

To cook or not to cook: A means-end study of motives for choice of meal solutions

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Abstract

Few studies have approached the issue of the motivations for choice of meal solutions. This is, however, a matter of undeniable importance when individuals select, purchase, prepare and consume foods. This study resorted to the means-end chain theory and laddering interviews to conduct an analysis of the motives behind the choice of meal solutions of 50 Dutch subjects. The analysis yielded hierarchical value maps for homemade meals, ready meals, take-out and eating out (as general meal solutions), and for frozen pizza and chilled hotpot (as specific ready meals). Results show that the replacement of homemade meals by ready meals is, to a great extent, dependent on how subjects trade-off perceived sensory and health-related benefits with convenience features. Meal context, a highly positive evaluation of homemade cooking and some moral-based criticism towards saving time and energy in food preparation may nevertheless play a considerable role in meal solutions' choice.

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1. Introduction

Convenience, together with price, sensory appeal and health-related concerns, is believed to be an important determinant of food choice (McIntosh, 1996; Rappoport et al., 1993; Steptoe et al., 1995). Like healthiness or sensory quality, convenience is a broad, multidimensional construct, in which not only the foods' characteristics but also those of consumers and circumstances play a role. The need for convenience shapes a myriad of food-related behaviours like shopping, storage, meal composition, meal preparation (how and by whom), eating patterns and cleaning and waste disposal (Swoboda & Morschett, 2001; Yale & Venkatesh, 1986). It is reasonable to say that, in our day and age, convenience determines to a great

extent when, where, what, how and even with whom we eat.

The industry and service sectors have readily reacted to the convenience trend by stepping up product development and considerably expanding their offer of convenience products and services. There seems to be a reasonable degree of certainty about how the convenience-driven demand for foods is shaped and how to best respond to this demand (Datamonitor, 2003; Khan, 2000; Larson, 1998). Given the reports of the fast tempo of Western life-style, the increasing time pressure brought about by job- and leisure-related activities onto meal preparation, the extraordinary reduction of cooking times (Bowers, 2000; Sloan, 1997; Voedingscentrum, 2000) and the multiplicity of the offer, one could ask: is someone still cooking out there? And why?

Yet, several studies reveal that many Europeans still view homemade hot meals as the proper dinner (Mäkelä, 2000; Murcott, 1995). A survey reported by the Dutch Nutrition Centre (Voedingscentrum, 2000), showed that as many as 70% of the Dutch population prepares its hot

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meals from scratch everyday. The ideal of a well-prepared family meal seems also to prevail in the US, despite North Americans' reputed preference for eating out or using Home Meal Replacements (Costa et al., 2001): 55% of US dinners include one or more homemade dishes, and large meals are cooked so that leftovers can be used in subsequent meals (Bowers, 2000; Larson, 1998). Another sign that understanding the demand for convenience in meal preparation may not be as straightforward as one might think is the fact that not all alternatives to cooking are equally popular. For instance, manufactured meal components and food service do generally better than manufactured ready meals in Europe, while food service and *on-the-premises* prepared meals have taken the lead in the US (Datamonitor, 1998; Larson, 1998).

Studies dealing with convenience in meal preparation have been almost entirely devoted to the analysis of its demographic and economic determinants, such as employment status, household size, education level and income (Bonke, 1996; Darian & Tucci, 1992; Yale & Venkatesh, 1986). A view of convenience based on economic rationality—consumers choose the meal preparation alternative that offers the greatest perceived time and effort savings for a specific situation—has also framed the few studies devoted to its psycho-social determinants like convenience-orientation, role-overload or perceived time-pressure (Candel, 2001; Reilly, 1982; Scholderer & Grunert, 2005; Verlegh & Candel, 1999). These studies were, however, unable to convincingly demonstrate the existence of meaningful relationships between these determinants and the choice of meal solutions that would be expected under economic rationality. For instance, no significant relationships between the frequency of consumption of ready meals and convenience-orientation (Candel, 2001), role-overload or employment status (Reilly, 1982) were found. This indicates that other, so far unidentified, motives are probably behind the purchase and consumption of this type of products.

Only a few qualitative studies have investigated the higher-level motivations behind the use of homemade and other types of meals (Boer & McCarthy, 2003; Costa et al., 2002a, 2003; Milburn, 1995; Oude Ophuis et al., 1994). Moreover, not much is known about the specific attributes consumers use to select meal replacing alternatives (Jaeger & Meiselman, 2004). The aim of this study was, therefore, twofold:

- To investigate consumers' higher motives for choosing among general meal solutions.
- To uncover the attributes consumers find relevant when discriminating between specific meal solutions and how these relate to higher motives.

The attributes behind the choice of general meal solutions were expected to be more abstract and self-related than the attributes used to evaluate and select specific meals, which were anticipated to be more concrete and stimuli-related. As a result of this, the means-end chain the-

ory (MEC) and individual laddering interviews were the instruments selected to carry-out the study (Reynolds & Gutman, 2001; Gutman, 1982). MEC provides a good understanding of potential consumption motives by depicting how product attributes are linked to self-relevant usage consequences and personal values in models of consumers' cognitive structures: the *attribute-consequence-value* (ACV) chains or ladders (Olson & Reynolds, 2001). The knowledge generated by MEC's application can thus improve the understanding of the determinants and mechanisms of convenience-related food choice. Moreover, this knowledge can be highly useful to Research & Development practitioners in the development of new food products (Costa et al., 2004; Grunert & Valli, 2001).

2. Methodology

The selection and application of the appropriate methods for this study followed closely the guidelines for research applications of the MEC theory (Grunert & Grunert, 1995; Reynolds & Gutman, 2001). For a detailed description of these methods, as well as their current application within food-related research, the reader is referred to a recent review on the matter (Costa et al., 2004).

