grapple with fine-tuning these terms.

In summary, categories of word association responses of 10 fruits and 10 vegetables were analyzed for qualitative differences as a function of self-monitoring tendencies. Any qualitative differences in word association responses found for LSM's, on the one hand, and HSM's, on the other, were compared with the categories used in the self-monitoring literature, including 'image/social identity/value expressiveness/form', and 'function/quality/utilitarianism'. In this manner, more specific definitions of the categories of concepts used by LSM's and HSM's in evaluating products were provided.

Methods

Participants

Respondents (n=337) were approached in places such as the university cafeteria, daycare centers and kindergartens, libraries, downtown cafes, parks, and office buildings. Every effort was made to ensure a representative sampling of the Armidale population. To this end, ABS Census Data (1991) were used to identify relative numbers of individuals in each of Armidale's subgroups. Indigenous and non-indigenous Australians, members of the international community, adults of various age groups, males and females of varying marital status and with or without dependents, and members of each of the employment categories listed in the ABS Census Data were sampled.

Procedure

There were two stages of the study. The first was a word association study piloted with 70 subjects, using a pencil and paper format. Folders of photographs of twenty fresh fruits and vegetables which were found in a preliminary study to be the most commonly consumed by the majority of Australians were given to respondents. Ordering of stimulus objects was randomly determined for each respondent.

Respondents were told that they would be asked to look at several pictures, and to write down any thoughts or ideas that came to mind while viewing the pictures. Space was provided for up to ten associations to each picture. Respondents were also informed that the word association study would be followed with several brief questionnaires (a demographics questionnaire, favourability ratings for each of the fruits and vegetables (using a Likert-type scale) and a self-monitoring questionnaire (Snyder, 1987)). Separate pages in the answer booklets were provided for up to ten word association responses to each fruit and vegetable.

Immediately prior to beginning the study, respondents were told that they could feel free to write down any thoughts and ideas that came into their minds while they looked at the pictures. They were assured that there were no right and wrong answers,

and that any ideas they might provide would be useful. Ordering of stimulus images was randomly determined for each subject.

Computer Driven Word Association Study

The second, and main stage, was a computer driven study, in which detailed instruction screens appeared at appropriate stages throughout the study, instructing subjects how to use the computer. The structure of the word association study, and the ordering of questionnaires was the same as that used in the pilot study. The only exception to this was that five practice trials preceded the stimulus materials (photographs of fruits and vegetables) used in the word association study, to familiarize respondents with the use of the computer. Two hundred and sixty-seven (267) respondents participated in the computer-driven word association study.

Merging Datasets

There were no qualitative differences in word association responses for those participating in the pilot study and the computer study. In light of this, both datasets were merged for the purposes of data analyses. The total number of separate word association responses for all of the ten fruits and ten vegetables was 16,167.

The raw data were independently categorized by the author and three independent judges (who were unaware of the purposes of the study). A categorization system based upon the model developed by Bliss et al. (1983) and Monk (1983a&b) was adopted. The actual categorization scheme utilized is discussed in a further section of the report.

Rationale for Categorization and Data Analytic Methods Used

Categorization

Coding of large datasets is a useful way of maintaining meaningfulness of data without being overwhelmed by the size of the dataset (Miles & Huberman, 1994). Coding is the equivalent of Monk's (1983a&b) categorization system, wherein the code, or category name, is used purely as a descriptor of the data. Miles and Huberman (1994, p.57) state that an important reason to code, or categorize data, is that it provides the researcher with the ability to 'pull a lot of material together, permitting analysis'. This was the primary motivation for utilizing categories in the present study. Codes should have some conceptual and structural order, that is, they should relate to one another in an inherent manner. The categories developed in the present study possessed this quality; each category represented a meaningful, yet distinct list of consumer fruit and vegetable perceptions. The author was thereby able to analyze the data according to these general themes that consumers associated with fresh fruits and vegetables.

To summarize, use of systemic networks (Bliss et al., 1983; Monk, 1983a&b) utilizing a scheme of producing a network of categories (Miles & Huberman, 1994) that gradually becomes more specific (the appearance of subcategories) was considered optimal for organizing the word associations produced by the participants in the present study.

Data Analysis

The data analytic methods used in the present study were both qualitative and quantitative in nature. Miles and Huberman (1994) state that words and numbers should be kept together throughout the analysis, so that word-derived numbers, such as the category numbers used in the present research, that make little sense, can be made more intelligible by referring back to the words. It was the ability to firstly determine that there were differences in the numbers of words produced by LSM and HSM, *followed by* the ability to refer back to the actual words, which provided the author with conclusions relating to the data, that is, that LSM produced more horticultural words than HSM, for example. Thus it was a mix of qualitative and quantitative methods that provided most power to the analysis, and that enabled the author to draw solid conclusions from the dataset.

