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► **To cite this version:**

K. Peters, H. Remaud. Factors influencing cosumber menu-item selection in a restaurant context: ..
Food Quality and Preference, 2020, 10.1016/j.foodqual.2020.103887 . hal-03415201

HAL Id: hal-03415201

<https://hal.science/hal-03415201>

Submitted on 21 Jul 2022

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FACTORS INFLUENCING CONSUMER MENU-ITEM SELECTION IN A RESTAURANT CONTEXT

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HIGHLIGHTS

- Most and least important attributes influencing menu-item selection are similar among casual and fine-dining restaurant patrons.
- The most influential attribute on patrons' menu-item selection at restaurants is "the combination of ingredients".
- Restaurant patrons being placed in a high social context give a greater relative importance on menu-item attributes.
- Highly food-involved patrons place greater importance on attributes that are considered least likely to influence the menu-item selection of patrons with less involvement.

ABSTRACT

Assuming that the more a restaurant's manager know the preferences of his/her clients, the greater the chance to maximise the experience of the customers and therefore the revenue of the restaurant. However, very little is known about the attributes that influence menu-item choice of such customers in a restaurant context and consequently, on the relative importance attached to specific attributes shaping the overall appeal of a menu-item. Despite the familiarity that consumers have with making menu-item choices, there exists a significant paucity of academic research exploring the relative importance of attributes that influence menu-item selection in a restaurant context.

This research aims to respond to the following question: what are the attributes that influence menu-item choice in a casual and fine-dining restaurants context? To explore further the reasons that influence menu-item choice, the authors also investigate the extent the customers' level of food involvement and the social context have an impact on the attributes influencing menu-item choice in these two restaurants' contexts.

This study utilises the Best-Worst method to examine consumer-based preference in relation to the relative importance of attributes that influence the menu-item choice of casual and fine-dining restaurant patrons. Respondents should have patronised a casual or fine-dining restaurant within the last 4 weeks and 6 months respectively and were randomly allocated the task to respond the questions either with a casual-dining context in mind or with a fine-dining context in mind. Consumer attribute-based preferences are also examined in relation to an individual's level of food involvement and effect of social context, giving the authors the opportunity to split the entire sample into sub groups. The overarching objective is to draw comparisons in order to determine whether the attributes that influence menu-item choice differ between segments of consumers. Quantitative data was collected from 1208 respondents in Australia representative of casual and fine-dining restaurant patrons.

Results of the study indicate that “the combination of ingredients” is the most influential attribute on patrons’ menu-item selection at casual and fine-dining restaurants, *with a probability of 100% for that attribute to be chosen as the most important one when selecting a dish*. Conversely, the “avoidance of certain foods” and “the core ingredient of the dish is sustainably produced” are the least important attributes influencing the menu-item selection of restaurant patrons, *with a probability of 30 to 38% for these attributes to be chosen as the most important one when selecting a dish*. Interestingly, the ranking and relative importance of menu-item attributes significantly differed between segments of consumers with a high and low level of food involvement. *The “the combination of ingredients” remains the most important reason for people highly involved in food. Whereas “a sufficient portion size that will satisfy my appetite” and “a dish that I have tried before and know that I will like the taste” have probabilities of 100 and 94.5% to be chosen as the most important attribute when selecting a dish for people with low food involvement.*

Key Words: Restaurant, Social effect, Food involvement, Best-Worst, **Menu-item selection**

1. INTRODUCTION

Given the potential for accelerated growth in the restaurant industry, it is essential that food-service operators understand the attributes that influence consumer choice in order to generate greater customer satisfaction and sales. In a restaurant context, the perceived simplicity of selecting an item on a restaurant menu is in reality a fallacy masking a complex task. This choice-task poses various complexities associated with the decision-making process, which can be seen as a rational process in one extreme, to habitual and spontaneous in the other. Ultimately, menu-item selection is constrained by a trade-off between substitutable alternatives. Therefore, the attribute-based preferences of restaurant patrons provide an indication of the factors that influence menu-item selection.

Despite the familiarity that people have with making menu-item choices, there exists a significant paucity of academic research exploring the relative importance of attributes influencing menu-item selection in a restaurant context. Bowen and Morris (1995) refer to the representation of items listed on a restaurant menu as a unique type of selling situation, comparable to delivering a professional speech. Consequently, the intangible aspect of menu-item selection lends itself to a greater level of perceived risk associated with the choice decision. McCall and Lynn (2008) highlight the relative importance of the role of a restaurant menu suggesting that, *“among the multitude of factors that might entice a diner to enter a restaurant, it is the menu that drives the process”*.

This research aims to determine the relative importance of the attributes that influence menu-item choice in casual and fine-dining restaurants using a Best-Worst experiment, according to their level of food involvement and effect of social context. *According to Euromonitor (2008), casual and fine-dining restaurants are classified under the umbrella of full-service restaurants, including “all sit-down establishments where the focus is on food rather than on drink (...) characterised by table service and a relatively higher quality of food offering to quick-service units”*. For the purpose of this research, a fine-dining restaurant is defined as a restaurant where a main course is priced more than Au\$30. On the other hand, a casual-dining restaurant is defined as a restaurant where a main course is priced between Au\$15 and Au\$30.

2. LITERATURE REVIEW

2.1 Factors that influence food choice in a restaurant context

Either rationally driven or based on experience, menu engineering consists of the “*systematic evaluation of a menu’s cost or sales data for the purpose of identifying opportunities for improved performance*” (Jones and Merricks, 1995). If the cost of the ingredients is a key component of what is offered on the menu and on the margin generated by the restaurant, the way dishes are presented on a menu are more likely to influence the choice of the customers. A menu-item includes a set of identifiable attributes that can be consciously evoked to separate those items that will be considered for purchase from those that will not. In that perspective, an attribute can be defined as the characteristics or factors by which products are identified and perceived as different by customers. The ascription of different levels of importance attached to menu-item attributes shape the overall appeal of a dish to the consumer (Johns & Pine, 2002).