2.1. Recruitment of subjects

Recruitment took place among Dutch citizens living in the province of Gelderland during the first semester of 2001. Individuals were recruited through advertisements in newspapers, supermarkets and students' residences. During a first telephonic conversation, in which details of the study were provided, potential subjects were questioned about socio-demographic indicators, frequency of food acquisition and preparation, knowledge of meal solutions and frequency of ready meal use. If they met the requirements necessary for participation—be in charge of household meals and sufficiently knowledgeable about different meal solutions—an appointment for a 2-h interview was made. Since we were also interested to learn why Dutch consumers do not resort to manufactured ready meals more often (Costa et al., 2002b; Voedingscentrum, 2000), both frequent and infrequent users of this type of meal solution were included in the sample. Finally, and to be able to investigate the motivations of different consumer segments, a wide age spectrum (≥ 20 years old) was observed during recruitment.

A sample of 50 subjects was assembled, the profile of which is depicted in Table 1. Its size and characteristics are in accordance with methodological guidelines (Reynolds & Gutman, 2001), and are similar to those of samples used in comparable studies (Boer & McCarthy, 2003; Fotopoulos et al., 2003; Oude Ophuis et al., 1994). A trained interviewer¹ conducted the fifty laddering interviews at

¹ A co-author of this paper, Diane Schoolmeester.

Table 1
Socio-demographic, product usage and product knowledge characteristics of the subject sample ($N = 50$)

<i>Gender</i>	
Female	80%
Male	20%
<i>Age</i>	
Range	20–87 years old
Mean \pm SD	52.2 \pm 19.7
<i>Marital status</i>	
Married or living together	52%
Single	32%
Other	16%
<i>Education level</i>	
Low	4%
Medium	44%
High	52%
<i>Job status</i>	
Paid job	30%
Unemployed	18%
Retired	36%
Student	16%
<i>Children at home</i>	
Yes	18%
No	82%
<i>Frequency of ready meal use</i>	
Never	12%
Low (≤ 1 /month)	28%
Medium (2–3/month)	46%
High (1–3/week)	14%
<i>Knowledge about ready meals</i>	
Low (inaccurate, 1–2 examples)	14%
Medium (fairly accurate, 3–4 examples)	32%
High (highly accurate, >4 examples)	54%

Product knowledge was assessed by asking subjects to provide a definition of the ready meals' category (accurateness of definition) and enumerate top-of-mind examples of these products (number of products mentioned) (Costa et al., 2001).

the subjects' home during the second semester of 2001. All interviews were conducted in Dutch and tape-recorded with the interviewees' permission.

2.2. Elicitation task and stimuli

At the start of the elicitation task, subjects were asked to rank-order four general meal solutions according to the likelihood of each of them being chosen for dinner on an ordinary weekday and on the weekend of the week of the interview. The meal solutions—homemade meals,² manufactured ready meals, take-out meals and eating out at a restaurant—along with their description, were presented randomly to subjects with the aid of written cards. The last three meal solutions were selected as stimuli because they were assumed to be the most credible alternatives to home-

made dinners in the context of this study (Candel, 2001; Costa et al., 2002a, 2003; Oude Ophuis et al., 1994).

To guarantee that the elicitation of motives resulting from comparisons between less abstract/more similar stimuli would not be neglected, subjects who chose ready meals as the first or second most likely option in either of the occasions proposed went through a third ranking step. In this step, they were asked to rank-order five manufactured ready meals—frozen pizza, canned soup, chilled Oriental-style noodles, dried Italian-style pasta and chilled hot-pot—according to the likelihood of each of them being chosen for dinner on the occasion previously considered. The products and their descriptions were presented randomly to subjects with the aid of written cards. These products were then widely available in shops and supermarkets in the Netherlands. Furthermore, according to the nationwide food consumption data available at the time, they were among the six most consumed types of ready meals in this country (Costa et al., 2002b).

Immediately following each of the two (or three) rank-ordering steps—meal solutions on a weekday, meal solutions on the weekend and specific ready meals—subjects were asked to supply the motives for their rankings. These were then used as the starting point for the laddering task. The elicitation of motives focused on the meals ranked first and second in the first two ranking steps, and on those positioned first, second and fifth in the third ranking step. Since we were interested to learn why ready meals were not more frequently consumed in the Netherlands, the motives for ranking this type of meal solution in the third or fourth position on a weekday or the weekend were also elicited and laddered.

2.3. Laddering interviews

In view of the exploratory nature of the aims and the complexity of the stimuli under study, the *soft-laddering* technique (Grunert & Grunert, 1995; Olson & Reynolds, 2001; Russel et al., 2004) was selected to conduct the interviews. The research team designed an interview guide to help steer the dialogues and keep track of all elements mentioned by subjects. The same team also pre-tested and optimised the interview procedure through the performance of three pilot interviews.

The interviews started with a brief description of the tasks—rank-order of stimuli, elicitation of motives and laddering—and the type of questions involved. Namely, the *why is this important to you* line of questioning, typical of the laddering technique (Reynolds & Gutman, 2001), was introduced. Subjects were also told that there were no wrong or right answers, given that the interviews' purpose was solely to gain a better understanding of how consumers viewed the topic of meal preparation. Throughout the elicitation task the interviewer wrote down the rank-orders and the underlying motives provided. A five-minute, warm-up conversation regarding the rankings and the cooking/eating habits of subjects preceded the actual

² Whether cooked from scratch or with the help of prepared meal ingredients.

laddering task. At the end of the interview, the interviewer summarised the main lines of reasoning supplied and asked if there was anything else subjects would like to add. Finally, subjects were thanked for their time and rewarded with a gift voucher.

2.4. Data analysis

After all interviews had been conducted, the audio-tapes were transcribed and files containing the individual information provided during recruitment and the respective transcript were assembled for each subject. These files underwent a data analysis procedure, the details of which have been described elsewhere (Costa et al., 2004).