Categorization Scheme Used

The word association responses obtained in the present study were subjected to an intensive iterative analysis, a process which illuminated a set of categories that could encompass most of the data. A 'miscellaneous' category, which contained all responses not fitting into any of the other categories contained less than 1% of the data, illustrating that the categorization system was almost completely inclusive. An inter-rater consistency level of 95% was reached among the four coders. That is, 95% of the categorizations of word association responses were agreed upon by all raters. Figure 1 shows the categories that were developed to describe the word association responses obtained in the present study. In summary, five categories were developed from the word association responses. These were 'sense' (appearance), 'function' (uses), 'horticulture', 'idiosyncratic', and 'evaluation'. Detailed descriptions of each of these categories appear in Appendix A.

According to Conastas (1992), "the designation of categories provides one with a manageable way of describing the empirical complexities of many hours of observations or summarizing hundreds of pages of interview transcriptions" (p. 255). Conastas also refers to the need to clarify the design and analysis of qualitative research. What follows is a detailed description, following Conastas (1992), of the manner in which the categories that were utilized in the data analysis were produced.

Origination of Components of Classification

In terms of the present research two of the global categories, 'sense' and 'function', were derived from literature (Conastas, 1992), specifically the work of Snyder (1991), who investigated consumer reactions to these categories. Therefore, these categories were developed *a priori*, whereas the other three global categories naturally flowed from the initial categorization process. That is to say, an iterative (Cooksey, 1997), or repeated process of reading through the responses provided by the participants illuminated the existence of many words dealing with horticultural matters, others that were evaluative in nature (positive, negative and neutral words such as 'tastes awful' or

'delicious'), and lastly, idiosyncratic responses which appeared to be personally meaningful to the participant, such as 'I remember apple trees on a farm I lived on years ago'.

Specificity of Categories

As one moves from the global to the terminal categories in the network, the description of responses becomes more specific (see Appendix A). So, for example, the global category *sense* indicates that the response referred to something consumers physically sense about an object: its taste, or odor, or color, and so on. However, following the tree to a particular terminal category, say form - positive, discriminates between responses at a finer level; this indicates that the response deals with the physical form of the object, and that it was positive in nature. For example, a response such as 'good coloring' would be categorized as a positive form response, as the respondent was making a positive comment about the appearance of the object (see Figure 1).

Data were analyzed at the level of terminal categories for the purposes of providing individual network summaries for each of the ten fruits and ten vegetables. This enabled the author to provide a richly detailed knowledge structure for each item. This is in contrast to all other analyses conducted on the data, including the analysis of demographic trends and self-monitoring analyses, wherein global categories were focussed upon, and terminal categories were used as an adjunct to provide a detailed picture of individual effects. The issue of combining qualitative and quantitative data analysis methodologies has been discussed above.

Nomination of Components of Categorisation

Nomination of category names (Constas, 1992) was as such: the 'function' category was derived from the work of Snyder (1991), and 'sense' was derived from Snyder's (1991) 'form' category. The use of 'sense' as opposed to 'form' was due to the various sensory modalities used in evaluating the quality of fresh fruits and vegetables (such as feel and smell), which related to more elements of the object than simply its form. It was therefore decided to extend the category from one dealing with appearance to one dealing with all information impinging on the various senses when a respondent viewed the product. Consequently, the global category *sense* was adopted, which was then subdivided into responses dealing with specific sensory modes.

As to the naming of the other three categories developed, 'evaluation', 'idiosyncratic', and 'horticulture' were the most descriptive names that the author could find. Monk (1983b) suggests that purely descriptive terms be used, rather than category labels that may infer theoretical meaning to the categories that are not justified.

Ethical Matters

Finally, a discussion of trustworthiness, or validity of the study is warranted. Participants were given a detailed instruction sheet prior to commencing the study which assured them that their responses were anonymous, and that their assistance in the study would be of great benefit to the researcher. The respondents were also informed that they

could withdraw from the study at any time. The author believes that these statements sufficiently underlined the need for honest and non-censored responses. Validity of categories was developed by utilizing a panel of categorisers (see Appendix B for instructions given to categorisers) to independently assess the accuracy of the categorization process. The entire study was presented to the university Ethics Committee and was fully approved. Additionally, all participants signed an Ethical Clearance/Consent Form at the commencement of the study.

Category 1: Sense (or Appearance)

Reading through the responses, words relating to the appearance of the object were extremely common. Given the discussion in Chapter 3 relating to the uniqueness of fruits and vegetables, and the corresponding attention that should be paid to appearances when evaluating these products, this finding was not unexpected. However, due to the various sensory modalities used in evaluating the quality of fresh fruits and vegetables (such as feel and smell), it was decided to extend the category from one dealing with appearance to one dealing with all information impinging on the various senses when a respondent viewed the product. Consequently, the global category *sense* was adopted, which was then subdivided into responses dealing with specific sensory modes. The global category *sense* was subdivided into those responses dealing with specific sensory stimuli, such as 'taste', 'sound', 'odor', 'eating', 'feel', 'form', 'specific reference to mode of presentation', 'looks like', and 'confused'. Perusal of the data in these categories illustrated the need for still further sub-categories. For example, when describing the taste of a product, respondents' comments were positive, negative, or neutral. To this end, several of these categories were subsequently subdivided into categories dealing with positive, negative or neutral responses. What follows is a specific description of each of the terminal categories within the global category *sense*. (Bolded words in brackets are the shorthand, or abbreviation of the terminal categories adopted by coders - see Table 1).

