
A Conceptual Framework of Consumer Food Choice Behaviour

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Abstract: The aim of this paper is to develop a conceptual framework for the analysis of consumer behaviour concerning the evaluation and choice of food products. The paper presents a review of theory on the processes of consumers' decision making and quality perception. Following this review, a theoretical framework is proposed that integrates the models of Engel, Blackwell and Miniard (1995), the main constructs of the Total Food Quality model of Grunert (1997), together with additional constructs and relationships between them, proposed by Zeithaml (1988) and by the authors of the present paper.

Keywords: consumer behaviour; food; decision-making; perception; quality.

1. INTRODUCTION

Food comes in infinite variety and food choices are a major component of all purchase decisions made by consumers (Grunert, 1997). However, in spite of the research that has been conducted during the last twenty years, there is no singular commonly accepted model for explaining consumer behaviour and food evaluation. The aim of this paper is to develop a conceptual framework for the analysis of consumer buyer behaviour concerning the evaluation and choice of food, through the integration of previous tested models

The structure of the paper is as follows. In the next section a review of the most widely used models in the marketing field to explain and predict consumer behaviour is presented. Special emphasis will be given to the application of those models to food. A great bulk of research on consumer behaviour towards food is concerned with alternative evaluation and choice and the role of food quality in that process. Therefore, the third section examines in more detail the process of food evaluation and choice. This is followed by a discussion of the quality concept and consumers' perceptions of product quality. Finally, the last section proposes a conceptual framework for the analysis of consumer decisions regarding food choice.

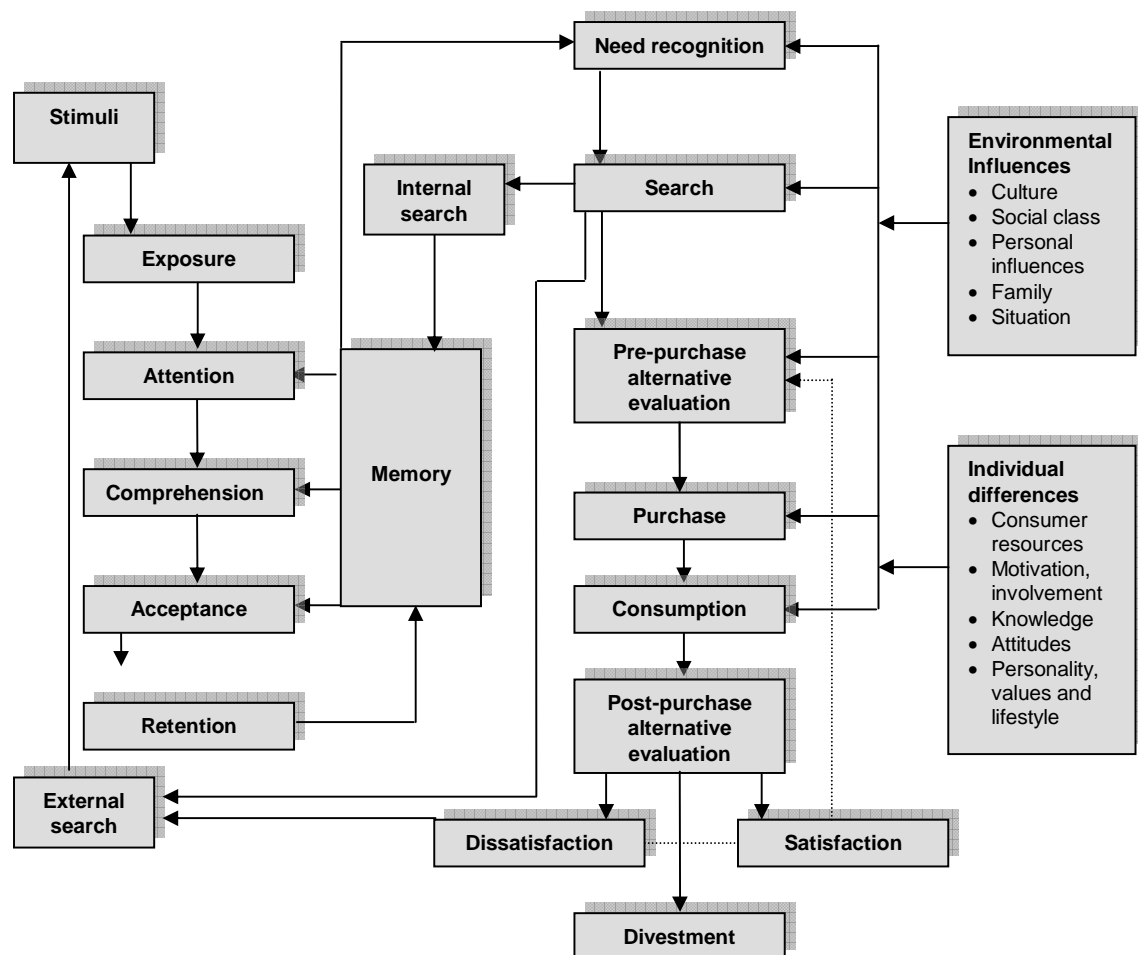
2. CONSUMER BEHAVIOUR MODELS

Models of buying behaviour have been developed since the 1940s to satisfy the objectives of describing and predicting consumer behaviour, so that a fuller understanding of customers, both present and prospective, is achieved (Chisnall 1995). For this author, of the many models of buying behaviour, the multivariable models are the most appropriate. As Schiffman and Kanuk (1994) argued, these are comprehensive models conceived to capture the dynamics of consumer decision-making and to provide a framework for consumer researchers to test the various dimensions of the models. The multivariable models emphasize that many buying decisions, even those reputedly based on purely economic considerations, are also subject to the so-called non-rational factors. People's needs and motivations are complex and they are likely to seek satisfaction at an economic level and also at deeper levels, involving emotions, cultural norms and values, group affiliations, etc. (Chisnall 1995).

2.1. The Engel-Blackwell-Miniard Model

Since, it is not the aim of this paper to make a thorough comparison of all the multivariable consumer behaviour models that have been developed, only the Engel-Blackwell-Miniard (EBM) model (Engel, Blackwell, and Miniard 1995), developed from the Engel-Kollat-Blackwell model, will be described in more detail (Figure 1). This option is justified because, among the more comprehensive models (e.g., the Howard-Sheth model, the Nicosia model, and the Andreasan model), the EBM model seems to be simultaneously the more parsimonious and the one that can be applied with fewer problems to different decision situations and product categories.