The first two authors of this paper carried out the content analysis of the transcribed interviews with the aid of the subject files and the LadderMap software (Gengler & Reynolds, 2001). Firstly, and in order to be able to reconstruct the individual ladders provided during the interviews, sets of summary codes were created. Subjects' sentences or words thought to best represent the ideas comprised by each code were identified and retained to help further interpretation of the results. The codes, sentences and words were then translated into English. Secondly, implication matrices and the respective hierarchical value maps (HVM) were generated for the meal solutions and specific ready meals laddered by 20 or more subjects. A cut-off point guaranteeing a fair balance between the amount of information retained and the clarity and simplicity of the HVM generated was chosen through an iterative process (Reynolds & Gutman, 2001). Finally, and to be able to evaluate the extent to which heterogeneity in the subjects' answers could have led to unduly addition or elimination of information, average consistency indices³ were calculated for each HVM obtained (Grunert et al., 1995).

3. Results and discussion

3.1. Elicitation task

Table 2 shows the means and standard deviations of the rank-orders of the meal solutions and ready meals under study, according to the likelihood of subjects choosing each of them for dinner on the occasions considered. As anticipated, homemade meals were almost always the most likely choice for dinner on both the weekday and the weekend. Conversely, eating out was mainly the least or second least likely choice, though relatively more favoured on the week-

Table 2

Means and standard deviations of the rank-orders of the meal solutions and ready meals under study, according to the likelihood of subjects choosing each of them for dinner on the occasions considered

	Mean ± Std of rank-orders
<i>Weekday dinner (n = 50)</i>	
Homemade	1.2 ± 0.7
Ready meal	2.5 ± 0.9
Take-out	2.8 ± 0.9
Eating out at a restaurant	3.5 ± 0.7
<i>Weekend dinner (n = 50)</i>	
Homemade	1.4 ± 0.9
Ready meal	2.6 ± 1.0
Take-out	2.8 ± 0.8
Eating out at a restaurant	3.1 ± 1.0
<i>Ready meals (n = 30)</i>	
Frozen pizza	1.8 ± 1.3
Dried, Italian-style pasta	3.0 ± 1.2
Canned soup	3.2 ± 1.4
Chilled, Oriental-style noodles	3.3 ± 1.3
Chilled hotpot	3.4 ± 1.3

end. Ready meals were mainly the second most likely choice for dinner on the weekday, with take-out meals being most frequently the third. On the weekend, however, take-out meals were almost as frequently considered as the second most likely choice for dinner as ready meals. Given that subjects who ranked take-out meals and eating out as their first or second most likely choice on the weekday also ranked these meal solutions as their first or second most likely choice on the weekend, and with similar arguments, laddering results pertaining to take-out meals and eating out on the weekday were not analysed further.

Across subjects, the ranking of ready meals on the weekday was positively correlated with that on the weekend (two-tailed Spearman's coefficient = .505, $p < .01$). However, while the ranking of this meal solution on the weekday was positively correlated (two-tailed Spearman's coefficient = .335, $p < .05$) with the individual recruitment data concerning the *frequency of ready meal use* depicted in Table 1, no significant relation was found between the latter and the ranking of ready meals on the weekend (two-tailed Spearman's coefficient = .131, $p = .365$). The explanation for the discrepancy observed between the *frequency of ready meal use* and the ranking of ready meals on the weekend might lie in the fact that no consumption occasion was specified during recruitment. This probably led consumers to consider the question about ready meal usage in the context of a weekday dinner, which is the occasion in which Dutch consumers more often prepare and eat their meals at home (Verlegh & Candel, 1999; Voeding-scentrum, 2000).

Twenty subjects chose ready meals as the third or fourth most likely type of meal solution to be consumed on a weekday. This sub-sample of 20 subjects was labelled as *non-users*, with the remaining sub-sample of 30 subjects being labelled as *users*. As could be expected, the two sub-samples significantly differed in terms of *frequency of*

³ A consistency index is the difference between the highest frequency of any direct link in a chain and the frequency of indirect links between its start and end elements. The higher the consistency index, the greater the chance that the chain has resulted from the aggregation of different ladders across subjects (Roehrich & Valette-Florence, 1991). Average consistency index = sum of the consistency indices of all chains in an HVM divided by the number of chains depicted.

ready meal use (Kruskall–Wallis H test, $\chi^2_1 = 40.263$, $p < .001$) and product knowledge (Kruskall–Wallis H test, $\chi^2_1 = 9.520$, $p < .05$) (Table 1). Sørensen et al. (1996) have also demonstrated the existence of significant relationships between product use and product knowledge in the context of food-related laddering studies. The existence of significant relationships between these two constructs is not surprising, given the logical association that exists between them. Users and non-users did not, however, differ significantly in terms of age (one-way ANOVA, $F_{(1,48)} = 3.279$, $p = .076$), gender (Pearson's chi-square: $\chi^2_1 = 2.083$, $p = .149$), children at home (Pearson's chi-square: $\chi^2_1 = .203$, $p = 0.652$), marital status (Kruskall–Wallis H test: $\chi^2_1 = 1.829$, $p = .176$), education level (Kruskall–Wallis H test: $\chi^2_1 = .656$, $p = .418$) or job status (Kruskall–Wallis H test: $\chi^2_1 = .031$, $p = .860$).

Few differences were observed between the rank-ordering of the specific ready meals on the weekday and the weekend, as well as between their respective underlying motives. These results were therefore combined and jointly analysed. Since dinner on the weekday was the occasion most often considered during the third ranking step, the results concerning the specific ready meals depicted in Table 2, as well as those introduced hereafter, describe mostly the subjects' views regarding the consumption of these products during the week. Of the 30 subjects who underwent the third elicitation step, over 60% elected frozen pizza as their most likely choice for dinner. The chilled noodles and the chilled hotpot were ranked mostly in the third or fourth positions, while the dried pasta occupied almost equally the second, third and fourth positions. The canned soup was mainly either the second or the fifth most likely choice of ready meal.