Table 1. Descriptors of 'Sense' Terminal Categories

SENSE - VISUAL - FORM - looks like (looks like). Responses indicating that the product looks like something else. [For example, actual responses categorized here include (to the apple stimuli) 'balls' and 'smooth river rocks'].

- positive (**form +ve**). A response that evaluates the form or appearance of the product in a positive manner. [For example, actual responses categorized here include (to the apple stimuli) 'good coloring' and 'nice pair'].

- negative (**form -ve**). Same as above, except that the words describing the appearance of the product are negative. [For example, actual responses categorized here include (to the apple stimuli) 'black spots' and 'bruises'].

- neutral (**form**). Words that refer to the appearance of the product, but cannot be viewed as being either positive or negative. [For example, actual responses categorized here include (to the apple stimuli) 'red' and 'shiny'].

- ODOUR (**odor**). Responses that refer to the odor of the product. [For example, actual responses categorized here include (to the apple stimuli) 'fragrance' and 'rotting fruit smell'].

- TASTE - positive (**taste +ve**). Responses that refer to the taste of the product in a positive manner. [For example, actual responses categorized here include (to the apple stimuli) 'yummy' and 'tasty'].

- negative (**taste -ve**). Negative taste responses. [For example, actual responses categorized here include (to the apple stimuli) 'Granny Smith today lacks flavour' and 'bitter skin from too many chemicals'].

- neutral (**taste**). Taste responses that are neither positive nor negative. [For example, actual responses categorized here include (to the apple stimuli) 'sweet' and 'taste'].

- SOUND (**sound**). The sound that is made when eating the product. [For example, actual responses categorized here include (to the apple stimuli) 'crunch' and 'snap'].

- TEXTURE - feel (**feel**). Words that describe how the product feels when it is touched, or handled. [For example, actual responses categorized here include (to the pineapple stimuli) 'spiky' and 'prickly'].

- TEXTURE - eating (**eating**). Words that describe how the product feels when it is being eaten. That is, the sensation of the product in the mouth. [For example, actual responses categorized here include (to the strawberry stimuli) 'mushy' and 'saliva'].

CONFUSED (**confused**). The individual cannot properly identify the product. That is, individual is not sure which fruit it is. [For example, actual responses categorized here include (to the lemon stimuli) 'orange' or 'grapefruit'].

SPECIFIC REFERENCE TO MODE OF PRESENTATION (SRTMP). A reference to the way that the product has been presented. [For example, actual responses categorized here include (to the lemon stimuli) 'light effect' or 'grey'].

PACKAGE (package). References to the manner in which the product is packaged. [For example, actual responses categorized here include (to the strawberry stimuli) 'punnet(s)'].

Self-monitoring Analyses

The numbers of words, of low self-monitors (LSM's), on the one hand, and high self-monitors (HSM's), on the other that were placed into the five global categories (*evaluation, function, horticulture, idiosyncratic and sense*) were tabulated. These analyses afforded an opportunity to determine whether the types of word association responses generated by LSM's and HSM's differed in a qualitative sense.

Contingency tables were generated for fruits and vegetables separately, to determine whether there were significant differences in numbers of word association responses in each of the five categories for the low and high self-monitoring groups. Analyses were restricted to respondents who received extreme self-monitoring scores (Snyder, 1987, p. 181). Self-monitoring scorers in the 25th percentile were classified as LSM's, and those self-monitoring scorers in the 75th percentile were classified as HSM's. That is, those respondents scoring less than 6 out of 18 were considered to be low self monitors (LSM's), whereas respondents scoring over 9 were considered to be high self monitors (HSM's). In the sample used in the present study, there were 120

extreme low self-monitoring respondents, and 69 extreme high self-monitoring respondents.

Table 1 shows, for fruits, the observed versus expected frequency counts for each of the cells of the contingency table, plus standardized residuals. The chi-square value was significant (partial chi-square = 24.13, $df = 4$, $p < .0001$). Inspection of Table 1 shows that LSM's produced more horticultural responses than expected ($sr = 2.27$), and less idiosyncratic responses than expected ($sr = -2.03$). Conversely, HSM's provided less horticultural responses than expected ($sr = -2.11$) and slightly less idiosyncratic responses than expected ($sr = 1.89$). There were no substantial differences in responses in the sense and function categories for these groups, indicating that, while responses in the function and sense were by far the most common, LSM's and HSM's were not differentiated in their responses in these two categories. This finding will be discussed at length in the Discussion.

Category 2: Function (or Uses)

Many responses related to uses of fresh fruits and vegetables. To this end, a *function* category was developed. Analysis of the responses within this global category suggested the existence of several sub-categories. Responses indicated that fresh fruits and vegetables were functional in several senses. Sub-categories dealing with potential uses, ease of preparation and health were consequently identified. When inspecting the responses in the 'use' category, which all reflected ways of actually using the product, it was found that several sub-categories were emerging. To this end, the 'use' category was subdivided into four sub-categories: 'uses-general', 'uses-when', 'uses-who', and 'uses-with'. Responses in the preparation category dealt with the relative ease of preparation, and were therefore subdivided into 'preparation - hard', and 'preparation-easy'. Specific definitions of the various *function* categories follows in Table 2.

