



Klaus G. Grunert

Contents

The Many Meanings of Food	1198
Approaches to Measuring the Meaning of Food	1199
The Means-End Approach to Foods	1199
Theory	1199
Methodology	1201
Examples	1202
A Means-End Approach to Food-Related Lifestyle	1206
Theory	1206
Methodology	1206
Examples	1208
Perspectives	1211
References	1212

Abstract

This chapter introduces the means-end approach to the analysis of the meaning that food has to people. Food has meaning for people because of the goals they attach to food and eating, and research shows that these goals are many and diverse, extending far beyond the basic goal of nutrition and survival. The means-end approach can be used to analyze the meaning that people attach to a particular food product or the meaning that people attach to food in general. For the former, the laddering interview technique is usually used, and results are presented in so-called hierarchical value maps, and several examples are presented. For the latter, food-related lifestyle is a survey instrument that maps the role that food has for people in attaining life values. The main use of this instrument has been for segmentation, and a number of generic segments are presented that emerge from

K. G. Grunert (✉)
MAPP Centre, Aarhus University, Aarhus, Denmark
e-mail: klg@mgmt.au.dk

numerous studies that have used this instrument. The chapter closes with perspectives for future work in measuring the meaning of food in life.

The Many Meanings of Food

Without food there is no life. Food provides nutrition which ensures survival. But beyond this most basic role of food in life, food has many other functions in life. Food is a genuine form of pleasure and gratification. Food is a means to socialize, providing cohesion in family life or a platform on which to make or keep friends. Food is part of the cultural heritage, and this provides a means of reproducing cultural identity. For some people, it is a means to live out creativity and curiousness and to achieve stimulation. For others, it is a way to create stability in a life that sometimes can be volatile and unpredictable. For many, preparing meals is a way of achieving recognition and personal growth.

Thus, the meanings of food in life are many. Understanding this multitude of meanings has been of interest to a range of researchers almost as diverse as the meanings of food. Anthropologists have tried to understand the role of food in society and its evolution (Mintz and Du Bois 2002). Psychologists and sociologists have tried to understand the motives that drive food choice and eating behavior, the decision-making processes leading to food and meal choices (Shepherd and Raats 2006), and the practices that people engage in when shopping for food, preparing meals, and consuming them alone or with family and friends (Poulain 2017). In addition, there is a strong interest in understanding the meanings of food in life from an applied perspective. People working with the development, production, and marketing of food products need to understand what consumers will look for in food and adapt their offerings accordingly (Grunert et al. 1995). For the past few decades, there has been considerable concern over the fact that many people practice less-than-healthy food habits, and understanding the many meanings that food has in life has been viewed as one way of devising measures that can encourage people to eat healthier (Chrysochou et al. 2010). More recently, there has been much debate about the environmental consequences of food production, and especially about the effect of specific categories like red meat, and again trying to understand the meanings that people attach to these product categories is an important element in the discussion on ways to encourage people to cut down on the consumption of those food items where production is detrimental to the environment (Schösler et al. 2012).

It has probably become clear that the topic of understanding and measuring the meaning of food in life is vast and diverse. There is no way in which we can cover all possible approaches to this in this chapter. Our aim here is more modest: After a brief overview of possible approaches to measuring the meaning of food in life in the next section, we will concentrate on one particular approach that we regard as especially promising and that has proved its usefulness over the past 30 years or so, namely, the means-end approach. We will then devote the rest of the chapter to discussing the means-end approach first to analyzing the meaning of food products and then to analyzing the meaning of food in life in general.

Approaches to Measuring the Meaning of Food

We view “meaning” here as a subjective construct – something that is developed in or in the interaction of minds of people. Two basic distinctions will be introduced here: meaning as a cultural or as an individual construct and meaning as attached to different food products or to food in general. Each of these calls for different measurement approaches.

Culture can be defined as “a system of values and norms that are shared among a group of people and then taken together constitute a design for living” (Hill 1997, p. 67). Food achieves cultural meaning by becoming part of or attached to these cultural values and norms. Cultural values and norms are learned by socialization processes starting in early childhood and once internalized may not be consciously realized, influencing behavior by automatic or semiconscious processes. Cultural meanings of food are therefore difficult to elicit by direct questioning and ethnographic methods that rely on a combination of observational and interviewing techniques are therefore prominent in this field. This notwithstanding, cultural differences in values and norms have been analyzed by survey techniques (the most prominent examples being the Hofstede values (see, e.g., Hofstede 1991), and the Schwartz cultural dimensions of values, Schwartz 1994), and this can be extended to the analysis of cultural differences in the meaning of food, although this raises a host of problems with regard to intercultural validity (see Grunert 2019).