The standard deviation values depicted in Table 2 indicate that inter-subject agreement was higher for the rank-ordering of meal solutions than for that of specific ready meals. This was expected given the fact that meal solutions are more abstract and general stimuli than specific ready meals and that the choice of the latter is usually more a matter of personal taste than that of meal solution type. Dinner choice on weekdays was likewise more consensual than on the weekend. This indicates that (1) the choice of meals solutions became more varied in the weekend, with meal solutions other than homemade meals increasing their relative chances of being consumed, and that (2) some meal solutions, such as eating out or take-out meals, were almost never considered a very likely dinner option for either weekdays or weekend. A previous study performed by Verlegh and Candel (1999) has also indicated that meal solutions like eating out are not a part of Dutch daily eating habits, mainly due to perceived financial constraints.

3.2. Content analysis

A total of 1236 ACV ladders were reconstructed from the interview transcripts, representing an average of 24.7 ± 10.7 ladders per interview. Each subject produced,

on average, 11 ladders about homemade meals, 6–7 ladders regarding ready meals, 4–5 ladders about frozen pizza and 2–4 ladders concerning any two other types of ready meals. The ladder length per subject ranged between 2 and 8, with an average of 3.5 ± 0.6 . These statistics provide sufficient evidence of the adequacy of the methodology applied and the way the experimental study was conducted (Grunert et al., 1995; Reynolds & Gutman, 2001).

Less than 20 subjects generated ladders for homemade meals and ready meals on the weekend, and for the chilled noodles, the dried pasta and the canned soup. Consequently, these ladders were not aggregated further. The laddering results concerning the three specific ready meals will be discussed in next sub-section. The results concerning the choice of meal solutions on the weekend will be discussed together with those obtained for its weekday counterparts, in Section 3.3.

3.2.1. Chilled, Oriental-style noodles

As could be expected from the rank-ordering of specific ready meals depicted in Table 2, subjects provided mostly reasons why the Oriental-style noodles were not more often seen as a likely dinner option. This product was judged to have a poor appearance, a low nutritional value and an unbalanced composition, which led it to be perceived as a rather unhealthy meal. Moreover, subjects thought that cooking their own Oriental-style noodles was as quick and easy as using this prepared version and led more often to a tastier and nutritious outcome. This negative evaluation of the product's features—comparable to that obtained in a previous study with a fairly similar sample (Costa et al., 2002a)—led mostly to perceived negative consequences of its use, such as deriving little enjoyment or nourishment from one's dinner. The few subjects who were positive about this ready meal appreciated it mostly for its convenience and high carbohydrate content. They associated these features with having more time and energy to devote to the performance of daily activities.

3.2.2. Dried, Italian-style pasta

In general, subjects appreciated the convenience features of this product. One mother went as far as stating: *This way my children get a full hot meal even when I don't have much time to cook. Therefore, they are properly fed and learn the importance of having at least one decent meal per day. I feel it's my duty to teach them this much.* In spite of this, some subjects stated to dislike the taste of this pasta dish and the fact that its mode of preparation prevents the addition of any extra ingredients. Others, yet, found it a rather nutritionally unbalanced product.

3.2.3. Canned soup

Most subjects were quite negative about having this product for dinner. Its composition and portion size were found highly inadequate, and the overall taste evaluation was also very negative. Additionally, subjects appeared to be worried about the effects of its consumption on diet

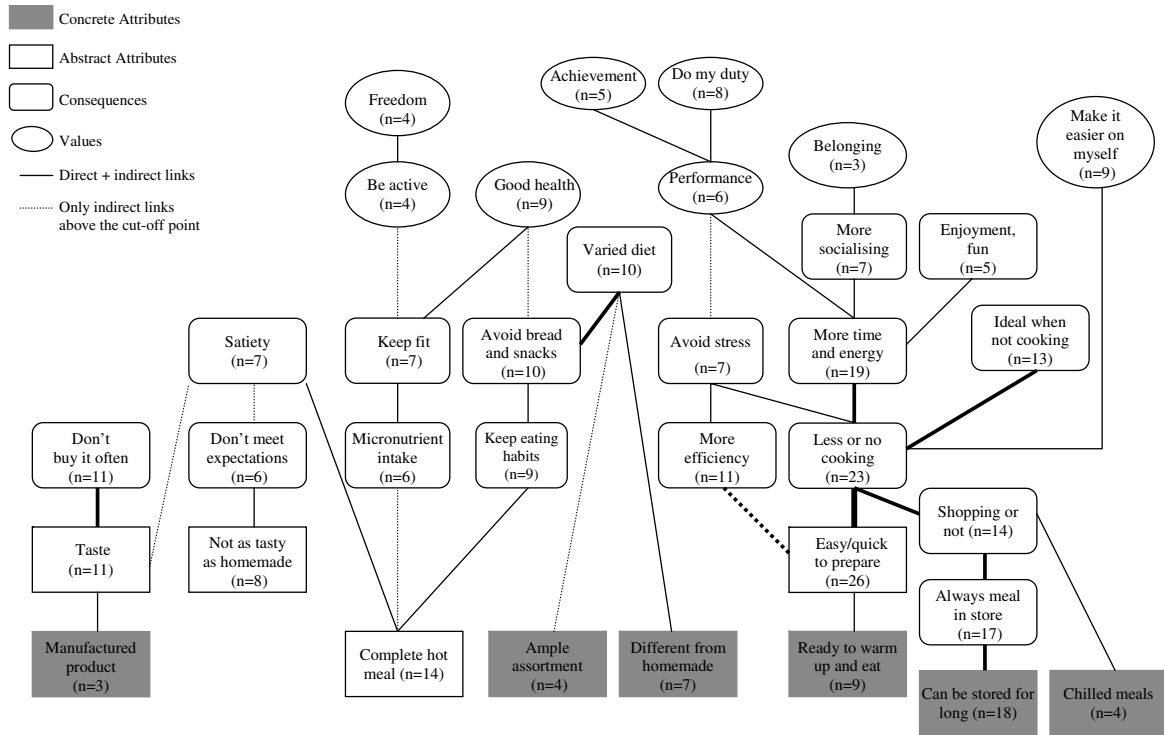


Fig. 2. Hierarchical value map of ready meals on weekdays, derived from the interviews with the sub-sample *users* ($n_i = 30$, cut-off point = 3, average consistency index = 5.0).