Table 2. Descriptors for 'Uses' Terminal Categories

FUNCTION - USES - general (uses-gen). Responses that refer to the way in which the product can be used. [For example, actual responses categorized here include (to the lemon stimuli) 'lemonade' 'salad dressing' and 'taste enhancer'].

- who (**uses-who**). Responses indicating that certain groups of people use this product. [For example, actual responses categorized here include (to the watermelon stimuli) 'kids' and 'children'].

- when (**uses-when**). Responses indicating that the product is used, or consumed at a specific time (time of year, time of day, etc.). [For example, actual responses categorized here include (to the watermelon stimuli) 'summer' or 'Christmas'].

- with (**uses-with**). Responses indicating that the product can be eaten with some other product. [For example, actual responses categorized here include (to the strawberry stimuli) 'cream' and 'champagne'].

- HEALTH (**health**). Responses that associate the product with physical health (either positive or negative). [For example, actual responses categorized here include (to the carrot stimuli) 'eyes' and 'vitamin A'].

- PREPARATION - hard (**prep-hard**). Responses indicating that the product is considered to be difficult to prepare. [For example, actual responses categorized here include (to the pumpkin stimuli) 'have cut hard pumpkins with an axe' and 'accidents with knives'].

- easy (**prep-easy**). Responses indicating that the product is considered to be easy to prepare. [For example, actual responses categorized here include (to the carrot stimuli) 'easy to peel' and 'quick'].

Inspection of the terminal categories for the five global categories (refer to Appendix A for information relating to how each of the global categories was further differentiated into successively more specific categories) is necessary in order to specify precise qualitative differences in the word association responses of high and low self-monitors. Table 2 produces observed versus expected cell counts, plus standardized residuals, for each of the terminal categories.

Inspection of Table 2 shows that the terminal categories having discrepant observed versus expected frequencies are the feel category (sr = -2.38 LSM's, 2.22 HSM's), where LSM's produced fewer feel-oriented words than expected, whereas HSM's produced more. Additionally, the LSM's produced more 'looks like' responses than would be expected (sr = 2.30), whereas HSM's produced less (sr = -2.14). It can be noted that the 'feel' and 'looks like' terminal categories belong under the global category 'sense'.

With regard to the horticultural category, where the most substantial discrepancies between observed and expected cell counts were found, these discrepancies are due primarily to the terminal category 'grow', where LSM's produced more responses than expected (sr = 2.37) and HSM's produced fewer responses than expected (sr = -2.21); and the terminal category 'varieties', where LSM's produced more responses than expected (sr = 3.54) and HSM's produced less (sr = -3.30).

The other large discrepancy between expected and observed findings was found in the 'uses – who' category (which is under the umbrella of the global category 'function'), where LSM's produced fewer responses than expected (sr = -2.13) and HSM's produced fewer responses than expected (sr = 1.98).

One other finding that was less substantial than the above, but nearing significance, was the number of responses in the terminal category 'evaluation – positive', where LSM's produced more responses than expected (sr = 1.86) where HSM's produced fewer responses than expected (sr = -1.74).

Category 3: Horticulture

Another global category which emerged contained responses dealing with *horticultural* information. For example, some comments referred to the varieties of fruit or vegetables, and others related to the place or manner in which various fresh fruits and vegetables are grown (termed 'variety', 'place', and 'grow', respectively). Other horticultural categories that emerged were as follows: 'category', 'commonality', 'name', and 'buy'. Responses in the horticultural categories clearly related to factual, or semantic information. A description of *horticultural* categories follows, in Table 3. Note that the categories entitled 'identify' and 'origin' were not included in the category network, as

they were considered superfluous (subsequent to categorizing the word association responses) as descriptive categories.

Table 3. **Descriptors for 'Horticulture' Terminal Categories**

<p>IDENTIFY - name (name). The product is named. [For example, actual responses categorized here include (to the apple stimuli) 'apple'].</p> <p style="padding-left: 40px;">- category (category). The product is placed in a category. [For example, actual responses categorized here include (to the carrot stimuli) 'vegetable'].</p> <p>ORIGIN - place (place). Where grown. [For example, actual responses categorized here include (to the banana stimuli) 'Coffs Harbour' or 'Queensland'].</p> <p style="padding-left: 40px;">- grow (grow). How grown. [For example, actual responses categorized here include (to the banana stimuli) 'plantation' or 'bunch' or 'injection to ripen quickly'].</p> <p style="padding-left: 40px;">- varieties (varieties). Identifying the product in terms of a specific variety (Batlow, Delicious, etc.) or brand. [For example, actual responses categorized here include (to the apple stimuli) 'Granny Smith' or 'Delicious'].</p> <p>BUYING VENUE (buy). References to where the product is purchased. [For example, actual responses categorized here include (to the banana stimuli) 'Big Banana' or 'locally bought', or 'Safeway'].</p> <p>COMMONALITY (commonality). References made regarding the commonness, or familiarity of the product. [For example, actual responses categorized here include (to the strawberry stimuli) 'rare dessert', 'too few', or 'familiar'].</p>
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Table 3 is a summary contingency table showing all significant differences in observed versus expected findings for terminal categories.