Figure 1 – The Engel-Blackwell-Miniard Model



Source: Engel et al. (1995)

As the authors argue, the model encompasses all types of need satisfying behaviour, including a wide range of influencing factors and different types of problem-solving processes

(Engel et al. 1995). Moreover, in the several revisions of the model that have been undertaken, the authors have incorporated the work of other authors. Chisnall (1995) argues that a shortcoming of this model is that it does not specify the preconditions under which certain outcomes will emerge.

From Figure 1 it can be seen that the model consists of four sections: decision process stages; information input; information processing; and variables influencing the decision process. The focus of the model is on the decision process stages: problem recognition, search, pre-purchase alternative evaluation, purchase, consumption, post-purchase alternative evaluation, and divestment. As Schiffman and Kanuk (1994) stated, information from marketing and non-marketing sources feeds into the information-processing section of the model. After passing through the memory, which serves as a filter, the information has its initial influence at the need recognition stage. Search for external information is activated if additional information is required or if the consumer experiences dissonance because of dissatisfaction with the chosen alternative. The information processing section of the model consists of the consumer's exposure, attention, comprehension, acceptance and retention of incoming information. The last section of the model consists of individual and environmental influences that affect all stages of the decision process.

2.2. Consumer Behaviour Models Applied to Food

Specific models of consumer behaviour with respect to food have been developed across the years. As happens with most of the general models, traditionally, the food models take a cognitive approach to consumer behaviour, where the decision-making process and the information processing of marketing stimuli are central to explain consumer behaviour (Verbeke 2000). Marshall (1995) argued that while there is recognition of external influences such as product availability and economic factors, most food choice models focus on the interaction between the individual and the food product. The decision process is facilitated by information processing mechanisms and conditioned by psychological, social, cultural, and social influences that, usually, are afforded a peripheral role.

One of the most pervasive models concerning consumer behaviour towards food is the model proposed by Steenkamp (1997). His model also distinguishes between the consumers' decision-making process with respect to foods, and the factors influencing this decision process. In the decision process, 'borrowed' from the EBM model, four stages are identified: need

recognition, search for information, evaluation of alternatives, and choice. Three groups of factors influencing the decision process are recognized: properties of the food, factors related to the consumer, and environmental factors. According to the author, this grouping of factors is based on one of the earliest and most influential models of factors affecting the behaviour of food consumers, the Pilgrim model from 1957.

Comparing the Steenkamp model with the EBM model, the most noticeable difference is the lack of an explicit treatment of the information processing perspective. In the Steenkamp model, the marketing stimuli are spread across the three groups of factors and are considered to influence consumer behaviour in the same way as culture or the socio-demographic characteristics of the individual. However, even Steenkamp (1997) acknowledges that the boundaries between the three groups of influencing factors are fuzzy and that mutual influences may occur.

In the Steenkamp model a special emphasis is given to the food product, as one of the major influences on food choice. The food product affects the decision process mainly through physiological effects and sensory perception. This focus is probably related to the fact that, in general, food products are commodities, sold unbranded or unlabelled and with poor or inexistent communication around them. Consequently, the models and the research dealing with consumer choice and behaviour relating to food are, mostly, concerned with the influence of physical and sensory properties of the products and of price. In summary, it can be said that the Steenkamp model is a simpler version of the EBM model, which emphasises aspects that are particular to food products.

More recently, Verbeke (2000) proposed a four component conceptual framework for analysing consumer decision-making towards fresh meat. As in the Steenkamp model, a four-stage model of the decision-making process forms the point of departure of his framework. However, in addition to the Steenkamp model, this model is linked first with a “hierarchy of effects” model and then, as in EBM model, concepts related to information-processing are implemented. Finally, the Steenkamp (1997) classification of factors or variables that potentially influence consumer decision-making is also adopted. According to Verbeke (2000), the “hierarchy of effects” indicates the different mental stages that consumers go through when making buying decisions and responding to marketing or non-commercial messages. Verbeke (2000) argues that while it is generally agreed that a structure including a cognitive, affective and conative component holds, no clear-cut evidence about the sequence and interdependency of these hierarchical steps appears to be available. For the author, in the current

meat situation, specific attention is to be paid to potential influences on consumer decision-making that result from communication and marketing and, consequently, the information-processing concept should be included in the models.

It should be noted that there has been some criticism, even in the food field, of the cognitive-rational approach to the study of consumer behaviour. As Hansen (2002) argues, several researchers have suggested that the 'traditional' cognitive view should be complemented by taking into account consumers' affections, such as the possible emotional responses to the perception and judgement of products and of consumption experiences. Zajonc and Markus (1982) suggested that an individual can take action based on an emotional feeling that is without or with just a low level of cognitive activity. According to the authors, the reason for this is that positive emotions seem to affect consumer purchase behaviour positively.

For Garber et al. (2003), research is particularly difficult for food products because of the complex nature of consumer responses to them. However, this author argues that there is an accompanying cognitive component to any sensory experience, in that prior experience with the same or similar products lends symbolic, associative and rhetorical meaning to any sensory experience. Also Hansen (2002) suggested that, generally, the consumer keeps an open mind towards useful stimuli in the environment, as is presupposed in the information processing perspective. To support the cognitive, information-processing perspective on consumer behaviour it can be added that cognitions might be beliefs about a food (e.g. about its health properties), attitudes toward a food (e.g. an overall evaluation), preferences for a food (e.g. plans to purchase or consume) (Conner et al. 1998). Attitudes can have an affective component and are not, necessarily, formed on completely rational grounds.

In conclusion, it can be argued that, in general, choice and consumption of a product are based on a cognitive decision-making process and take account of stimuli surrounding that choice and consumption. Past experience, sensory perception, and emotion or affect are important influences but, at some point of the experience with the product, an evaluation based on some criteria (objective or not) is made by the consumers of that product. Depending on the product and on the situation, the complexity of the choice may vary but, usually, there is a problem-solving approach to choice, even if affect or less rational factors influence the way people solve that problem. Thus, it can be said that the EBM model encompasses a wide range of situations and influences on consumer behaviour and, consequently, it can supply a basis for the analysis of behaviour relating to food.

3. ALTERNATIVE EVALUATION AND CHOICE OF FOOD

In spite of the connection of all the stages in the decision-making process and the four sections depicted in the EBM model, the aim of this paper is to better understand how consumers choose food. Therefore, in this section special attention will be paid to the theory on that issue and to the factors that may influence consumers' alternative evaluation and choice of food products.