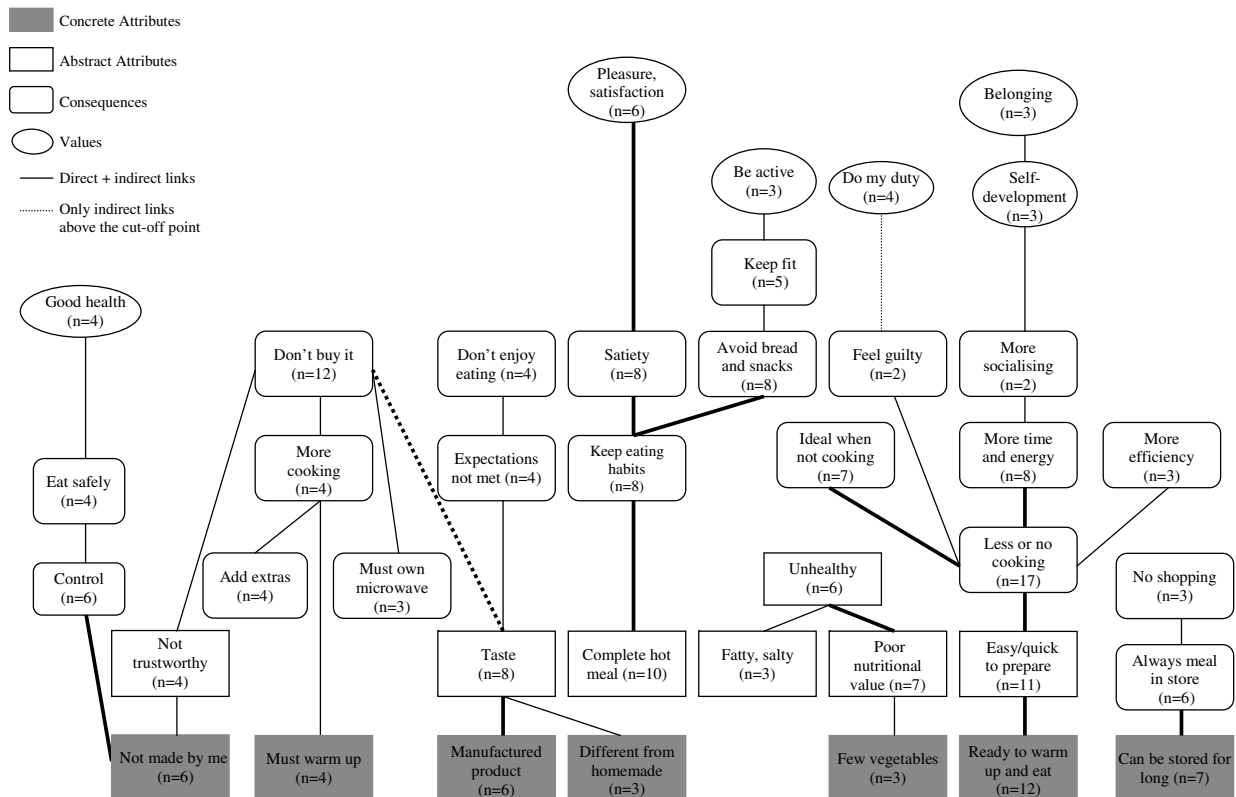


Fig. 3. Hierarchical value map of ready meals on weekdays, derived from the interviews with the sub-sample *non-users* ($n_i = 20$, cut-off point = 2, average consistency index = 2.6).

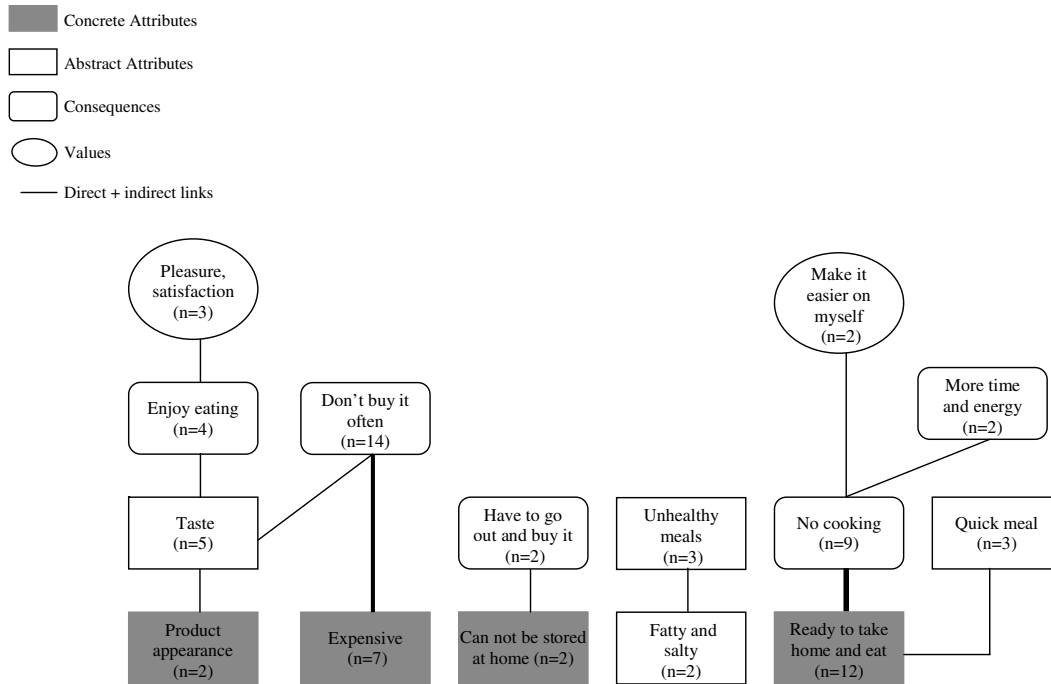


Fig. 4. Hierarchical value map of take-out on the weekend ($n_i = 21$, cut-off point = 2, average consistency index = 0.5).