Self-monitoring analyses identical to those conducted for fruits, were conducted for vegetables. The chi-square value for vegetable responses was not significant. The vegetable findings will not be discussed further.

Category 4: Idiosyncratic (or Experiential)

Yet another global category was identified from the iterative analysis process. This category was labeled *idiosyncratic*, and contained responses dealing with memories and responses which tended to be personally meaningful to respondents. For example, one sub-category which suggested itself from the data was labeled 'represents', and dealt with responses relating to what the product represents to the respondent. Another sub-category in this vein was termed 'represents - sex', and dealt with responses of a sexual nature. Other subcategories within the global category of 'idiosyncratic' responses were as follows: 'association to previous word', 'story', 'expression', 'homonym', and 'memory'. A description of *idiosyncratic* categories follows, in Table 4.

Table 4. Descriptors for 'Idiosyncratic' Terminal Categories

<p>STORY (story). A response that places the product in the context of a story, fairy tale, myth, etc. [For example, actual responses categorized here include (to the apple stimuli) 'Adam and Eve', 'Snow White' or 'Newton'].</p> <p>EXPRESSION (expression). An expression, or saying that is associated with the product. [For example, actual responses categorized here include (to the banana stimuli) 'banana lounge' or 'mellow yellow'].</p> <p>MEMORY (memory). A response indicating that the individual has a memory of the product in a specific context. [For example, actual responses categorized here include (to the broccoli stimuli) 'President Bush', or 'Dad' or 'childhood memory of overboiled broccoli'].</p> <p>HOMONYM (homonym). Words that sound the same (but are not necessarily spelt the same) but mean different things. [For example, actual responses categorized here include (to the pear stimuli) 'pair'].</p> <p>REPRESENTS - general (represents). A response that suggests that the product in question represents something. [For example, actual responses categorized here include (to the strawberry stimuli) 'decadent' or 'fragile' or 'romance'].</p> <p style="padding-left: 40px;">- sex (sex). Responses indicating that the product is viewed in an erotic, or sexual manner. [For example, actual responses categorized here include (to the banana stimuli) 'condom', 'penis' or 'phallic symbol'].</p>
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Table 4, another summary table, shows the observed versus expected frequencies of word association responses for the global category *idiosyncratic*.

In Table 4, findings that near significance are in boldface. As can be seen, the terminal categories of 'memory' and 'represents' showed differences in observed versus expected numbers of word association responses that neared significance. These findings are instructive in terms of illustrating trends, or patterns, to the data, and will be discussed further in the Discussion.

Category 5: Evaluation

The next global category that suggested itself from the data related to *evaluations* of the products. This category was subdivided into 'positive' and 'negative' evaluations. Descriptions of these categories follows, in Table 5.

Table 5. Descriptors for 'Evaluation' Terminal Categories

<p>EVALUATION - positive (eval++ve). The product is evaluated in a positive way. [For example, actual responses categorized here include (to the strawberry stimuli) 'favorite fruit' or 'the best'].</p> <p style="padding-left: 40px;">- negative (eval--ve). Same as for a positive evaluation, except that the responses are a negative evaluation of the product. [For example, actual responses categorized here include (to the broccoli stimuli) 'boring', or 'not so versatile'].</p>
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A *price* (called evaluation) category was introduced, largely because of the focus in marketing literature on the role of price in the purchase decision. Any responses that relate to the price of the fruit or vegetable were placed into this category. (For example, actual responses categorized here include (to the strawberry stimuli) 'can be expensive' and don't buy often - expensive').

A *miscellaneous* category was also introduced to deal with responses that were uncategorizable. This category was used for any words that could not be placed in any of the other categories. (For example, actual responses categorized here include (to the broccoli stimuli) 'gold nugget', 'flake' and 'lost').

Discussion

Word associations for fruits revealed a self-monitoring pattern

In order to investigate the proposed relationship between self-monitoring propensity and particular product characteristics, the breakdown of fruit word association responses into global categories will be explored in depth. It is interesting to note that the findings of the present study indicate that HSM's and LSM's do not show significant differences in word association responses relating to *sense* and *function*. That is, relative numbers of word association responses relating to 'form' (appearance) and 'function' were approximately equal for both extreme LSM's and extreme HSM's. This finding runs counter to previous research in this area. That is, in contrast to previous studies that have shown that LSM'S tend to focus on functional product characteristics, whereas HSM'S focus on image, or form-related product characteristics, the findings of the present study show no significant discrepancies between observed and expected numbers of words in *sense* and *function* categories for LSM's and HSM's.

Rather, findings of theoretical interest from the present study tend to be clustered among the three lesser categories (*horticulture*, *idiosyncrasy*, *evaluation*) and an exploration of these trends will be undertaken in order to shed light on qualitative differences in word association responses for LSM's and HSM's.

As stated, there were significant differences in observed versus expected findings for both LSM's and HSM's. These differences related to the *horticulture* category, and to the terminal categories 'uses – who' and 'feel'. It was found that LSM's produced fewer *idiosyncratic* and more *horticultural* responses than expected, whereas the opposite was true for HSM's. That is, for HSM's, more idiosyncratic responses were found than expected yet less horticultural responses were found than were to be expected. Table 3 shows each of the deviations between observed and expected numbers of word association responses in *terminal categories* that were substantial.