3.1. Alternative Evaluation

For Engel et al. (1995), consumers apply evaluative criteria such as the standards and specifications of products in comparing alternative products.. Evaluative criteria are the desired outcomes from purchase and consumption, and are expressed in the form of preferred attributes. They are shaped and influenced by individual differences and environmental influences. As such, they become product-specific manifestations of an individual's motives, values, and attitudes. The authors argue that consumers apply a four-stage process: first, they determine the evaluative criteria to use; second they decide which alternatives to consider; third, they assess the performance of the considered alternatives; and fourth, they select and apply a decision rule to make a final choice.

According to Engel et al. (1995), the complexity of alternative evaluation will vary dramatically depending on the particular process consumers follow in their consumption decisions. When decision-making is habitual in nature, alternative evaluation will, usually, simply involve the consumer forming an intention to repurchase the same product as before. However, sometimes alternative evaluation can be quite complex. Consumers may employ a number of different evaluative criteria, and these criteria will usually vary in their relative importance or salience. The salience of evaluative criteria depends on a host of situational, product, and individual factors. Steenkamp (1997), reporting on a study involving 100 products and seven European countries, found that the five most important criteria used to evaluate food products are product quality, price, brand name/reputation, freshness, and guarantee.

According to Lefkoff-Hagius and Mason (1993), a preference judgement is typically defined as the outcome of a consumer's evaluation process. Preference is an expression of the emotional state or reaction of an assessor which leads to the choice of a preferred product. Garber, Hyatt, and *Starr* (2003) stated that in the food context is important to stress the notion that product performance alone is not the sole determinant of consumer preference and choice,

but that all elements of the entire marketing-mix interact to influence consumer preference and choice. Asp (1999) qualifies this argument, stating that food preferences are related both to psychological and physiological perceptions of the sensory attributes of food. Bell and Marshall (2003) add that perception and acceptance of foods by humans is mediated by several factors, including expectation, sensory specific satiety, perceived risks, perceived ethnic origin, hunger, expectations of reward, and the level of uncertainty about a product's identity and sensory characteristics.

Much research into food is focused on sensory preference as the determinant of choice. For Raats et al. (1995), sensory preference is the hedonic dimension of acceptability. It can be defined as the consumer's affective response to a food product in a given context. The authors argue that sensory preference is an indicator of food acceptability which could or could not be a predictor of the consumer's behaviour. According to Asp (1999) and Richardson, MacFie, and Sheperd (1994), of the sensory attributes, taste is the one considered more important in food selection. Also, Raats et al. (1995) stated that it is clear that the taste of a food is a crucial parameter in determining food acceptability. However, these authors argue that when buying behaviour is examined it is equally clear to the researcher that taste is not the only crucial determinant, and in some cases is clearly well down the priority list.

Moreover, as Lefkoff-Hagius and Mason (1993) argue, the evaluation process has been found to be highly contingent on the particular individual, on the social context, and on the context variables that describe the decision situation. Engel et al. (1995) add that the similarity of choice alternatives also has an impact on the evaluation criteria and their salience. For these authors, motivation, involvement, and knowledge are individual factors that can determine the type of evaluative criteria likely to be used during alternative evaluation and the relative salience of these criteria. A greater number of evaluative criteria are likely to enter into the decision as involvement increases. Involvement may also influence.

Finally, for Engel et al. (1995), knowledge can also determine consumer's use of particular evaluative criteria. Knowledgeable consumers will have information stored in memory about the dimensions that are most useful for comparing choice alternatives. Consequently, they will make evaluations more easily, look less for external sources of information and, therefore, it is more difficult to influence their decision. On the other hand, some consumers may be limited in their ability to accurately evaluate choice alternatives. These consumers may rely much more heavily on brand name or others' recommendations, because they lack the knowledge necessary for directly evaluating the product.

3.2. Choice and Purchase

In the Steenkamp (1997) model, food choice is characterised as being in accordance with attitude theory, which posits that the product alternative for which consumers hold the most positive attitude will be the chosen product. However, he acknowledges that there are a number of factors that weaken the relation between attitude and choice in the context of foods. For example, pressures from the social environment, the degree of behavioural control, habit, and variety-seeking behaviour. In the EBM model, attitude is related to alternative evaluation and choice as an influencing factor.

In the EBM model, decision rules represent the strategies that consumers use to make a selection from the choice alternatives. These rules may be stored in memory and retrieved when needed. Alternatively, they may be constructed to fit situational contingencies. In any case, Garber et al. (2003), argue that purchase consideration and choice is a comparative process in which competing brands or products are evaluated.

For Engel et al. (1995), decision rules vary considerable in their complexity. They may be very simple, for example to repeat a previous purchase decision), or they can be quite complex, involving the consideration of multiple criteria. Another important distinction is between compensatory and non-compensatory decision rules. Non-compensatory decision rules do not permit product strengths to offset product weaknesses. In contrast, compensatory rules do allow product weaknesses to be compensated by product strengths. According to the same authors, when choice is habitual, and even when choice is not habitual, consumers may employ simplistic decision rules. This is explained by the fact that consumers continually make trade-offs between the quality of their choice and the amount of time and effort necessary to reach a decision. In many cases the consumer will follow decision rules that yield a satisfactory (as opposed to optimal) choice while minimizing their time and effort.

For Raats et al. (1995), there is a distinction between foods that are selected after detailed cognitive processing, which involve the use of structured attitude and belief models, and those that are not. For the latter products, it is more likely that sensory properties may well form good predictors, although the mediating effect of usage context will still be important. Nevertheless, the authors argue that, at the moment of purchase, the decision-making process is purely cognitive and the sensory properties are those expected from previous memory, from direct claims on the package, inferred from the images and information, or indeed from handling the product itself. It is therefore appropriate to examine the role of sensory properties as just one element in a general attitudes and beliefs model. Moreover, at the point of purchase,

expectations of the sensory properties may contribute to the perception of a product before consumption, and therefore impact on the choice decision. Bell and Meiselman (1994) also concluded that expectation can mediate food selection behaviour.

As was mentioned in the previous section, the result of the evaluation process is a preference for a product. According to Rozin (1990), preference implies choice. To prefer a food is to choose it over another designated food (or other activity). In more affluent cultures, as availability and cost recede in importance, preference is more in line with use. Liking is a major cause of preference but not the only cause. As with the use/preference comparison, as certain constraints (in this case health and social factors) fall into the background, liking becomes equivalent to preferring. Marshall (1995) counter-argued saying that 'people like what they eat' rather than 'eat what they like' and food choice is moulded by cultural representation, which dictates what is eaten long before food reaches the mouth.