Furst *et al.*, (1996, p. 252) identified five categories of factors affecting food choice:

- Ideals factors include what is expected from the food, conscientiously or not, under social influence or not (Shepard, 1999). Ethical issues related to food preparation and sourcing can also influence food choice (Frewer *et al.*, 1997; Lindman & Väänänen, 2000).
- Personal factors represent the personal interest for specific food by individuals. We can include in that category sensory and non-sensory attributes influencing food choice (Bech-Larsen & Grunert, 2003), as well as the risk aversion that some individuals can have with regard to specific food affecting their choice (Frewer *et al.*, 1997).
- Resources is another key factor affecting food choice, with price considerations (Ritson & Petrovici, 2001) being one of the major constraint affecting customers’ choice for food. Other resources affecting food choice include skills and time.
- Social framework, most of the time rooted into families education and experiences.
- The food context, including the physical and social surrounding where the food choice takes place.

These factors provide ‘*points of comparison by which people evaluate their food choices*’ and mutually shape, reinforce, interact and compete with one another in a choice situation.

More recent researches exploring the factors that influence food choice have found conflicting results. For example, Myung *et al.*, (2008) identified price, nutrition, portion size, product information and food preparation method as the major attributes that influence menu-item selection. Contrastingly, Thomas and Mills (2008) suggest that the time of day, as well as the cost and perceived value of a menu-item governs the choice behaviour of restaurant patrons. Lee and Cranage (2007) found that taste, followed by price, and the provision of nutritional information are the major attributes influencing adolescents’ menu-item choices.

Other studies have explored how the descriptive complexity (or simplicity) of menu-items can influence consumer perception and selection of a dish. McCall and Lynn (2008) advocate that a detailed description of a menu-item can increase perceptions of food quality, expected price and likelihood of selection. It is also suggested that pricing information plays a subservient role to assessments of quality and is primarily used to confirm (or disconfirm) consumption decisions.

Given that social factors affect menu-item choice, it is necessary to determine the relative impact of behavioural and contextual factors on consumer choice in a restaurant context.

2.2 Habit vs. variety-seeking behaviour on food choice in a restaurant context

The conceptualisation of habit regarding consumer choice behaviour has always been elusively described in the literature (Ajzen, 2002; Ajzen & Fishbein, 2005; Eagly & Chaiken, 1993; Ouellette & Wood, 1998). Honkanen *et al.*, (2005) define habit as “*repeated behaviour that has gained automatic qualities*”. Verplanken and Aarts (1999) emphasise the autocratic nature of habit, describing the concept as “*learned sequences of acts that have become automatic responses to specific cues*”. The

results of a study by Honkanen *et al.* (2005) revealed that habitual choice behaviour explained differences in the intention to consume seafood. Therefore, the formation of an intention does not necessarily have to be reasoned (as the theory of reasoned action implies). These findings also suggest that habit plays an important role in understanding repetitive behaviour such as food consumption.

Choice has also been considered in relation to variety-seeking behaviour. Variety-seeking behaviour is defined by Khan (1995, p. 139) as “*the tendency of individuals to seek diversity in their choices of services or goods*”. A concept closely linked with variety-seeking behaviour is the variability of menu offerings, as this has the potential to expand (or reduce) the choice set of a restaurant patron. Bernstein *et al.*, (2008) suggest that a *variable* menu is typical of fine-dining restaurants, which is revised frequently and contains a large number of items within each category. Conversely, a *static* menu is emblematic of casual-dining restaurants that “*list the same food and beverages for sale for the same meal period day after day*” (Labensky *et al.*, 2001) and change “*only when individual menu-items are dropped or added for reasons of popularity or profitability*” (Mill, 2001, p. 11). This suggests that fine-dining restaurant patrons are more likely to exhibit variety-seeking behaviour when selecting menu-items than casual-dining restaurant patrons (Antun & Gustafson, 2005). Bernstein *et al.*, (2008) examined the attitudes and preferences of fine-dining restaurant patrons in relation to the variability of menu-items. Findings of the study provide empirical support for the contention that fine-dining patrons **tend to** seek choice variety over a sequence of dining occasions (Kahn, 1995). Therefore, it is expected that variety-seeking behaviour is more common among the fine-dining consumer segment, whilst habitual choice behaviour is typical of casual-dining restaurant patrons.

Following a thorough review of the literature, there is no evidence of studies seeking to differentiate the attribute-based preferences of casual and fine-dining restaurant patrons. Given the aforementioned assumptions, it is expected that the relative importance of menu-item attributes will differ between casual fine-dining restaurant patrons. This leads to the formulation of the first research proposition (**RP1**): The relative importance of (menu-item attributes) Best-Worst scores significantly differ between the casual and fine-dining segment of consumers.

2.3 Social context impact on food choice in a restaurant context

To ascertain the factors that influence menu-item choice, it is necessary to consider the environment in which the decision-making process occurs. Wansink (2004) suggests that the restaurant environment can be separated into two categories. The *eating environment*; comprised of ambient factors associated with the consumption of food, but that are independent of food and the *food environment*, which consists of factors that directly relate to the way food is provided or presented. Despite recent research suggesting that dining-out is a function of both the food and the situation it is consumed, the social context in which consumption choices are made has received little attention in academic literature. Finkelstein (1989) emphasises the importance of the social context when dining at a restaurant, noting that, “*much of dining out has to do with self-presentation, through images of what is currently valued, acceptable and fashionable*”. Finkelstein continues, describing the dining experience as a form of “*entertainment [where] social relations are iconically represented through visual images and imagined atmosphere*”.

The influence of social context may be regarded as a special case of social impact theory, which suggests that the relative importance, strength and immediacy of a group can be related to an individual’s conformity to normative group dynamics (Latane, 1981). Generally, it has been found that an individual’s food intake increases when meals are eaten in a social context, irrespective of the number of people present (De Castro, 1994; Clendenen *et al.*, 1994). The positive correlation between the presence of other people and food intake has been demonstrated for meals consumed at and away from home, as well as for different meal occasions (De Castro *et al.*, 1990; Patel & Schlundt, 2001). It has been found that menu-item choice differs depending on who is paying the bill and the number of

people an individual is dining with (Jones, 2007). Given that the social context exerts a significant influence on individuals' consumption patterns, menu-item choice may also depend on the subliminal social influence of whom an individual is dining with.

The term "food context" introduced by Furst *et al.*, (1996) can be closely related to the concept of social context, which "*encompasses the physical surroundings and social climate of the choice setting...that become part of the food choice process*". It has also been argued that the social context exerts a greater influence on food choice than consumers' personal preferences (Marshall, 1993; Schutz, 1988). Furthermore, Hobden and Pliner (1995) posit that individuals are more likely to engage in variety-seeking behaviour in the presence of others. Thus, there is considerable scope for exploring the influence of social context on consumer choice behaviour in a restaurant setting (Johns & Pine, 2002).