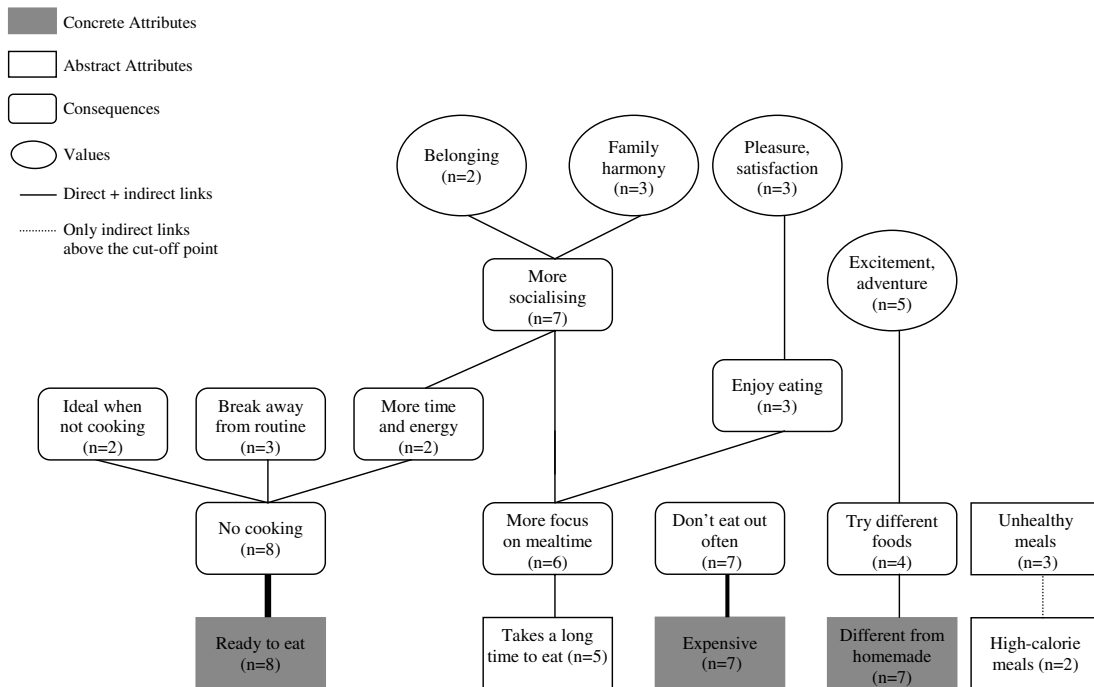


Fig. 5. Hierarchical value map of eating out at a restaurant on the weekend ($n_i = 23$, cut-off point = 2, average consistency index = 1.1).

trying (as in demanding time and effort), fun to make, varied (i.e., with ingredients changing from meal to meal) and safe to eat. This last attribute was related not only with the use of biologically grown ingredients (which were perceived to be more natural and pure), but also with homemade meals not being the outcome of industrial processes. Core consequences and values associated with homemade meals on

the weekday were the achievement of higher levels of activity and a good physique (ensure adequate micro-nutrient intake—keep fit—be active), as well as the maintenance of good health and well-being (control what you eat—eat healthy—good health, control what you eat—no weight gain—self-esteem). Hedonic (enjoy eating—pleasure) and social aspects (focus on meal—socialise—harmony) were

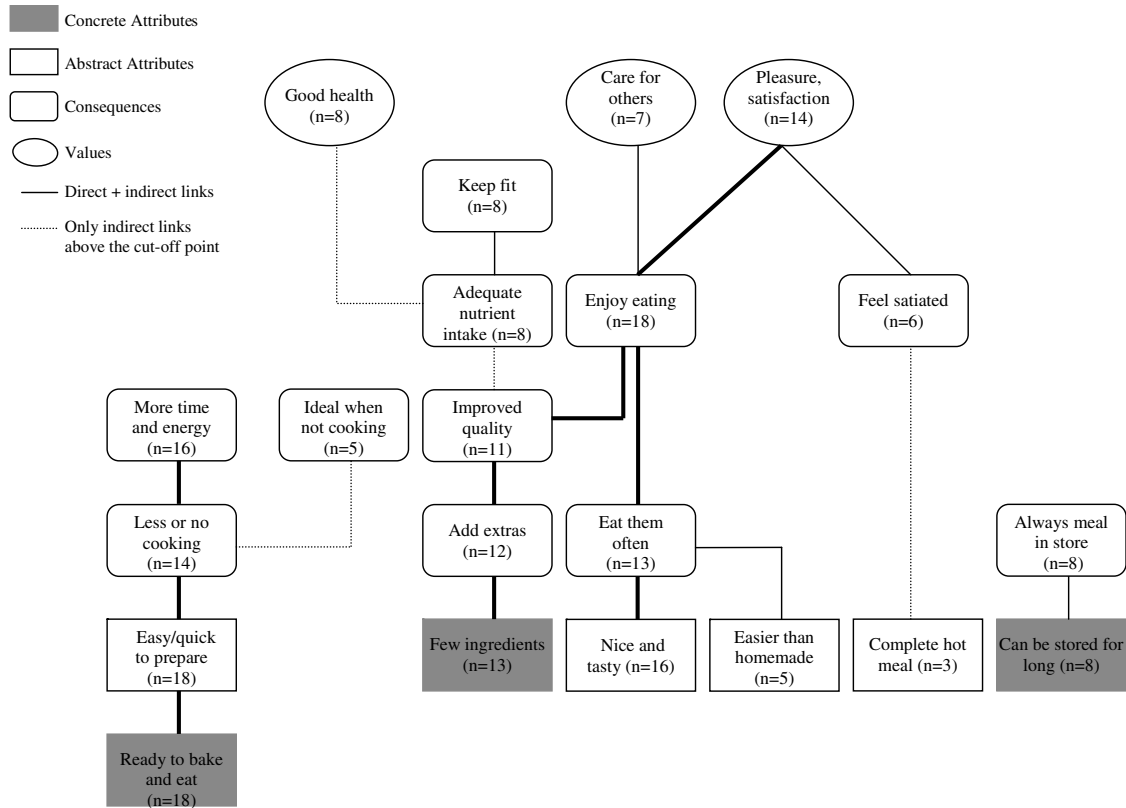


Fig. 6. Hierarchical value map of frozen pizza ($n_t = 31$, cut-off point = 4, average consistency index = 3.5).