4. FOOD QUALITY PERCEPTION

According to Steenkamp (1997) the criteria used by consumers in the evaluation of alternatives depend on the type of food product involved. The author discusses a study (AGB/Europanel, 1992) which investigated the importance of a large set of evaluative criteria for product choice in seven EU countries. One important conclusion of the study is that product quality is a summary construct, which subsumes many other aspects of the product. This conclusion is in accordance with the 'multi-attribute' approach to food quality, where quality is regarded as a multi-dimensional phenomenon, and overall quality is described by a set of attributes as perceived by consumers. The buyer then forms an overall, one-dimensional quality evaluation by some weighing of the various attributes, which will determine its choice (Grunert, 1997).

4.1. The Quality Concept

Issanchou (1996) argues that food quality is not an inherent characteristic of the food, but is closely allied with the concept of acceptability and, therefore, is more relevant to speak about perceived quality. For this author, consumer perceptions of product quality may find their base in physical characteristics of the product, in communication around the product, or in the combination of both. Perceived quality is what will motivate a consumer to buy a particular product for a particular usage. Additionally, perceived quality depends on the person and on the

context, i.e., on the circumstances in which food and consumer interact, and changes in perception occur for a person through experience and, for a given population, over time.

Hansen (2001) identified five general interpretations of the concept of quality. These interpretations range from the extremes of producers' objective criteria of quality, to the consumers' criteria of perceived quality. The interpretations of quality between these extremes include quality as value, quality as excellence, and quality as the adaptation to expectations. However, Booth (1995) argued that it is increasingly recognised that the basis on which any assessment of product quality is formed must, in the end, be the attitudes of the users.

In a comment on Booth's paper, Moskowitz (1995) stated that quality can be related to two factors – the subject's self-designed ideal, and the location of the product on a continuum at some distance from this ideal. The distance of the product to the ideal (its quality) will differ among consumers and among usage situations. Zeithaml (1988) also defined perceived quality as the result of the consumer's judgement about a product's overall excellence or superiority. For her, perceived quality is: different from objective quality; a higher level abstraction rather than a specific attribute of a product; a global assessment that in some cases resembles attitude; and a judgement that is usually made within a consumer's evoked set where evaluations of quality usually take place in a comparative context. According to Northen (2000), the perceived quality approach analyses product quality from the view point of the consumer, making quality a subjective assessment dependent on perception, needs and goals of the individuals.

Building on the material discussed above, it can be said that understanding and explaining the process of food evaluation and choice is to understand and explain the perception process of food quality. According to Grunert (1997), within the behaviourally-oriented analysis of consumer food choice, several broad approaches to study consumers' perception process of food quality can be distinguished. These include the economics of information approach, the multi-attribute approach, the hierarchical approach, and the integrative approach.

To better understand the theory on quality perception it is important to first clarify some concepts incorporated from those different approaches. According to Grunert (1997), from the perspective of an economics of information approach, product attributes can be categorized as search, experience and credence attributes. Search attributes, such as colour or fat content for meat, can be evaluated before purchase. Experience attributes, such as taste or juiciness, can be evaluated only after the purchase, during the consumption experience. In the latter case, consumers will try to infer quality from surrogate indicators. In the case of credence attributes,

the consumer never, or only at prohibitive costs, has the possibility of finding out whether the product actually possesses the characteristic, and they are a question of the credibility of the seller vis-à-vis the buyer. This is the case with attributes such, healthiness, animal welfare, naturalness, and safety.

The multi-attribute approach, derived from the multi-attribute attitude theory, also assumes that quality is a multi-dimensional phenomenon. According to Grunert (1997), to some extent the distinction between search, experience and credence characteristics has been incorporated into multi-attribute models by the distinction of intrinsic and extrinsic product attributes. Intrinsic attributes refer to attributes of the physical product, whereas extrinsic attributes refer to everything else. Grunert stated that extrinsic attributes are expected to be used mainly in those situations where information about intrinsic attributes is difficult to obtain, i.e., in those choice situations that are characterized by a predominance of experience and/or credence characteristics.

According to Northen (2000), a more recently accepted view of perceived quality and attribute types is the one where customers' perceptions of quality prior to purchase are based on quality cues. Quality cues are any informational stimuli that can be ascertained through the senses prior to consumption and, according to the consumer, have predictive validity for the product's quality performance upon consumption (Steenkamp 1997). Ophuis and Van Trijp (1995) argue that quality cues can be ascertained by the senses prior to consumption, whereas quality attributes are benefit-generating product aspects and cannot be observed prior to consumption. When searching for products to buy, consumers will most often use quality cues to predict attributes they desire in a product. In summary, Northen (2000) stated that the use of the term 'search attribute' to describe the analysis of a product prior to purchase is replaced by the term 'cue'.

Steenkamp and Van Trijp (1996) argue that a distinction can be made between intrinsic and extrinsic quality cues. Intrinsic cues are part of the physical product. They cannot be changed without also changing the physical product itself, in contrast with extrinsic cues, which are predominantly marketing related. In the case of food, intrinsic cues include visual cues such as colour, fat trim and marbling, in addition to non-visual cues such as smell. Extrinsic cues include price, brands, labels, shop, country-of-origin, and information. Northen (2000) stated that extrinsic cues have the capacity to communicate both experience and credence attributes. In contrast, intrinsic cues are not able to communicate credence attributes; hence, the only way