As food consumption in a restaurant occurs in the presence of other people, a primary aspect of this research is to assess an individual's propensity to actively seek advice from others in order to confirm (or disconfirm) their menu-item choices. **If opinion-seeking does not exclusively represent the social context of a meal that takes place in a restaurant, it is undoubtedly an critical part of it.** Therefore, an individual's propensity to engage in opinion-seeking behaviour is mediated by the presence of other consumers. Thus, it is expected that consumers with a high effect of social context (**i.e. opinion-seeking behaviour**) attribute little difference in the relative importance of attributes that influence menu-item selection. Conversely, consumers with low social context (**i.e. individuals not looking for opinion of others**) are expected to be better able to discriminate between menu-item attributes based on their own value judgements. The following research proposition was formulated to assess the extent to which the effect of social context influences the relative importance of menu-item attributes (**RP2**): The relative importance of (menu-item attributes) Best-Worst scores significantly differs between the segment of consumers with a low and high effect of social context.

2.4 Food involvement impact on food choice in a restaurant context

Involvement in product selection has been extensively researched and identified as a significant factor affecting consumer choice behaviour (Sun, 1995). Empirical research has focused on exploring the relationship between a consumer's level of involvement and recall, as well as attitudes and choice behaviour. Drawing upon the widely agreed conceptualisation of involvement, which is described as the interplay between the consumer, their needs, values, interests and motivation (Juhl & Poulsen, 2000; Olsen, 2001; Marshall & Bell, 2004; Laurent & Kapferer, 1985), a consumer's level of food involvement can be defined as the interaction between cognitive, affective and conative elements that serve to influence engagement with a (food) product as part of a (dining-out) service. Furthermore, it is assumed that an individual's level of food involvement will likely vary from one person to another. Therefore, food involvement is a continuum, along which an individual's involvement level can be measured. Food involvement is considered both as a situational and enduring measure, as situational involvement rarely occurs in isolation due to the continuous presence of enduring involvement (Richins *et al.*, 1992). Regardless of how differences in food involvement are accounted for, in all cases the sensation and pleasure associated with consumption assumes more importance for an individual who is highly involved with food than for an individual who is less involved (Bell & Marshall, 2003).

An individual's involvement level can also relate to the complexity of the decision-making process, ranging from cognitive to habitual menu-item choices (Swait & Adamowicz, 2001). Therefore, consumers who are highly involved are considered likely to give more thought to menu-item choice than low involved consumers who drawn upon habitual decision-making processes. Thus, it is hypothesised that individuals who are highly food involved are more capable of discriminating between menu-item attributes than individuals who are less food involved; and that this discrimination operates in affective and perceptive relative judgments (Bell & Marshall, 2003). Lastovicka (1978)

supports this presumption, noting that consumers high in (food) involvement have a tendency to utilise more extensive purchase evaluation mechanisms than do consumers low in (food) involvement. Similarly, Sherif *et al.*, (1973) postulate that highly involved consumers are less likely to be persuaded to change their preferences than consumers who are less involved in the purchase decision. Thus, it is expected that the construct of involvement will mediate differences in the relative importance of attributes influencing the menu-item selection of casual and fine-dining restaurant patrons.

This leads to the formulation of the final research proposition, to assess the extent to which an individual's level of food involvement influences the relative importance of menu-item attributes (**RP3**): The relative importance of (menu-item attributes) Best-Worst scores significantly differ between the segment of consumers with a low and high level of food involvement.

2.5 Research questions

Based on the literature review that we conducted, no direct and relevant response can be given to the question 'what are the attributes that influence menu-item choice in a restaurant context?', furthermore in a casual or fine-dining restaurant context. We also believe that wherever individuals have a meal, i.e. in a casual or fine restaurant, other aspects could shape their decision making process for food choice. One element that has been discussed is the impact that the social context could have on the attributes influencing menu-item choice in these two restaurants' contexts. The second question we aim to answer is the extent seeking the opinion of others (i.e. high social context) will impact the relative importance given to menu-item attributes. On a different perspective, the third question relates to food involvement, and to what extent highly food involved individuals would value different attribute influencing their menu-item choice compared to low food involved individuals.

3. RESEARCH DESIGN

This research is designed to ascertain the relative importance of menu-item attributes among Australian respondents using an online survey instrument and to assess the extent to which an individual's level of food involvement and tendency to engage in opinion-seeking behaviour mediates the relative importance of the attributes influencing menu-item selection. The Internet was selected as a preferable channel for data collection over alternative methods, as it is an efficient method of collecting information from a large number of respondents and allows for sampling across a wide geographical scope (Bachmann, *et al.*, 1996; Taylor, 2000; Yun & Trumbo, 2000).

3.1 Sample selection and data collection

A total of 1208 Australian respondents were recruited via an Internet panel provider (random selection of individuals who should have visited a casual-dining restaurant within the last 4 weeks and a fine-dining restaurant within the last 6 months). Quota sampling was used to obtain an equal distribution of gender (males, $n=572$; females, $n=636$), and distribution of ages (20-59 years) representative of casual and fine-dining restaurant patrons. To ensure geographical representativeness of the sample population, survey data was collected in all Australian States and Territories. Furthermore, the survey was available online for a period of one week (23rd-30th September 2009), to include a diverse range of respondents. The demographic of the sampling frame was compared to the 2006 Roy Morgan Single Source Data (with about 50,000 Australians interviewed every year on various subject, including dining experience) relating to the average number of Australians who patronised a casual or fine-dining restaurant. As a result, the sample is largely representative of Australian casual and fine-dining restaurant patrons.

Following preliminary questioning in relation to restaurant patronage, respondents were asked to evaluate their food involvement and social context influence. Respondents' level of food involvement

and the extent to which the social context moderates consumer choice behaviour in a restaurant, was measured in response to a series of questions using a 7-point Likert scale with labelled endpoints (strongly agree, strongly disagree). Respondents were asked to rate their opinion-seeking behaviour (as a proxy for the social context influence) and food involvement in a general context, rather than in relation to a specific decision/instance and a specific restaurant setting. Thus, the issues associated with situational recall, such as erroneous data as a result of the lead-time from choice behaviour to evocation were avoided. Then, respondents were asked to evaluate the 13 menu-item attributes derived from the literature review. Based on a random selection, about 50% of the respondents were allocated with the following scenario: "Imagine that you are in a casual restaurant for dinner with other people", and asked: "What attribute would most and least influence your choice when selecting a dish from the menu?" for each of the 13 choice sets. The other 50% were allocated the same scenario, but in a fine-dining context. An example of one of the thirteen questions that were presented to the 1208 respondents to measure the relative importance of 13 menu-item attributes is presented in Appendix 1.