Note that the terminal categories relating to the global category of *horticulture* that showed large discrepancies between observed versus expected numbers of responses were 'varieties' and 'grow'. For these categories, LSM's produced many more responses than expected, whereas HSM's produced many fewer responses than expected. In a similar vein, LSM's produced many more responses relating to the 'looks like' terminal category (which falls under the umbrella of the 'sense' global category), whereas, again, HSM's produced many fewer responses than expected.

Contrast this with the large discrepancies between observed versus expected numbers of responses for the terminal categories of 'uses – who' and 'feel', which fall

under the umbrella of the global categories *function* and *sense*, respectively. In this instance, LSM's produced many fewer responses than expected, whereas the reverse was true for HSM's.

Finally, Table 4 shows that, although a significant discrepancy between observed and expected numbers of word association responses was found for the global category *idiosyncrasy*, inspection of the terminal categories indicates no large discrepancies between expected and observed findings. However, there were some standardized residuals that almost reached significance, and these trends are instructive in the present attempt to shed light on qualitative differences in word association responses for LSM's and HSM's. The findings of interest are indicated in bold face.

As Table 4 illustrates, LSM's provided fewer responses relating to 'memories' and 'represents', whereas HSM's showed the opposite trend. Recall that the terminal category 'memory' is defined as 'a response indicating that the individual has a memory of the product in a specific context. For example, to a picture of an apple, the individual might respond with the phrase "mum's apple pies" '. The terminal category 'represents' is defined as 'a response that suggests that the product in question represents something. For example, to the picture of a pineapple, an individual might respond with the word "exotic". Or, to a picture of a strawberry, an individual might respond "luxury" '.

Recall that HSM's also provided more responses than expected in the 'uses – who' and 'feel' categories, whereas LSM's showed the opposite trend. These findings are relevant to those dealing with the individualised responses discussed above. The definition of 'uses – who' is thus: responses indicating that certain groups of people use this product. The 'feel' category is defined as 'words that describe how the product feels when it is touched, or handled. For example, to a picture of a pineapple, an individual might say "prickly", or "spiky".

It would appear that each of these categories (feel, uses – who, represents, memory) are highly individualised in nature. That is, each of these categories tends to focus on *experiential*, or personally meaningful ideas. These findings appear to indicate that HSM's focus on experiential characteristics of products. LSM's, on the other hand, provide fewer responses (than expected) of a personal nature.

Further support for this contention comes from an inspection of Table 4. Although several of the standardized residuals were moderate, a definite trend in the expected direction was found. It is the case that LSM's provide fewer *idiosyncratic* responses than expected, and HSM's provide more responses than expected for every terminal category except the ATPW . Note that these categories (expression, homonym, sex, and story) are categories of responses focussing on *highly individualised* remarks.

In contrast, the categories for which LSM's produced more responses than expected were 'looks like', 'grow', and 'varieties'. These categories are defined thus: 'grow' – 'how the product is grown'; 'varieties' – 'identifying the product in terms of a specific variety (Batlow, Delicious, e.g.) or brand'; and 'looks like' – 'responses indicating that the product looks like something else. For example, to a piece of watermelon, the individual might respond with the word "canoe".

These definitions clearly indicate that responses belonging to these categories are focussed on the product itself, rather than the individual making the response. That is, these responses do not appear to be individualised. It might also be stated that these responses are more factual, or intellectual, in content, as opposed to being experiential.

These results suggest that LSM's might be more inclined towards thoughts of a non-personal, factual nature, whereas HSM's are not.

In summary, it would appear that LSM's and HSM's do, in fact, show distinct qualitative differences in the word they use to describe an object. The findings of the present study do not, however, provide support for the tendency of HSM's to selectively attend to ideas relating to image/form/social expressiveness, or for LSM's to focus selectively on ideas relating to function, quality or utilitarianism. Rather, the findings of the present study appear to indicate that LSM's focus on intellectual, factual, non-personal information when describing objects, whereas HSM's focus on highly individualised, experiential ideas.

Implications of the findings of the present research for self-monitoring theory

Can these findings be reconciled with existing research? The work of Epstein (1991, 1994, 1997), Hammond (1996) and others is relevant to this discussion. Several contemporary psychological researchers suggest that at least two memory systems exist, one dealing with rational, factual information, and the other dealing with experiential, personal information. Hammond (1996) discusses the Cognitive Continuum, according to which cognitive processes occur anywhere along an intuitive-analytical continuum, with many everyday decisions using a combination of both polar extremes, and what Hammond refers to as 'quasirationality'. Epstein (1994, 1997) discusses the notion of interactive modes of cognitive processing, the rational (verbal-analytical, deliberative, rational) and the experiential (a largely preconscious, nonverbal, automatic process based on experience and emotionally-laden).