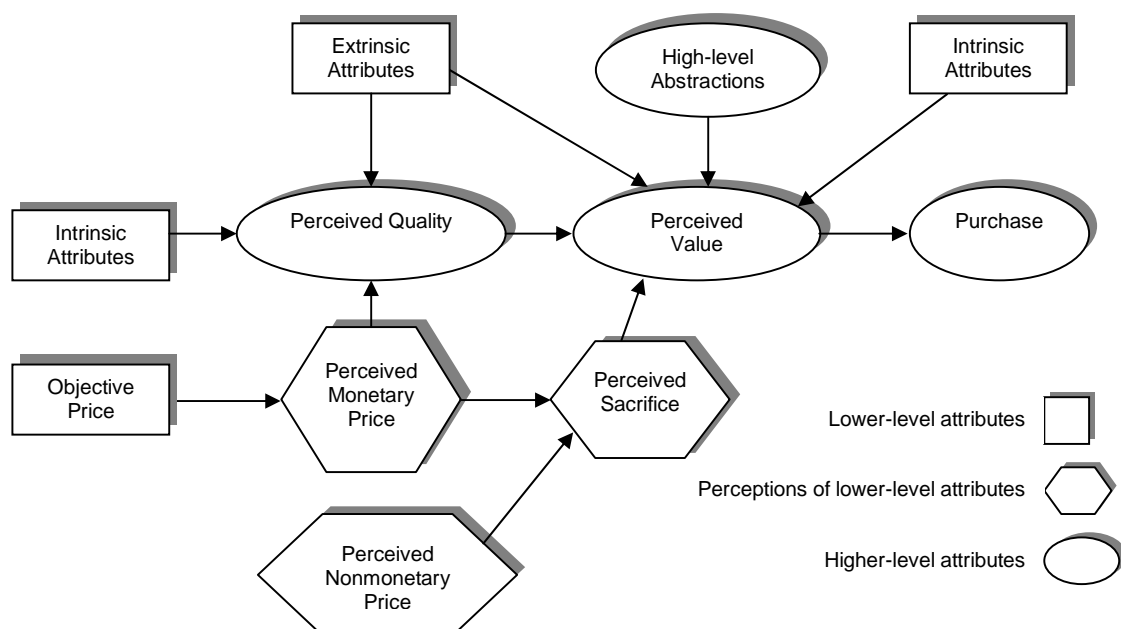
of successfully predicting credence attributes will be through the use of extrinsic cues. However, intrinsic cues will be more successful in predicting experience attributes.

4.2. The Zeithaml Model

The hierarchical models, in which means-end chain theory (Gutman 1982) is the most common approach, have in common the notion that consumers may infer some attributes from others. These may be attributes at the same level of abstraction, but in most cases the inference will be from the concrete to the abstract.

Quality has been included in multi-attribute models as a lower level attribute. However, Zeithaml (1988) proposes an adaptation of a model first developed by Dodds and Monroe (1985) (*in* Zeithaml 1988), where perceived quality is a second-order phenomenon, an abstract attribute. The model, depicted in Figure 2, defines and relates price, perceived quality, and perceived value, and gathers results from past research on those concepts. The model, which is proposed for all types of products, can clearly be applied to food products.

Figure 2 – The Zeithaml Model



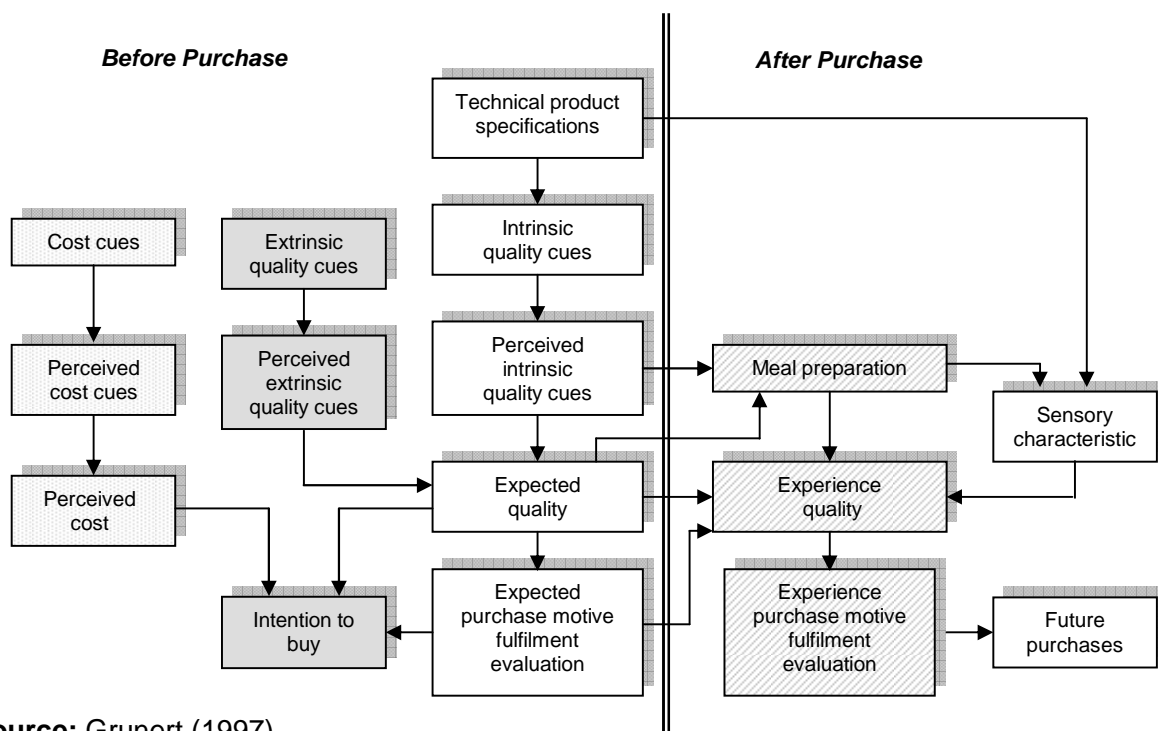
Source: Zeithaml (1988)

In the model perceived quality, a higher-level attribute, is an overall judgement based on perceptions of extrinsic and intrinsic attributes. Perceived price influences both the perceived quality and the perceived sacrifice. Zeithaml (1988) further explains that in the means-end chains, value, like perceived quality, is proposed to be a higher level abstraction but differs from quality in two ways. First, value is more individualistic and personal and second, value involves a trade-off of 'give' and 'get' components, that is the difference between the value of benefits conferred by the product and the 'cost' of acquiring them. Extrinsic attributes serve as 'value signals' and can substitute for active weighing of benefits and cost. Finally, the perception of value depends on the frame of reference in which the consumer is making an evaluation and the perceived value affects the relationship between quality and purchase.

4.3. The Total Food Quality Model

The integrative approaches try to integrate the other approaches into a unified framework for the analysis of quality perception process for food products. Two of the most notable cases of this integration are the Quality Guidance Model (QGM) of Steenkamp and Van Trijp (1996), and the Total Food Quality Model (TFQM) of Grunert et al. (1996) depicted in Figure 3.

Figure 3 – The Total Food Quality Model (TFQM)



Source: Grunert (1997)

Grunert (1997) does a summary description of the model, emphasising that the basis of the TFQM is the distinction between before and after purchase evaluations. Most food products have search characteristics only to a limited degree. In order to make a choice, the consumer will develop quality expectations but it is only after consumption that experienced quality can be determined, and even this is limited in case of credence characteristics.