The relationship between the independent variables (restaurant style, effect of social context and food involvement) and the dependent variable (choice attributes), and their relative importance on menu-item selection is mediated by the information provided on a restaurant menu. Therefore, it is expected that the relative importance of menu-item attributes will differ in accordance with (RP1) the style of restaurant (casual or fine-dining), (RP2) the effect of social context (low or high effect) and (RP3) an individual's level of food involvement (low or high).

3.2 Constructs development

3.2.1 Selection of 13 attributes influencing consumers' choice on a restaurant menu

Our literature review has identified more than 30 attributes or factors having the potential to influence consumers' choice on a restaurant menu. The list was narrowed down following interviews with marketing expert of a research institute based in Adelaide and two focus groups conducted in Adelaide at the end of August 2009. The sample size for these focus groups comprised 10 participants to discuss their behavior and feeling in a fine-dining restaurant context and 9 participants for the casual-dining context. Focus group participants were presented with a first menu and asked to select one entrée and one main course that they would be most likely to order. Then, a second menu was presented (with a few similar items as well as new items) and participants were asked to review the selection they would have made with the first menu. Upon completion, participants discussed the rationale underpinning their selection of their most preferred choice.

Following these focus groups, a final list of 13 primary factors was selected for inclusion in the quantitative survey:

1. A dish that features local produce: local produce was frequently cited as major attribute influencing the menu-item choice in both restaurant types. Locality refers to the origin of the main component of a dish.
2. The price of the dish was expected to influence significantly menu-item choice, especially for casual-dining restaurant patrons. Price in itself is most of the time meaningless, as several participants indicated that price is a combination with the type of the dish, the restaurant itself, the atmosphere, the service.
3. The way a dish is written on the menu tempts my palate: the menu-item description provides the information an individual requires to justify or change their selection. As one person articulated, 'how you describe the dish and the ingredients makes a lot of difference, the tastier it looks, the better the chances of ordering it'.

4. A dish representing a healthy option: a healthy choice is based on an individual's mindfulness towards selecting a dish containing nutritional properties. Healthy food choice is particularly prevalent among individuals with dietary restrictions.
5. The method of preparation refers to how a dish is cooked and served on the plate (i.e. grilled, steamed, battered, etc)
6. A dish I've never tried before refers to the variety-seeking behavior of an individual, also by opposition of a routine-based type of behavior (describe with attribute #9). Focus group participants pointed out that an appealing description of an item might entice them to select a dish that they are unfamiliar with.
7. The accompaniments that come with the dish is an attribute that has been frequently cited as a major factor affecting menu-item choice. Accompaniments include salade, vegetables, sauce.
8. The combination of ingredients complements each other well is a major factor underpinning menu-item selection. Participants referred to the importance of complementary ingredients as attributing to their choice of an item on the menu. In that perspective, a knowledge of the ingredients included in the dish was at the core of the choice process.
9. A dish that I have tried before and I know that I will like the taste directly refers to a habitual behavior of an individual, making his/her choice a safe one. Focus group participants also refer to choice dissatisfaction avoidance and easy choice when discussing habitual behavior in restaurants.
10. A sufficient portion size that will satisfy my appetite: portion size refers to as the quantity of food comprising a dish. The term also encompasses the combination of ingredients accompanying the core ingredient and refers to patrons' perceptions of quantity expectations.
11. The core ingredient of the dish is sustainably produced, i.e. being produced utilising sustainable practices. Sustainable and ethical orientation in relation to the menu-item choice was more common among fine-dining focus group participants compared to the casual-dining group.
12. A dish that I could not/would not want to prepare at home refers to individuals' cooking expertise. At the core of this assumption is the idea that a chef with culinary experience is able to prepare, cook and present a dish in a way that exceeds a patron's own skills.
13. Avoidance of certain foods refers to an individual's perception of potential risks associated with consumption. It also corresponds to the avoidance of particular menu-items due to personal reasons, such as social or dietetic issues.

3.2.2 Social context (opinion-seeking) scale

The effect of social context, or an individual's tendency to engage in opinion-seeking behaviour during the decision-making process was measured based on an individual's response to six questions. The measure takes into account the extent to which group influence moderates an individual's ability to make menu-item choices in a restaurant context. A measurement instrument has not yet been developed to specifically measure social context in a restaurant setting. Therefore, the opinion-seeking scale developed by Flynn *et al.*, (1996) was used to measure an individual's effect of social context using a 7-point Likert scale (ranging from strongly disagree to strongly agree), **although it may not reflect the entire complexity of a social context**. The application of the 6-item scale to several product categories provided evidence of validity, thus attributing to the generalisability and applicability of the scale to the food category. **The 6 items include: 'when considering a menu-item I ask other for advice', 'I don't need to talk to others before I select a menu-item', 'I rarely ask other people what menu-item to select', 'I like to get others' opinion before I select a menu-item', 'I feel more comfortable selecting a menu-item when I have obtained other people's opinions on it', 'when choosing a menu-item, other people's opinions are not important to me'.**

Individual scores could theoretically range from a minimum of 6 (strongly disagree with all items) to a maximum score of 42 (strongly agree with all items). Total scores for all items were summed to form indices of social context effect for each respondent. Respondents' with scores 16 points or below demonstrated a "low" social context effect, from 17 to 25 points "medium effect" and scores of 26 points and above were classified as a "high effect". Respondents classified as having a "medium" social context effect were removed for the purpose of analysis in order to objectively discriminate between the attribute-based preferences of consumers with a "low" and "high" effect of social context. In total, approximately 59% of respondents were retained for subsequent analysis.

3.2.3 Food involvement scale

Bell and Marshall (2003) developed a multi-item measure in order to gauge an individual's level of food involvement. The food involvement scale measures on a continuum an individual's level of involvement based on activities related to the acquisition, preparation, cooking, eating and disposal of food. The 12-item measure of food involvement provided evidence of reliability and internal consistency within two subscales, referred to as the "Set and Disposal" and the "Preparation and Eating" scales. The S&D scale include the following items: 'I do most or all of the clean up after eating', 'I do not wash dishes or clean the table', 'I care whether or not a table is nicely set'. These items were not used in the research, as they do not make sense to be used in a restaurant context.