This discussion on two interacting, parallel systems of information processing is directly relevant to the ideas of Vogel (1997), Damasio (1994) and Bechara et al. (1997), who posit the existence of two systems of knowledge, one that is largely factual, and which proposes response options and possible outcomes relating to these, and applies reasoning strategies to the activated facts and options; and another, which contains information related to past, emotional experiences and the rewards and punishments attached to these behaviors. When faced with a sensory representation of a particular situation or object, it is thought that the latter (experiential) system is accessed prior to the former (factual) system, and that the information contained therein biases, or influences how information in the factual system is dealt with. The authors suggest that the ventromedial frontal cortices of the central nervous system are involved in containing experiential information.

The self-monitoring findings of the present research are consistent with the contentions of Epstein (1991, 1994, 1997), Hammond (1996), Loewenstein (1996) and Bechara et al. (1997). The results of the present research indicate that HSM's produce word association responses that suggest selective activation of an experiential, personally meaningful system, while LSM's produce responses indicative of a factual, intellectual system.

In a general sense, these results are of assistance in further explicating the manner in which HSM's and HSM's differentially focus on particular product characteristics. The findings from the present study have provided more specific descriptions of the qualitative differences in ideas that HSM's and HSM's have toward objects. Rather than

HSM's focussing on product quality, and HSM's focussing on product image, as previous research in this area has indicated, it would seem that the differences between these two groups are more fundamental in nature, and relate to differential access to particular memory systems, namely, the rational, or factual system and the experiential, individualised system.

Recall that the word association study undertaken for the present paper was deliberately unstructured. This type of methodology provides respondents with a context-free environment in which contents of fruit and vegetable knowledge structures can be elicited. This is the first such study I am aware of that examines self-monitoring in a free-recall situation, and the results are instructive in providing more information on the specific nature of self-monitoring effects.

With respect to the implications of self-monitoring for fresh fruit and vegetable choice, it can be stated that the findings of the present study, when viewed in conjunction with previous self-monitoring research, demonstrate that individuals differing in self-monitoring propensity do appear to focus on particular product characteristics. Furthermore, this tendency might reflect a more basic pre-disposition for LSM's and HSM's to access cognitive knowledge systems that are located at various points along an intuitive, or experiential – rational, fact-based cognitive continuum, when evaluating products. The goal of marketers and consumer behavior psychologists is to better understand the behavior of consumers, and it is suggested that the (self-monitoring) findings of the present research are instructive in this regard. These findings have provided a link between self-monitoring theory and cognitive decision theory (Epstein, 1994; Damasio, 1994; Hammond, 1996), thus moving consumer behavior research a little close to its (above-stated) goal.

There are limitations inherent in many research projects, and the present research is no exception. At the time that the research was conducted, the author was not aware of the many excellent qualitative data analytic methods utilized by anthropologists and education researchers (Miles & Huberman, 1994). The author consulted and used the research methods of Bliss et al. (1983), which proved valid and reliable, however consultation of more contemporary works might have provided more contemporary technology (computer software, and so on) to collect and analyze the data.

Additionally, and as stated in the Introduction and elsewhere (Kjeldal, 2002), the data provided by the present research is of an inductive and descriptive nature. Inductive data is useful in the embryonic stages of research into any topic of interest, but must be followed by more deductive research methods. The inductive data provides a description of the phenomenon of interest, and can subsequently be used to form hypotheses regarding causal factors. With regard to the present research, the extensive body of descriptive data relating to consumer perceptions of fresh fruits and vegetables can, and is in fact, being utilized in deductive research (Cooksey & Kjeldal, under review).

Future Research Directions

Further research on the cognitive styles of LSM's and HSM's might benefit greatly from use of Rowe and Boulgarides' (1992) 'Decision Style Inventory', in providing more detail relating to the type and amount of information used by these

individuals in a decision context. The abovementioned research strategy is being pursued at the author at the present time.

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Appendix A

Network Categories

Before discussing the meaning of the five global categories that were developed, a word on specificity of responses is warranted. As one moves from the global to the terminal categories in the network, the description of responses becomes more specific. So, for example, the global category *sense* indicates that the response referred to something consumers physically sense about an object: its taste, or odor, or color, and so on. However, following the tree to a particular terminal category, say form - positive, discriminates between responses at a finer level; this indicates that the response deals with the physical form of the object, and that it was positive in nature. For example, a response such as 'good coloring' would be categorized as a positive form response, as the respondent was making a positive comment about the appearance of the object.

Data were analyzed at the level of terminal categories for the purposes of providing individual network summaries for each of the ten fruits and ten vegetables. This enabled the author to provide a richly detailed knowledge structure for each item. This is in contrast to all other analyses conducted on the data, including the analysis of demographic trends, the stimulus modality, and self-monitoring analyses, wherein global categories were focused upon, and terminal categories were used as an adjunct to provide a detailed picture of individual effects. That is, when investigating specific effects, numbers of responses in each global category were tabulated, whereas, when presenting the data in the form of systemic networks, numbers of responses in each terminal category were tabulated.

Appendix B

Instructions to categorisers

On the next page is a list of categories, as well as a brief description of each. Please read through the categories and their descriptions, and then assign each word in each of the booklets to the category that you deem to be most appropriate. An abbreviation that can be used when writing the category next to each word appears in brackets after the name of the category.