The pre-purchase component of the model shows how quality expectations are formed based on the quality cues available. The intrinsic quality cues are related to the product's technical specifications, i.e., characteristics that can be measured objectively. The extrinsic quality cues represent all other characteristics, such as brand name, price, packaging, etc. Of all the cues consumers are exposed to, only those which are perceived will have an influence on expected quality (Grunert et al. 2004).

According to the TFQM, quality is not an aim in itself, but is desired because it helps to satisfy purchase motives or values. The values sought by consumers will, in turn, have an impact on which quality dimensions are sought and how different cues are perceived and evaluated. Expected quality and expected fulfilment of purchase motives constitute the positive consequences consumers expect from buying a food product, and are offset against the negative consequences in the form of costs. The trade-off determines intention to buy. Price can be both a cost cue and an extrinsic quality cue.

After the purchase, the consumer will have a quality experience, which often deviates from expected quality. The experienced quality is influenced by many factors: the product itself, especially its sensory characteristics, but also the way the product has been prepared, situational factors such as type of meal, previous experience, etc. According to Grunert et al. (2004), the relationship between quality expectation and quality experience is commonly believed to determine product satisfaction and, consequently, the probability of purchasing the product again.

Compared with the Zeithaml model, it can be said that the TFQM does not explicitly include price as an extrinsic cue. Additionally, the model does not consider perceived value as a higher-level abstraction, incorporating instead perceived quality and perceived cost (which can be interpreted as the perceived sacrifice proposed by the first model). However, the later model is more precise about the process of expectations formation and its relation with experience and satisfaction. This is possible because the TFQM was developed especially for the perception and evaluation of food quality and, consequently, can better analyse those processes which, sometimes, cannot be generalized to other categories of products.

4.4. Extensions and Other Models

Issanchou (1996) also points out that determinants of perceived quality of a given product will differ depending if quality perception is considered prior to purchase, at the point of purchase or upon consumption. However, this does not imply that perceived quality attributes at one of the stages do not influence the perception of quality at another stage. For Issanchou (1996), perceived quality prior to purchase will determine the purchase intention and is largely determined by beliefs and attitudes. In forming the purchase intention, the consumer trades off perceived quality against price attitudes.

Depending on previous information and experience, quality cues are used at the point of purchase to infer expected quality attributes. However, it is not always possible for the consumer to infer experience quality attributes from quality cues available at the point of purchase. In such cases, and when consumers are involved with the product, perceived risk tends to be higher. The same logic can be applied to credence attributes. Moreover, as in the TFQM, Issanchou (1996) argues that, upon consumption, sensory attributes are the most important experience quality attributes of food. However, he also recognises that expectations affect the perception of experience quality attributes.

A number of similar models or adaptations of the TFQM have been proposed in the literature (Becker, 2000; Bernués, Olaizola, and Corcoran, 2003; Bredahl, 2004; Poulsen et al., 1996; Steenkamp and Van Trijp, 1996). The Quality Guidance Model (QGM) defined by Steenkamp and Van Trijp (1996) is an integrated consumer-based quality improvement approach that, as in TFQM model, relates perceived quality judgements to physical product characteristics. It consists of three distinct but related steps: identification of quality judgments; disentanglement of the quality judgments into perceptions of intrinsic quality cues and quality attributes; and translation of the consumer perceptions into physical product characteristics.

The QGM is somehow a more straightforward version of the TFQM, where experienced quality is designated 'quality performance'. The model distinguishes between quality cue perceptions and quality attribute perceptions. Quality attributes represent what the product is perceived as doing or providing for the consumers in relation to their wants, and form the basis for consumers' preferences. Perceptions of intrinsic quality cues as well as perceptions of quality attributes are influenced by the product's physical characteristics.

The model consists of two phases, the abstraction phase and the integration phase. The abstraction phase models the psychophysical relationships between physical product

characteristics and intrinsic cue/attribute perceptions. The model posits that physical product characteristics are abstracted to form the basis for consumer perceptions about the intrinsic quality cues and quality attributes. A single physical characteristic need not lead to a single intrinsic cue/attribute perception. Moreover, multiple physical characteristics must often be combined to arrive at an intrinsic cue/attribute perception.

The integration phase models the way intrinsic cues perceptions and quality attribute perceptions are integrated into a judgement about quality expectation and quality performance, respectively. According to the authors, quality expectations are important in inducing the consumer to try out the product, while quality performance is of paramount importance in stimulating repeated purchase behaviour, which is in accordance with the TQFM. Also for Steenkamp and Van Trijp (1996), the evaluation of the quality performance may be influenced by expectations that were formed with respect to the anticipated fitness for consumption.

Steenkamp and Van Trijp (1996) argued that their model and the TFQM share a number of aspects; however, the focus of the two models is somewhat different. The TFQM elaborates on the integration phase and also incorporates purchase intention, while the QGM gives much attention to the abstraction phase. For Steenkamp and Van Trijp (1996), the TQFM is more comprehensive, while the QGM is easier to operationalize and quantify in empirical settings.

Poulsen et al. (1996) pointed out that one limitation of the QGM is its concern only with intrinsic cues, and that extrinsic cues may have an important influence in the quality formation process. This is even more important because the attributes of food are mainly experience and credence attributes, for which consumers also use extrinsic cues to form their quality expectations. Additionally, the model does not consider the influence of other factors in the formation of expectations or in quality evaluation. However, these influences are taken into account in the model of consumer behaviour proposed by the same authors (Steenkamp 1997).

Poulsen et al. (1996) presented an extension of the QGM that includes the consumer quality formation process. The authors raise the question of - given the interpretation of product quality as an overall, uni-dimensional measure of 'fitness for use' as defined by Steenkamp and Van Trijp (1996) - how the two constructs (quality expectations and quality experience) are combined to form this overall perception of quality. They propose to model this quality formation process by measuring overall quality as a separate construct using multiple indicators. Hence, they suggest an additional structure in the integration phase of the QGM, called the quality formation process. In their work, the researchers specified the part of the model that relates to the quality formation process as consisting of three latent variables: expectation, experience,

and overall quality. Each of these constructs has its separate measures that are interpreted as 'soft' since they represent consumer perceptions which are in turn determined by the physical characteristics of the products. In this sense, this model is similar to the Zeithaml model since it considers one higher-level abstraction construct of perceived overall quality.