For the purpose of this study, the nine-item preparation and eating scale was adapted to measure an individual's level of food involvement. In order to measure an individual's level of food involvement, a total FIS score was calculated for each respondent based on their response to a series of nine questions on a 7-point Likert scale. Individual scores could theoretically range from a minimum of 9 (low involved) to a maximum score of 63 (highly involved). Respondents' with scores 39 points or below were classified as "low involved", from 40 to 48 points "medium involved" and above 49 points as "highly involved" with food. For the purpose of this study, respondents classified in the "medium involved" category were removed from analysis in order to compare the attribute-based preferences among restaurant patrons with a "low" and "high" level of food involvement.

3.3 Survey instrument: Best-Worst Scaling

For the purpose of this study, Best-Worst Scaling (BWS) was used to measure the relative importance of the attributes underlying menu-item selection. BWS has been frequently used in relation to the wine and restaurant industries (Cohen, 2009; Cohen, d'Hauteville & Sirieix, 2009; Lockshin et al., 2011; Sirieix et al., 2011), but far less in the food industry at the exception of Lusk and Briggeman (2009) who studied the importance of food values such as naturalness, taste, safety, origin, environmental impact and other factors.

The BWS method was selected, as it requires respondents to make a trade-off between the attributes that influence menu-item choice. The selection of the most and least influential attribute in each choice set is a discriminatory means of measuring the importance respondents place on a particular attribute (Cohen, 2003). Developed by Finn and Louviere (1992), BWS allows the comparison of more than two elements. The objective is to model 'the cognitive process by which respondents repeatedly choose the two objects in varying sets of three or more objects that they feel exhibit the largest perceptual difference on an underlying continuum of interest' (Finn and Louviere, 1992).

In our research, respondents were required to evaluate 13 choice sets (each containing 4 attributes) according to the attribute that most and least influences their menu-item choice at a casual or fine-dining restaurant (see section 3.1 for one example). The attributes contained within each choice set were purposefully randomised using a balanced incomplete block design (BIBD), permitting estimates of the relative importance of each attribute to be obtained. One BIBD for 13 items was selected

including 13 subsets of 4 items (attributes) in each subset, and appearing 4 times in total (i.e. combined with different items each time they appear in one subset).

Best-Worst (BW) scores were analysed to determine the overall importance of the attributes that influence menu-item choice. The level of importance for each attribute was calculated by subtracting the total “worst” (frequency of attribute being chosen as least important by respondent) from the total “best” (frequency of attribute chosen as most important). This resulted in 13 (BW) scores, ranging from +4 to -4 for each attribute. The relative importance of attributes underpinning menu-item selection was obtained by ranking the sum of BW scores for each attribute. Positive values of best minus worst scores indicate that the attribute was chosen more often as “best” as opposed to “worst”, and vice versa. The importance of attributes was also analysed using (square-root) coefficients, *giving a proxy for the choice probability of one attribute compared to the most important scaled at 100 per cent (Cohen, 2006)*. The ratio-based scores were calculated by dividing the total “best” by the total “worst” scores for each respondent. The resulting sqrt (B/W) scores were scaled by the attribute with the highest sqrt (B/W) score. The most important attribute, with a choice probability of 100 percent, was used as a benchmark to compare the sqrt (B/W) scores of the remaining 12 attributes. The resulting score indicates the choice probability of each attribute being chosen as “best”, corresponding to the relative importance of attributes influencing menu-item selection (Cohen, 2009).

Additionally, an analysis of variance (one-way ANOVA) was conducted in order to confirm significant differences between (menu-item) BW coefficients. The single-step multiple comparisons procedure enabled testing of the assumption that the relative importance of menu-item attributes differs according to the style of restaurant, level of food involvement and effect of social context.

4. FINDINGS

4.1 Attributes influencing the menu-item choice of casual vs. fine-dining patrons

A comparison of B minus W scores (B-W), the average BW scores, and the relative importance of menu-item attributes among casual and fine-dining restaurant patrons are presented in Table 1.

Table 1: Importance of menu-item attributes for the casual and fine-dining segment (n=1208)

#	Attribute	Casual-dining (n=603)				Fine-dining (n=605)			
		B-W Score	Average BW score	SQRT (B/W)	Relative importance	B-W Score	Average BW score	SQRT (B/W)	Relative importance
1	Local produce	-302	-0.125	0.767	46,5	-141	-0.059	0.879	55,9
2	The price	268	0.111	1.255	76	11	0.032	1.009	64,3
3	The way a dish is written	76	0.032	1.057	64,1	38	0.016	1.028	65,4
4	Healthy option	-142	-0.059	0.880	53,3	-142	0.005	0.882	56,1
5	The method of preparation	211	0.087	1.261	76,4	205	0.028	1.237	78,8
6	A dish I've never tried before	-175	-0.073	0.850	51,5	42	-0.058	1.037	66,1
7	The accompaniments	84	0.035	1.077	65,3	77	0.017	1.070	68,1
8	The combination of ingredients	514	0.213	1.651	100	481	0.199	1.570	100
9	A dish that I have tried before	279	0.116	1.264	76,6	67	0.095	1.060	67,5
10	A sufficient portion size	274	0.114	1.284	77,8	229	0.085	1.228	78,2
11	Sustainably produced	-762	-0.316	0.510	30,9	-625	-0.258	0.590	37,5
12	A dish that I could not prepare	479	0.199	1.390	84,2	443	0.183	1.358	86,5
13	Avoidance of certain foods	-804	-0.333	0.535	32,4	-685	-0.283	0.592	37,7

Results of the ANOVA indicate that the *F-ratio* of 78.16 (12, 7826) is significant ($p < 0.05$) for the casual-dining results, as well as for the fine-dining results ($p < 0.05$).

Both segments of consumers consider “the combination of ingredients” and “a dish that I could not / would not want to prepare at home” as the most important attributes influencing menu-item

selection. “The core ingredient of the dish is sustainably produced” and the “avoidance of certain foods” are the least important attributes influencing the menu-item selection of casual and fine-dining restaurant patrons. “The avoidance of certain foods” relates to the tendency for a consumer to engage in habitual or variety-seeking behaviour. Expectantly, “the price of the dish” is much more important to casual-diners than fine-diners. Surprisingly, the analysis of BW scores indicate that “the way a dish is written on the menu” and the selection of “a dish representing a healthy option” do not seem to exert a large influence on the menu-item choice of casual or fine-dining restaurant patrons.