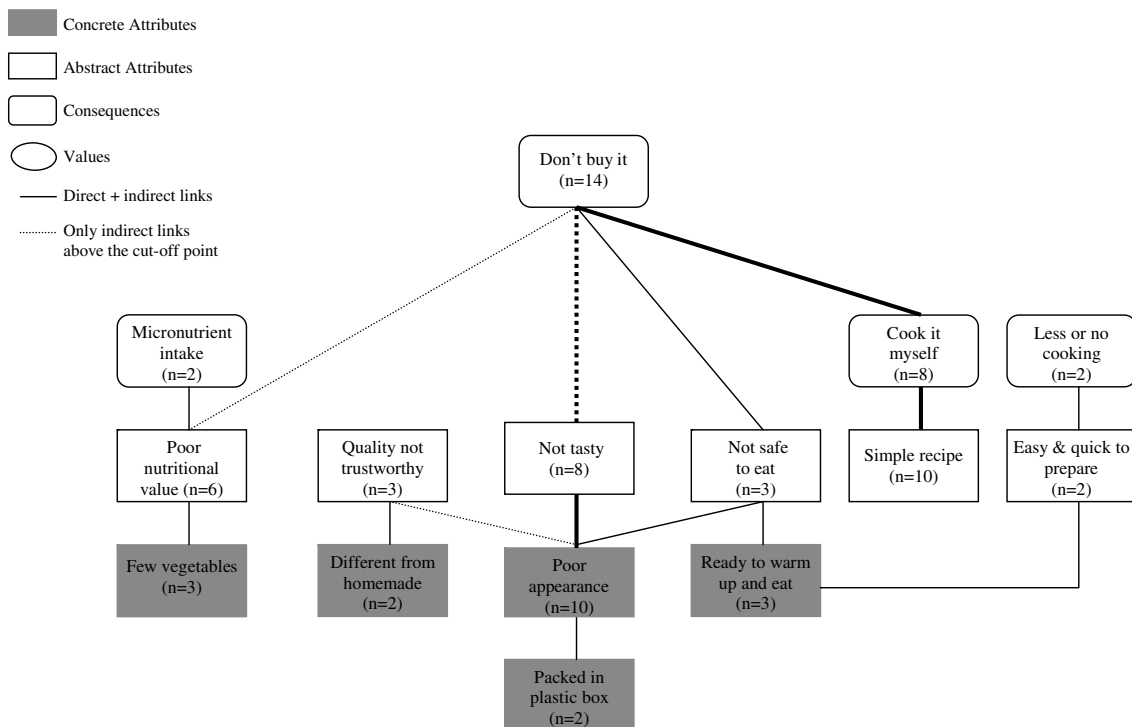


Fig. 7. Hierarchical value map of chilled hotpot ($n_t = 21$, cut-off point = 2, average consistency index = 0.5).

also thought to be highly self-relevant outcomes of home-made meal consumption.

Ten subjects produced ladders about homemade meal consumption on the weekend. The main attributes

mentioned here were an increased complexity and sophistication of the dishes cooked. Additionally, weekend meals appeared to be more often shared with family and guests than their weekday counterparts, which also led subjects to put more time and effort into preparing them. Consequently, cooking weekend dinners was seen as a source of enjoyment and gratification, which positively differentiated them from everyday meals. This outcome concurs with a previously reported consumer tendency to value the time and effort put into cooking according to the meal's occasion and setting (Jaeger & Meiselman, 2004; Verlegh & Candel, 1999).

The present study's findings indicate that subjects viewed the consumption of homemade meals as an essential means of achieving relevant personal goals. This could be symptomatic of a high involvement with cooking and eating meals at home, which could, in turn, have influenced greatly the evaluation of the other meal solutions. Comparable results were also reported in similar studies (Costa et al., 2002a, 2003; Goldsmith et al., 1995; Milburn, 1995).

3.3.2. Manufactured ready meals

It was interesting to observe that subjects could provide both positively- and negatively formulated chains of meaning regarding the ready meals' category (Figs. 2 and 3). *Users* and *non-users* alike recognised the convenience aspects of its acquisition, storage (*can be stored—always meal in store—no shopping*) and consumption (*ready to warm up and eat—easy/quick to prepare—less cooking—more time/energy for other activities*). For *users*, however, the benefits of ready meal use went beyond having more time for social activities. The consumption of this type of meals was perceived to positively impact on work and sports' performance, the optimisation of which subjects viewed as a duty towards themselves and others. Avoiding stress and having a more relaxed life-style were also seen as important consequences of spending less time and energy in cooking daily meals. *Non-users*, in contrast, thought that spending little time and energy in cooking could become a source of reproach and regret. They were of the opinion that individuals who acted in this manner were then neglecting their duties towards themselves and relevant others. Nevertheless, both *users* and *non-users* agreed that ready meals, though by far not as tasty and satiating as the outcome of their own cooking, were still preferable to snacks and bread-based meals. The subjects who chose ready meals as their first or second most likely choice on the weekend shared similar views.

Major drawbacks of ready meal use mentioned by subjects were the association between industrial processing and poor taste, health-related aspects (*poor nutritional value, fatty/salty*), preparation aspects (*microwave ownership necessary, must add other ingredients*) and the loss of control felt over meal preparation, which was perceived as potentially leading to the consumption of unsafe foods.

Reports of conflicting valuations of self-relevant consequences stemming from the same attributes are well accom-

modated by the MEC theory and are not unusual in studies about the motives behind food choice. It is thought that these conflicting valuations make consumers' choice more difficult by leading them to more often weigh the positive against the negative outcomes of product use before a purchase decision (Reynolds & Gutman, 2001). This can affect the frequency with which ready meals are purchased, as well as become an obstacle to the introduction of new products, especially if the negative outcomes are perceived to often outweigh the positive ones.