Becker (2000) proposed the Consumer Attribute Model to analyse consumer behaviour towards food, which, he argued, is rather similar to the QGM. However, in the Becker model the role of extrinsic cues on the formation of perceptions is introduced as an important one. Becker's framework intends to link together quality as perceived by consumer, and quality as managed and produced by private and regulation public organisations, and it makes the distinction between product characteristics that are objectively defined by producers, and product attributes that are perceived by consumers.

The author makes the distinction between search, experience and credence quality attributes and between the cues used by the consumer to evaluate the product according to the three types of quality. Search quality (quality in the shop), a concept equivalent to the concept of expected quality defined in the models previously described, consists of the quality attributes cues which become available at the time of shopping and that can be both intrinsic and extrinsic cues. Experienced quality (eating quality) consists of the quality attributes cues which are available in use or in consumption. For the author those are only intrinsic cues. Finally, in credence quality no cues are accessible in the process of buying and consuming. The consumer has to rely on other information as delivered by the media, word-of-mouth, etc., and extrinsic cues are the dominant means of informing the consumer on credence quality attributes.

In conclusion, the three dimensions of quality are regarded as the basis for perceived quality, so, as in the extension of the QGM by Poulsen et al. (1996), an overall, uni-dimensional measure of perceived quality, composed of three constructs, is modelled. Becker emphasises the role of the industry in defining characteristics of the product in what concerns shopping, sensory and 'process, safety and nutritional' quality, and the way these characteristics are communicated through extrinsic or intrinsic cues. The several definitions of quality included in the model can be interpreted as the quality continuum defined by Hansen (2001).

More recently, Bernués et al. (2003) proposed a conceptual model of supply, perception and demand of food quality that gathers together several aspects of the models built by Becker (2000), Grunert (1997), Steenkamp (1997) and Steenkamp and Van Trijp (1996). The model differs from the TFQ model in four main aspects. First, as in the Becker (2000) model, the

supply of quality by industry is explicitly represented, emphasising the implications for the intrinsic, extrinsic and cost characteristics of the product. Second, expected quality, formed in the purchasing situation, is also separated into search and credence quality. Third, perceived overall quality is conceptualised as being influenced by search, credence and experienced quality. Finally, the overall perceived quality, together with the dynamic and increasingly diverse personal and environmental factors, as defined by Steenkamp (1997), determine the purchasing motives, that are linked with credence and expected quality.

Additionally, Bredahl (2004), in an empirical study on quality expectations and quality experience, found that both have two underlying constructs, health quality and eating quality. In other words, when evaluating experience quality consumers also consider health quality (a credence attribute), which is determined by their expectations in this dimension and by experienced eating quality. Expected health quality is formed only on the basis of extrinsic cues. In his model, Bredahl also includes past purchases, which directly influence expected eating quality, and future purchases, which are also explained by the two constructs of experienced quality.

Hoffmann (2000) also separates expectations and perception after purchase (experience) into two constructs: food quality and food safety. For this author, expected food quality and expected food safety are determined by perceptions of extrinsic and intrinsic cues and perceptions, and expectations can also be influenced by other factors such as socio-economic factors, attitudes, preferences, and prior experiences. These factors also have an influence on experienced food quality and safety. Another different feature of this model is that it allows the possibility of experience and credence characteristics being communicated via intrinsic or extrinsic quality cues, created by a party perceived as trustworthy by consumers.

In summary, from the models described in this section perceived quality can be conceptualized as a global assessment of the product based on extrinsic or intrinsic cues. If the costs (monetary or other) are considered, consumers form another higher-level abstraction, which Zeithaml (1988) designated as perceived value. Quality perceptions are defined by expected quality (before purchase) and experienced quality (after consumption). In more recent models, these two constructs have been hypothesised to be composed of two other constructs, which can be designated as eating (i.e. sensory) quality and credence (e.g. health, safety) quality.