4.2 Impact of low vs. high social context on factors influencing the menu-item choice

Table 2 presents a comparison of average BW scores related to the relative importance of menu-item attributes for patrons with a low and high effect of social context. Restaurant patrons with a high and low social context effect both considered “the combination of ingredients” as the most important attribute influencing their menu-item choice.

Table 2: Importance of menu-item attributes for the low and high social context segment

#	Attribute	Low social context (n=388)				High social context (n=324)			
		B-W Score	Average BW score	SQRT (B/W)	Relative importance	B-W Score	Average BW score	SQRT (B/W)	Relative importance
1	Local produce	-101	-0.065	0.866	44.0	-214	-0.165	0.708	47.7
2	The price	-26	-0.017	0.966	49.1	162	0.125	1.285	86.6
3	The way a dish is written	51	0.033	1.059	53.8	35	0.027	1.048	70.6
4	Healthy option	-119	-0.077	0.849	43.1	-72	-0.056	0.086	59.7
5	The method of preparation	188	0.121	1.371	69.6	97	0.075	1.222	82.3
6	A dish I've never tried before	-31	-0.020	0.959	48.7	-23	-0.018	0.961	64.7
7	The accompaniments	44	0.028	1.062	53.9	47	0.036	1.082	72.9
8	The combination of ingredients	414	0.267	1.969	100	225	0.174	1.484	100
9	A dish that I have tried before	-20	-0.013	0.974	49.5	147	0.013	1.267	85.3
10	A sufficient portion size	158	0.102	1.245	63.3	150	0.116	1.302	87.7
11	Sustainably produced	-433	-0.279	0.550	28.0	-406	-0.313	0.521	35.1
12	A dish that I could not prepare	378	0.244	1.496	76.0	238	0.184	1.367	92.1
13	Avoidance of certain foods	-503	-0.324	0.535	27.2	-386	-0.298	0.592	39.9

Results of the ANOVA indicate that the *F-ratio* of 45.51 (12, 5031) is significant ($p < 0.05$) for the low social context results, as well as for the high social context results: *F-ratio* of 36.9 (12, 4199) is significant ($p < 0.05$).

Although results indicate that both segments consider the “avoidance of certain foods” and “the core ingredient of the dish is sustainably produced” as unlikely influences on their menu-item selection, the ranked order of importance differs between consumers with a low and high effect of social context. Interestingly, all attributes assume a greater relative importance and choice probability for consumers with a high effect of social context, with the exception attribute #11 (“the core ingredient of the dish is sustainably produced”), which has a slightly higher probability of being selected by consumers with a low social context. Given that restaurant patrons with a high social context effect place a greater relative importance on menu-item attributes, they are more likely to actively seek out (and value) the opinion of others in relation to their choice of item on the menu. In such instances, the perceived risk associated with making a bad choice is heightened in accordance with consumers’ relative value judgements.

4.3 Impact of low vs. high food involvement on factors influencing the menu-item choice

Table 3 compares the differences between average BW scores and the relative importance of attributes that influence the menu-item choice of consumers with low and high food involvement. The BW analysis revealed that the relative importance of menu-item attributes significantly differ across

these two segments. Similar to the attribute-based preferences of the other segments of consumers analysed in this study, restaurant patrons with a high level of food involvement considered “the combination of ingredients” as the most important attribute influencing menu-item selection. Different to other segments, consumers with a low level of food involvement considered “a sufficient portion size” more important (probability of 100% to be chosen as the most important attribute influencing the menu item selection) than “the combination of ingredients” (probability of 88.8% to be chosen as the most important attribute influencing the menu item selection).

Table 3: Importance of menu-item attributes for the low and high food involvement segment (n=760)

#	Attribute	Low food involvement (n=387)				High food involvement (n=373)			
		B-W Score	Average BW score	SQRT (B/W)	Relative importance	B-W Score	Average BW score	SQRT (B/W)	Relative importance
1	Local produce	-225	-0.145	0.724	49.4	18	0.012	1.027	54.7
2	The price	196	0.127	1.271	86.8	-71	-0.048	0.904	48.1
3	The way a dish is written	-105	-0.068	0.882	60.2	179	0.120	1.231	65.5
4	Healthy option	-76	-0.049	0.904	61.7	-108	-0.072	0.854	45.5
5	The method of preparation	124	0.080	1.214	82.8	144	0.097	1.326	70.6
6	A dish I've never tried before	-135	-0.087	0.828	56.5	86	0.058	1.138	60.6
7	The accompaniments	91	0.059	1.133	77.3	8	0.005	1.011	53.8
8	The combination of ingredients	182	0.118	1.301	88.8	404	0.271	1.877	100
9	A dish that I have tried before	246	0.159	1.385	94.5	-107	-0.072	0.861	45.8
10	A sufficient portion size	272	0.176	1.465	100	19	0.013	1.028	54.8
11	Sustainably produced	-420	-0.271	0.555	37.9	-366	-0.245	0.605	32.2
12	A dish that I could not prepare	176	0.114	1.215	82.9	377	0.253	1.527	81.3
13	Avoidance of certain foods	-326	-0.211	0.672	45.9	-583	-0.391	0.488	26.0

Results of the ANOVA indicate that the *F-ratio* of 38.92 (12, 5018) is significant ($p < 0.05$) for the low food involvement results, as well as for the high food involvement results: *F-ratio* of 48.60 (12, 4836) is significant ($p < 0.05$).

The relative importance of “a dish that I have tried before” and “a dish representing a healthy option” is similar among highly involved consumers. These attributes have approximately a 60 to 65% probability of being chosen as the “most” important attribute influencing menu-item choice. Patrons with low involvement considered, “a dish that I could/would not want to prepare at home” and “the method of preparation” to be of similar importance, with a choice probability of approximately 82%. A comparison of the attributes that influence the menu-item selection of the two segments, revealed that “a dish that I could/would not want to prepare at home” was the most similar attribute in terms of relative importance among consumers who are low and highly food involved. The relative importance of “a dish that I have tried before” deviated the most between the two segments.

Results also indicate that majority of attributes influencing menu-item selection assume a far greater relative importance for the segment of consumers with low food involvement in comparison to highly involved consumers. The exceptions were “the combination of ingredients”, “the way a dish is written on the menu” and “the dish features local produce”, which were considered more important on average to highly involved patrons. Furthermore, it is evident that “a sufficient portion size” is three times as important to the low food involvement segment as it is to the highly food involved segment.