Several other studies have shown that ready meal consumption could be, to a large extent, dependent on the outcome of consumers' trade-offs between convenience aspects, on one side, and sensory- and health-related aspects on the other (Boer & McCarthy, 2003; Costa et al., 2003; Oude Ophuis et al., 1994). The findings of this study introduce, nevertheless, new evidence of what could also be an important determinant of ready meal use: the negative valuation of convenience attributes, deriving from the conviction that an appropriate amount of effort, attention and time should indeed be put into meal preparation. By being associated with feelings of guilt, regret and neglecting one's duty, ready meal consumption may become very undesirable for some precisely because it is very convenient. The low moral status of convenience food consumption has been highlighted in previous studies (Mäkelä, 2000; Gof-ton, 1995; Goldsmith et al., 1995; Haire, 1950; Thompson, 1996).

3.3.3. Take-out meals

Subjects who generated ladders about take-out meals on the weekend stated that their preference for these products was mainly related to the degree of readiness for consumption they displayed, which practically eliminated the need to devote time and energy to shopping and cooking (Fig. 4). Nonetheless, some subjects disliked the fact that such readiness implied having to go out just before dinner to buy food.

Few subjects mentioned *good appearance* and *taste* as the main attributes leading to the consumption of take-out meals. The majority stated that a poor taste, together with a relatively high price and health considerations, posed a major obstacle to their more frequent use. These findings contradict, to some extent, the outcome of a previous study suggesting that take-out meals could constitute a more preferred type of meal solution than ready meals (Costa et al., 2003).

3.3.4. Eating out at a restaurant

The majority of subjects viewed eating out as a meal solution only suitable for the weekend (Fig. 5). Restaurant meals were found to be too demanding in terms of time and money to be consumed on a normal weekday. Nevertheless, they were seen as a means of achieving valued ends like *pleasure* (through the enjoyment of both food and location), *family harmony* (through an increased level of socialisation during meal time) and *excitement/adventure* (by

creating the opportunity to come in contact with different eating cultures). These results support the assumption that, for Dutch consumers, eating out is more valued by its recreational aspects than by its convenience or functionality, being therefore reserved for special occasions or weekends only (Verlegh & Candel, 1999).

3.3.5. Frozen pizza

Subjects' choice of frozen pizza as the most likely ready meal to be consumed at dinnertime was mainly based on the positive evaluation of the convenience and sensory attributes of this product vis-à-vis its homemade version (Fig. 6). Some subjects, however, were of the opinion that most frozen pizzas contain few toppings. Still, this was considered to be only a minor disadvantage, since it gave consumers the opportunity to add extra toppings of their own choice. This addition was perceived to improve considerably the nutritional and sensory quality of these products. Moreover, it provided subjects with a degree of control over (and participation in) the meal preparation that was highly appreciated.

3.3.6. Chilled hotpot

The subjects who produced ladders about the chilled hotpot dish had mostly a negative opinion about the characteristics of this product (Fig. 7). From its appearance, composition and preparation method they inferred a poor sensory, nutritional and microbiological quality. Not even the recognition of its intrinsic level of convenience in preparation was sufficient to outweigh this negative evaluation. The fact that most subjects considered the homemade version of this product already very easy to prepare also contributed to the underrating of the convenience level it offered. These findings provide further support to the assumption that, for Dutch consumers, ready meal use represents a fairly unsatisfactory and unnecessary trade-off between the positive aspects of homemade meals and time- and effort-savings in meal preparation (Oude Ophuis et al., 1994).

4. General conclusions and implications for future research

Through the performance of a means-end and laddering study involving 50 Dutch consumers, we have approached the issue of the motives behind choice of meals and meal replacing alternatives. The findings of this study introduce new evidence of what could also be an important determinant of ready meal consumption: the negative valuation of convenience attributes, deriving from the conviction that an appropriate amount of effort, attention and time should be put into meal preparation. By suggesting the existence of a close association between moral issues and ready meal use in the minds of consumers, this research has clearly contributed to extend the knowledge about convenience-driven food choice beyond the realm of economic rationality.

It was possible to generate hierarchical value maps regarding the consumption of a number of different meal

solutions and ready meals during the week, as well as outline how subjects viewed the use of some meal solutions on the weekend. Nevertheless, some limits must be set regarding the scope of the conclusions that can be drawn from this study. The size of the subject sample used determined the almost exclusively qualitative nature of the findings here presented. These should therefore not be rashly generalised to the whole of the Dutch population. Moreover, the level of abstractness of some of the stimuli investigated, together with the sample's fairly heterogeneous socio-demographic profile, has likely influenced the ability of some HVM to accurately represent every subject's views on choice of meal solutions. This much can be inferred from the relatively high average consistency indices displayed by the HVM of homemade meals (Fig. 1) and that of ready meals generated by the sub-sample users (Fig. 2). It is, nonetheless, relevant to point out that the evaluation of an HVM's ability to accurately express consumers' knowledge structures remains a fairly subjective and unreported topic. Concrete consistency index values which can differentiate a valid HVM from an inappropriate one have yet to be proposed (Grunert et al., 1995).

The evidence presented so far indicates that the HVM obtained in this study portray a fairly accurate and complete picture of the motives behind meal choice mentioned during the laddering interviews. It is, thus, reasonable to assume that these findings can constitute a solid basis for the design of future quantitative studies, aiming to uncover the relevance of different meal-related ACV chains for individual consumer segments. Of particular importance is to determine how the outcome of the trade-offs taking place between the convenience and health-related aspects of meal consumption may vary across different settings and consumer segments. It would be equally interesting to find out to what extent moral issues related to the use of meal replacing alternatives are influencing food-related attitudes and behaviours. Finally, the main outcomes of this study should be also taken into account when searching for means of improving the image and intrinsic quality of meal solutions, as well as in the development of new meal-replacing products.

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