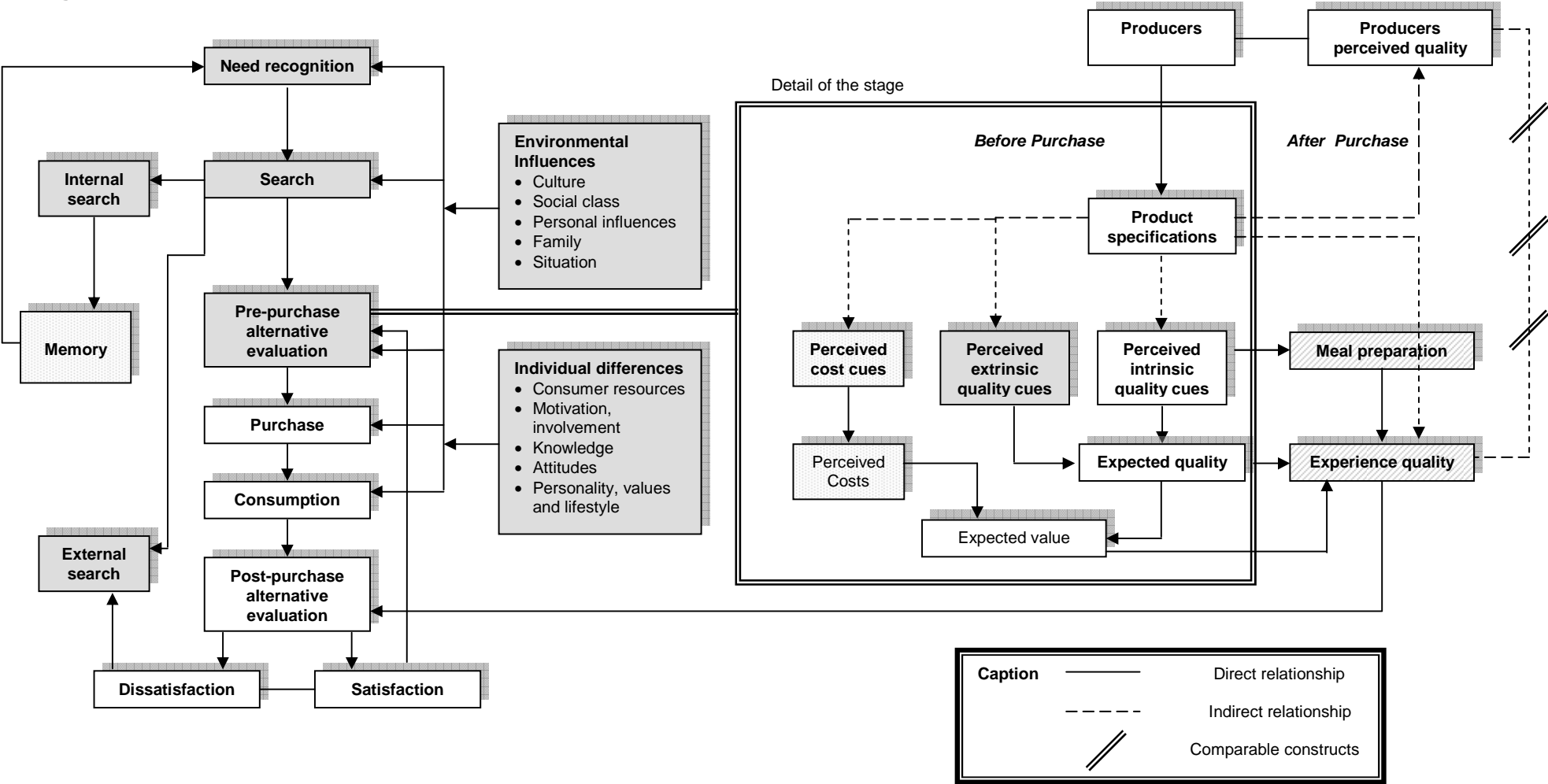
5. A CONCEPTUAL FRAMEWORK FOR FOOD CHOICE

Taking into consideration the theory discussed in the previous sections a two-component conceptual framework for analysing consumer decision-making towards fresh food is proposed in Figure 4. The framework gathers the main features of the EBM model of Engel *et al.* (1995), regarding consumers decision-making, the main constructs of the TFQ model from Grunert (1997), concerning consumers quality evaluation, and some additional constructs and relationships between them, proposed by Zeithaml (1988) and by the authors of the present paper. The key feature of the framework is that it tries to integrate the two models (EBM and TFQ), taking into consideration the theoretical principles proposed by their respective authors. The EBM model is a general model for consumer-behaviour, while the TFQ model was developed for food products but is expected to apply to other type of products which are composed mainly of experience attributes.

Consumers' quality perception and experience are particularly important in food consumption behaviour, since food products are mainly experience products. That is the reason why several researchers have concentrated their work on studying the formation of consumers' food quality expectations and experiences, as determinants of food choice. What Grunert (1997) purposes is a model to explain consumers' quality evaluation-processes before and after the consumption of the product, and to show how the process determines intentions to buy and future purchases. However, as with any other decision about consumption or buying of a product, food choice is influenced by a set of factors such as attitudes, information, motives, previous knowledge, etc. Consequently, it can be argued that the TFQ model is a detailed proposition of the two alternative evaluation stages (pre and post purchase) proposed in the EBM model.

To fully understand the proposed framework, it is important to explain the modifications to the original models. First, the two models are not fully depicted in the figure. Some of the models' constructs, such as information processing in memory, from the EBM model, or the influence of objective cues on perceived cues, from the TFQ model, were excluded. It was thought that their omission does not compromise the understanding of the consumer' decision-making process proposed by the models.

Figure 4 – A Conceptual Framework for Food Choice



Additionally, the omitted constructs are not the issue under analysis in the present paper, which focuses on consumers' perceptions and influences to their decision-making, and not on the product objective properties or consumer information processing. Consequently, the framework concentrates in the evaluation stages and on the main influences to those stages of the EBM model, and on the determinants of consumers' quality perception of the TFQ model.

Therefore, in Figure 4, there are dashed arrows that represent indirect relations between constructs. In other words, a dashed arrow between two constructs means that in the original model there is a third construct mediating that relationship. For example, the relationship between product specifications and perceived intrinsic quality cues is mediated, in Grunert's model, by the intrinsic quality cues construct. Additionally, constructs that were represented in both models are only depicted once. That is the case of intention to buy and future purchases of the TFQ model. Since this model is interpreted, in the proposed framework, as a detailed view of the alternative evaluation stages of the EBM model, the result of that evaluation is the decision whether to buy or re-buy the product as is proposed in the latter model.

Moreover, if the product is understood as the offer made to the consumers, product specifications may be regarded in a more holistic perspective than the one in the TFQ model, to include specifications about extrinsic cues, price and other costs (e.g. seasonal and spatial product availability). The product specifications or cues are, at least partly, defined by the producers and by other actors in the food chain. To illustrate this perspective, dashed arrows connecting product specifications and perceived extrinsic and cost cues are included in Figure 4. Again the dashed connection means that between the two constructs there is another construct, in this case extrinsic quality cues and cost cues.

Another modification to the TFQ model proposed in the framework concerns the result of quality expectations and experience formation, which Grunert designates as expected and experienced purchase motive fulfilment evaluation. The model shows that those constructs are the result of expected and experienced quality that, in the Zeithaml's model, when combined with perceived costs, determine the perceived value of the product. In Zeithaml's view, perceived value is the basis for consumers purchasing decision. That notion of perceived value (expected or experienced) is included in the framework.

Finally, the framework also suggests that producers, when establishing either intrinsic or extrinsic product characteristics, are, in a more or less objective way, defining the quality of their products. In Figure 4 this is designated as producers' perceived quality. In other words, when making product specifications, producers intend to establish an image of the

quality of their products. This construct may be comparable to consumers' expected and experienced quality in relation to the product. It can be said that a good product and an effective marketing strategy would induce a perception of quality in consumers very similar to producers' perceived quality. In other words, that the product is perceived by buyers and consumers as producers intended to and, consequently, that the firm's strategy is achieving its quality goals.

In an empirical research reported elsewhere (Marreiros, 2005), the relationship between the EBM and the TFQ models was explored. More precisely, the aim of the study was to ascertain if these models could be integrated and if the proposed framework could be applied to consumers' decision-making relating to beef. The study tried to understand how consumers evaluate and choose beef, and uncover the main influences on these processes. Accordingly, the study investigated associations between consumer attitudes, perceived quality cues and choice cues and consumption of beef. The research, besides studying the beef consumers as a whole, investigated differences between consumer groups, using several criteria to define those groups.

Regarding the results of that study it can be stated that the framework proposed in this paper applies to the consumption and purchase of beef. When analysing different groups of consumers, there was always an association between their attitudes and beliefs and the attribute importance for experienced quality and the cues used for buying-decision. Clusters on the basis of attitudes to beef eating showed not only that the consumers in each cluster declared different consumption behaviour as postulated by attitude theories, but also that they used different product cues to make their buying-decisions relating to beef and used different attributes to evaluate beef experienced quality.

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