5. DISCUSSION

5.1 Does menu-item attributes relative importance differ between casual and fine-dining patrons (RP1)?

What is perceived as most important for people *when selecting a dish in restaurant*, either for casual and fine-dining patrons, relate *mostly* to the perceived complexity to cook a dish at home. This can be

because of the combination of the ingredients, and knowing how to complement one the others, or for other reasons such as lack of expertise, smell, better taste, etc. Such result is inconsistent with previous studies, which suggest that price, quality and convenience are the most important decision criteria (Urala & Lähteenmäki, 2003; Weatherell *et al.*, 2003). Results stemming from the analysis also challenge the contention that fine-dining patrons are more likely to seek choice variety over a sequence of dining occasions in comparison to casual-dining restaurant patrons (Antun & Gustafson, 2005; Kahn, 1995). The relatively low importance associated with selecting an unfamiliar dish can be related to consumers' perceived risks. In this case, the selection of a menu-item consumed previously reduces the risks associated with uncertainty, leading consumers to select an item on the menu that they are familiar with.

On the other hand, what we found as not so important, i.e. "the way a dish is written on the menu" and the selection of "a dish representing a healthy option", is in contrast with the findings of several studies that emphasise the importance of menu-item descriptions and consumer preference for healthy food-choices (Myung *et al.*, 2008; Wansink *et al.*, 2005; Albright *et al.*, 1990). Moreover, given that description has a relatively small influence on the menu-item choice of casual and fine-dining restaurant patrons, the ability for the elaborate description of a dish to increase perceptions of food quality, expected price and the likelihood of selection, (as advocated by McCall and Lynn, 2008) is unlikely.

To summarise, the analysis of BW scores revealed that the relative importance of the attributes considered to "most" and "least" influence menu-item selection is similar among casual and fine-dining restaurant patrons. This result contradicts the findings of prior studies, which have assumed differences in the attribute-based preferences and choice behaviour of casual and fine-dining patrons. In conclusion, the ranking of (menu-item attributes) BW scores do not significantly differ between the casual and fine-dining segments of consumers, thus disconfirming the first research proposition of this study.

5.2 Do low vs. high social context impact on factors influencing the menu-item choice?

Whatever the level of social context, people going to casual and fine dining restaurants do consider the "avoidance of certain foods" and "the core ingredient of the dish is sustainably produced" as least important influencer of their menu-item selection. On the side of the scale, people going to casual and fine dining restaurants do consider the "the combination of ingredients complements each other well" and "A dish that I could not/would not want to prepare at home" as the most important influencer of their menu-item selection. However, the ranked order of importance of all other attributes differs between consumers with a low and high effect of social context. All attributes assume a greater relative importance and choice probability for consumers with a high effect of social context, which stress the complexity and issues of choosing a meal with other people around the table.

The results partly confirm the second research proposition of this study, which suggests that the relative importance of (menu-item attributes) BW scores differ between the segment of consumers with a low and high effect of social context. This emphasises the importance of the immediate social context in which a choice is made. Thus, in the context of casual and fine-dining restaurants, the opinion of Finkelstein (1989) that "*much of dining out has to do with self-presentation, through images of what is currently valued, acceptable and fashionable*" is applicable, and particularly relevant to the segment of consumers with a low effect of social context. This suggests that social context is primarily driven by implicit behaviour, where "*choices are made unconsciously and are strongly affected by the [external] environment*" (Dijksterhuis *et al.*, 2005, p. 193).

5.3 Do low vs. high food involvement impact on factors influencing the menu-item choice?

We do observe a clear distinction between consumers with a high vs. low level of food involvement, where the latter considering “a sufficient portion size” more important than “the combination of ingredients”. It is important to recognise that previous studies have proposed a relationship between healthy food choices and a consumer’s level of involvement in the (food) product category (Bell & Marshall, 2003). However, our results contradict the notion that higher levels of involvement are associated with healthy food choices. Specifically, “a dish representing a healthy option” exerts a much greater influence on the menu-item choices of consumers with a low level of food involvement. **This result could be attributed to the utilitarian-based preferences of low involved restaurant patrons. In this case, it is logical that the segment of consumers with a low level of food involvement care more about the primitive sensation of ingestion than consumers who are highly food involved who place a greater emphasis on the fulfillment of hedonic and sensory sensations stemming from menu-item consumption.** In support of this claim, it is evident that the three attributes that most influence the menu-item choice of consumers with a low level of food involvement are linked to the concept of value. For example, “a sufficient portion size”, “a dish that I have tried before” and “the price of the dish”, relate to the value-orientation underlying the menu-item choice of patrons with a low level of food involvement. On the contrary, highly involved patrons are more sensitive to the attributes indicative of sensory characteristics, such as “the combination of ingredients” and “the method of preparation”.

The results also demonstrate a relationship between an individual’s level of involvement and tendency to engage in variety-seeking behaviour or make menu-item choices based upon previous consumption experience. Specifically, the segment of consumers with a high level of food involvement are more likely to exhibit variety-seeking behaviour in a restaurant context than consumers with a low level of involvement, who are more likely to make familiar menu-item choices. These results are consistent with the findings of Frewer *et al.*, (2002) who suggests that variety-seeking behaviour is more likely where there are a large number of similar alternatives with sensory variety, and when consumers have a high involvement with the product category.

Despite the recent trend towards the consumption of local and sustainable produce, results of this study suggest that local and sustainable produce are relatively unimportant attributes influencing restaurant patrons’ menu-item selection. This result is consistent with other preference-based studies, which have demonstrated that, although consumer interest in sustainable and local produce may be increasing, ethical factors are only taken into account by a minority of consumers (Brown, 2003; Vermeir & Verbeke, 2006; Zepeda & Leviten-Reid, 2004). Therefore, the inclusion of sustainable and local produce on restaurant menus may only appeal to a niche of restaurant patrons. This is at least partly due to the attitude-behaviour gap: attitudes are often a poor predictor of behavioural intention or marketplace behaviour (Kraus, 1995). Arguably, an individual’s interpretation of ethical terms on a restaurant menu conjures up a variation in normative expectations. Therefore, the marketing of local and sustainable produce is unlikely to encourage repeat patronage at casual and fine-dining restaurants, as menu-items containing local and/or sustainable produce may be perceived as a novel selection.