Individual meanings of food are embedded in the cultural meanings, but the analysis of individual meanings of food emphasizes individual idiosyncrasies and/or the identification of groups of people with similar meanings within a cultural unit. Individual meanings of food are mostly analyzed by various versions of qualitative interview techniques and quantitative surveys, reflecting the conviction that such meanings are amenable to conscious individual reflection and hence also to verbal communication.

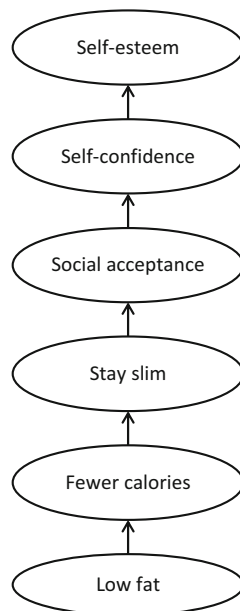
Food-related meanings can be analyzed at different levels of abstraction. At the lower level of abstraction, it is common to analyze the meaning that consumers attach to specific food products and their attributes. Meanings can be and are also analyzed with regard to many other elements of daily food-related life, like brands, stores, shopping routines, modes of preparation, meals, and festivities. Each of these can be analyzed at the individual and at the cultural level.

The Means-End Approach to Foods

Theory

Things acquire a meaning if we can mentally link them to some type of goal or purpose. If we cannot see a goal or purpose, we designate things as “meaningless.” Means-end theory has been an approach to the analysis of consumer behavior that attempts to understand the subjective meanings of products and services by looking at how consumers mentally link them to self-relevant consequences and from there

Fig. 1 Example of a means-end chain



to desirable life values (see Gutman 1982, introducing the concept to consumer research, and Costa et al. 2004, and Grunert 2010, for newer overviews). Figure 1 shows a simple example: low-fat ice cream is desired by a consumer because it is known to have fewer calories, which leads to the desirable consequences of slimming and social acceptance, which in turn are related to self-confidence and, eventually, self-esteem. By looking at this means-end chain, we can understand what makes low-fat ice cream desirable for this consumer and which meaning he/she attaches to it.

There are two major theoretical roots to this concept. One is research on life values, which was pioneered by Rokeach (1973) and later brought to prominence also in a cross-cultural context by Schwartz (1992). Life values are basic motivators that drive our choices across a wide range of life situations (Schwartz and Bilsky 1987), and they are viewed as culturally universal. However, because they are abstract, their direct relation to behavior and choices involving concrete objects is usually weak (Vinson et al. 1977). Means-end theory solves this by invoking the idea of a hierarchy of concepts ordered by abstractness, with values being the most abstract, products/services and their characteristics the most concrete, and personally relevant consequences in between. In invoking this idea about a hierarchy of concepts ordered by abstractness, means-end theory draws on Kelly's personal construct theory (Kelly 1955). Kelly's theory is a cognitive theory of personality, and the main premise is that people construe the world by interpreting events through a hierarchical system of bipolar constructs, which allows people to make predictions about the outcomes of these events. Applied to food, this means that people construe the meaning of food by categorizing a particular food item in terms

of its characteristics, in terms of the consequences expected because of these characteristics, and in terms of how this food will contribute to attaining important life values, as the example in Fig. 1 demonstrates.

Means-end theory has frequently been applied to understand the meaning of food (see below for examples), but we should note that it has also been applied to many other aspects of consumer behavior (see the contributions in Reynolds and Olson 2001) and even to understanding the meaning that people assign to as diverse phenomena as architecture (Lundgren and Lic 2010) and information systems (Chiu 2005).

Methodology

Measuring meaning structures based on means-end theory usually employs an interview technique called *laddering*. Laddering was developed in the context of Kelly's personal construct theory by Hinkle (1965) and has been the standard tool in means-end research. The basic idea of the method is to ask a respondent a series of questions that leads him/her to construct a means-end chain starting from the bottom – the concrete end – and then push him/her up a ladder of abstraction, hence the name (see also Fig. 2).