SENSE - VISUAL - FORM - looks like (looks like). Responses indicating that the product looks like something else. E.g., to a piece of watermelon, the individual might respond with the word 'canoe'.

- positive (**form +ve**). A response that evaluates the form or appearance of the product in a positive manner. E.g., 'looks inviting', 'pretty', or 'attractive'.

- negative (**form -ve**). Same as above, except that the words describing the appearance of the product are negative.

- neutral (**form**). Words that refer to the appearance of the product, but cannot be viewed as being either positive or negative.

- ODOUR (**odor**). Responses that refer to the odor of the product.
- TASTE - positive (**taste +ve**). Responses that refer to the taste of the product in a positive manner.
- negative (**taste -ve**). Negative taste responses.
- neutral (**taste**). Taste responses that are neither positive nor negative.
- sound (**sound**). The sound that is made when eating the product. E.g., 'crunch'.
- texture (**feel**). Words that describe how the product feels when it is touched, or handled. E.g., to a picture of a pineapple, an individual might say 'prickly', or 'spiky'.
- texture (**eating**). Words that describe how the product feels when it is being eaten. That is, the sensation of the product in the mouth. E.g., to a picture of a grape, an individual might say 'squishy'.

FUNCTION - USES - general (uses-gen). Responses that refer to the way in which the product can be used. E.g., to a picture of a lemon, an individual might respond with the word(s) 'meringue pie', 'lemonade', or 'washing substance'.

- who (**uses-who**). Responses indicating that certain groups of people use this product.
- when (**uses-when**). Responses indicating that the product is used, or consumed at a specific time (time of year, time of day, etc.).
- with (**uses-with**). Responses indicating that the product can be eaten with some other product. E.g., to the word strawberries, an individual might respond with the word 'cream', indicating that strawberries can be eaten with cream.

- EVALUATION - positive (**eval++ve**). The product is evaluated in a positive way. E.g., to the word lemon, an individual might respond with the word 'versatile', or 'underrated'.

- negative (**eval--ve**). Same as for a positive evaluation, except that the responses are a negative evaluation of the product.

- HEALTH (**health**). Responses that associate the product with physical health (either positive or negative).

- PREPARATION - hard (**prep-hard**). Responses indicating that the product is considered to be difficult to prepare.

- easy (**prep-easy**). Responses indicating that the product is considered to be easy to prepare.

IDENTIFY - name (name). The product is named. E.g., to the picture of an apple, the individual responds with the word 'apple'.

- category (**category**). The product is placed in a category. E.g., to the picture of an apple, the individual responds with the word 'fruit'.

- confused (**confused**). The individual cannot properly identify the product. That is, individual is not sure which fruit it is. E.g., to the picture of an apple, the individual responds with the word(s) 'apple?', or 'confused', etc.

STORY (story). A response that places the product in the context of a story, fairy tale, myth, etc.

EXPRESSION (expression). An expression, or saying that is associated with the product. E.g., 'banana benders', rough end of the pineapple'.

MEMORY (memory). A response indicating that the individual has a memory of the product in a specific context. E.g., to a picture of an apple, the individual might respond with the phrase 'mum's apple pies'.

SPECIFIC REFERENCE TO MODE OF PRESENTATION (SRTMP). A reference to the way that the product has been presented. E.g., 'a good drawing', or 'black and white'.

ORIGIN - place (place). Where grown)

- grow (**grow**). How grown)

.- varieties (**varieties**). Identifying the product in terms of a specific variety (Batlow, Delicious, e.g.) or brand.

PRICE (price). Any responses that relate to the price of the fruit or vegetable.

BUYING VENUE (buy). References to where the product is purchased)

HOMONYM (homonym). Words that sound the same (but aren't necessarily spelt the same) but mean different things. E.g., to a picture of a pear, an individual might respond with the word 'pair'. Similarly, to a picture of a peach, an individual might say 'peach color'.

COMMONALITY (commonality). References made regarding the commonness, or familiarity of the product. E.g., to a picture of a potato, the individual might say 'common fruit', or 'staple'.

PACKAGE (package). References to the manner in which the product is packaged. E.g., to a picture of a carrot, the individual might say 'plastic bag'. Similarly, to a picture of a strawberry, the individual might say 'punnet'.

REPRESENTS - general (represents). A response that suggests that the product in question represents something. For example, to the picture of a pineapple, an individual might respond with the word 'exotic'. Or, to a picture of a strawberry, an individual might respond 'luxury'.

- sex (**sex**). Responses indicating that the product is viewed in an erotic, or sexual manner.

NO CATEGORY (no cat). Use this category for any words that cannot be placed in any of the other categories.

Author's Note

Sue-Ellen Kjeldal research interests include the psychology of consumer behavior; organizational behavior; organizational change; evolutionary psychology; and the evolutionary origins of human facial attractiveness. Sue-Ellen teaches courses relating to organizational behavior, human resource management, and behavioral science in management. Sue-Ellen may be contacted at The New England Business School, Faculty of Economics, Business, and Law, University of New England, Armidale, NSW 2350 Australia; E-mail skjeldal@une.edu.au

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