Based on the results of this study, there is sufficient evidence to suggest that the ranking of (menu-item attributes) BW scores significantly differ between consumers with low and high levels of food involvement. Thus, confirming the final research proposition.

6. CONCLUSION

This research applied the **Best-Worst** method to determine the relative importance of attributes that influence the menu-item choice of casual and fine-dining restaurant patrons. The sophisticated measurement and analysis of restaurant patrons’ attribute-based preferences encompass theoretical, practical and methodological implications. Specifically, this study contributes to the theoretical body

of knowledge in the hospitality and marketing literature via the extension of the attributes and underlying processes that influence consumers' consumption decisions.

The fact that the Research Proposition #1 is not confirmed is an interesting results in itself. We based this research proposition on the existing findings exposed in the literature, and as such, we are showing a different picture of the behaviour of restaurants' patrons. One explanation can originate from the investigation method. Using Best-Worst Scaling method forces respondents to make a trade-off between various attributes, and too many extent, is a more reliable method when measuring what the more influential attribute are when choosing a menu-item in a restaurant. Second, the social context, or to be more precised, the opinion seeking behaviour does not affect what is most important when choosing a menu-item in a restaurant. In that perspective, we believe that the opinion-seeking scale developed by Flynn et al., (1996) very much measure the importance of others' opinion and not the entire social context which would also include the type of the guests you have dinner with, the mood of the dining participants, the event the diner refers to, etc. Third, this study was also used as a platform to further validate Bell and Marshall's (2004) measure of food involvement and its effect on restaurant patrons' menu-item choices.

Managerially, the results of this study suggest that similar marketing strategies should be employed to attract (and satisfy) casual and fine-dining restaurant patrons. The analysis of consumers' menu-item preferences lead to similar strategic conclusions, however, the expectations attached to each attribute may differ when patronising a casual-dining as opposed to a fine-dining restaurant. This study also found that both casual and fine-dining restaurant patrons were more likely to choose menu-items that they had consumed on a previous occasion, as opposed to selecting an unfamiliar dish. Given the social and psychological functions associated with food choice, when designing a menu restaurateurs' should consider the inclusion of items that are conventional in terms of satisfying patrons' appetite, and those items that are familiar to restaurant patrons.

The analysis of patrons' attribute-based preferences indicates that a combination of ingredients that complements each other well is most likely to positively influence menu-item selection in casual and fine-dining restaurants. Conversely, this research found restaurant patrons place little importance on the avoidance of certain foods and ordering a dish that contains sustainable produce. This suggests that restaurants would potentially benefit from allocating their marketing efforts on trialling various combinations of ingredients (i.e., "specials"), rather than emphasising the sustainable attributes of menu-items. Raising consumer awareness of the benefits of ethical consumption is the first step in the extended process of implementing marketing activities directed towards consumption of local and sustainable produce.

This study extends the generalisability and statistical significance of prior research via the utilisation of a methodological framework encompassing both qualitative and quantitative components. In addition a large sample representative of the population of casual and fine-dining restaurant patrons attributes to the methodological rigor of this study.

A key limitation of this study is the assumption of attitudinal stability, which implies that consumer perceptions are relatively stable psychological constructs. Furthermore, involvement is treated solely as a behavioural characteristic, however it is assessed external to the behavioural process, thus failing to incorporate respondents cognitive decision-making processes. Although the attributes analysed in this study were selected based on relevant literature and feedback from focus group participants, it is not possible to state with certainty that these are the 13 most important attributes that influence menu-item selection at casual and fine-dining restaurants. Thus, it is important to recognise that choice tasks, such as Best-Worst are constrained by the number of attributes included in the experimental design. Moreover, Best-Worst Scaling requires respondents to evaluate the importance of attributes relative to others featured in the choice design. As a result of the high discriminatory power of the

Best-Worst method the addition (or removal) of attributes has the potential to alter coefficient scores and distort the importance ranking of choice-attributes. Similarly, based on the results of the factor analysis for the food involvement construct, it is likely that the addition (or removal) of scale items may change the proportion of respondents classified under the “low” and “high” involvement categories.

Despite the limitations highlighted above, the findings of this study contribute to understanding the attribute-based preferences of Australian restaurant patrons. This information can assist practitioners and academics in developing (and implementing) efficient marketing strategies targeting diverse segments of consumers. Further scrutiny is recommended for exploring food choice given the results from this study, which suggests that food involvement and social context are important determinants of menu-item choice. Exploration of the potential relationship between individuals’ level of food involvement and the tendency to engage in variety-seeking or habitual choice behaviour in a restaurant context could be an additional agenda for future research.

The replication and extension of this study to other product and service markets would further enhance the methodological rigour of the Best-Worst method to assess consumers’ attribute-based preferences. Future research could also incorporate multi-media and graphical content in order to assimilate and operationalise the attributes that influence menu-item choice in a restaurant context. In addition, the analysis of purchase data from a restaurant in order to assess whether the attribute-based preferences complement (or contradict) the results of this study is recommended. The final recommendation would be to conduct a longitudinal study to test the consistency and stability of consumers’ menu-item preferences over a period of time. Similarly, replication in other countries would verify differences in menu-item choice across nationalities.

Appendix 1: Example of one of the thirteen questions that were presented to the 1208 respondents to measure the relative importance of 13 menu-item attributes

The next section consists of 13 tables, each presenting 4 factors that might influence your choice at a casual-dining [or fine-dining] restaurant. We are looking for the one that influences most and the one that influences least your decision to choose a particular item from a menu in a casual [fine-dining] restaurant context.

The following questions may appear to be repetitive. However, each table [from 1 to 13] presents a different combination of attributes we would like you to compare, based on the following situation: "Imagine that you are in a casual [fine-dining] restaurant for dinner with other people ... What attribute would most and least influence your choice when selecting a dish from the menu?"

Least	Q1	Most
<input type="checkbox"/>	The core ingredient of the dish is sustainably produced <i>(e.g. sustainable seafood, organic produce, free-range, etc)</i>	<input type="checkbox"/>
<input type="checkbox"/>	The combination of ingredients complements each other well	<input type="checkbox"/>
<input type="checkbox"/>	The method of preparation <i>(e.g. choice of how the dish is cooked, grilled, battered, etc)</i>	<input type="checkbox"/>
<input type="checkbox"/>	The price of the dish	<input type="checkbox"/>

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