Data collection consists of two phases, a first phase eliciting attributes of the foods to be analyzed and a second phase where attributes are extended to ladders by a series of prompts. In the example in Fig. 1, the attribute “low fat” could, for example, be elicited by asking the respondent which attributes are important for her when buying ice cream. Based on that, the respondent would be asked why it is important for her to buy ice cream that is low in fat, generating the answer that this implies lower calories. This in turn would lead the interviewer to ask why it is important to the respondent to buy ice cream which is low in calories, and this process of prompting with “Why?” questions would continue until the value level is reached. The sequence of answers constitutes a “ladder,” and typically two to five ladders are generated per respondent in a laddering interview. Analysis of the data consists of three phases: the raw ladders are coded into a smaller set of categories,

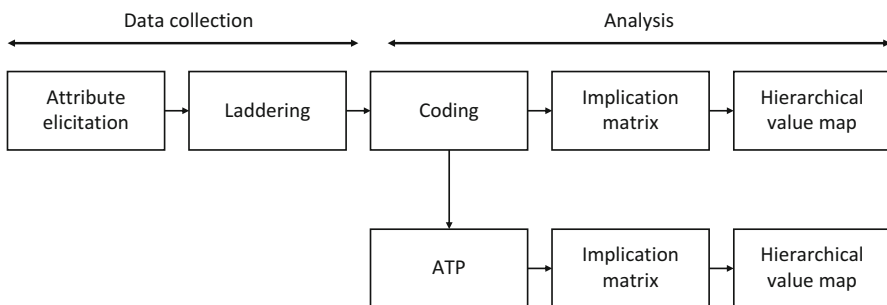


Fig. 2 Basic paradigm of conducting means-end research

which then form the basis for the computation of an implication matrix. This is a symmetric matrix with the categories that result from the coding process defining both the rows and the columns, and the information in the cells are frequencies of how often a certain category succeeds another across the set of ladders (e.g., still following Fig. 1, how many respondents said that selecting an ice cream with low fat implies fewer calories). In the last step, this implication matrix is turned into a hierarchical value map, which has been the most common way of presenting and interpreting laddering data. A hierarchical value map is simply a graph showing those links between attributes, consequences, and values where the frequency of that particular link in the implication matrix surpasses a cutoff level chosen by the researcher. This basic setup, described by Reynolds and Gutman (Reynolds and Gutman 1988), is largely still followed today, although there has been a host of extensions and modifications regarding the elicitation technique (Bech-Larsen and Nielsen 1999; Steenkamp and van Trijp 1997), the way of questioning (Grunert and Grunert 1995), and the analysis of the implication matrix (e.g., Aurifeille and Valette-Florence 1995; Kaciak and Cullen 2006; Valette-Florence 1998). Software tools have been developed to aid in the analysis, most notably MECANALYST and LADDERUX.

Laddering is a qualitative technique used on small samples. For validation of the results in larger samples, the association pattern technique (APT) has been developed (Ter Hofstede et al. 1998). It essentially consists of two empty matrices, one linking attributes and consequences and another linking consequences and values, where respondents are asked to tick those cells where they believe there is an association. The data can be interpreted in terms of response probabilities and can be used as input both for the derivation of hierarchical value maps and for analytical techniques aimed at market segmentation (Ter Hofstede et al. 1999).

Examples

Numerous studies have been published applying the means-end approach to the food domain, and an unknown number of studies have been conducted as part of proprietary corporate research. They share the basic aim of understanding the meaning that consumers assign to a food product and its characteristics or, put another way, the reasons why a food product is a meaningful choice for some consumers. Sometimes, this interest is linked to a product category, sometimes to a particular (often branded) product, and sometimes to products with a special characteristic. Sometimes means-end based studies have been used trying to understand cultural differences in attaching meaning to food (e.g., Nielsen et al. 1998), and in its quantitative version, it can and has been used for consumer segmentation (Ter Hofstede et al. 1999). In terms of practical applications, the two major types of applications have been in product development and in communication design. In product development, the major thrust is in understanding which perceived self-relevant consequences and values are meaning-giving for a particular product category and which product attributes they are inferred from by consumers and

then designing a product that consumers will perceived as valuable, also compared to competing products (e.g., Grunert and Valli 2001). In communication design, the main idea is that strong product-related communication should communicate a complete chain including attributes, consequences, and values: Communicating consequences claims benefits for the consumer, communicating values provides motivation, and communicating attributes provides credibility to the claim about consequences. This line of thinking and its implications have been elaborated in the MECCAS model (Reynolds and Craddock 1988; Bech-Larsen 2001).

In the following, we will provide four examples of results from studies using the means-end approach and the laddering method in the food domain. In all four cases, results are shown as hierarchical value maps, the main tool used for communicating results from laddering studies.

Figure 3 shows results from an unpublished study on yoghurt in Italy, based on laddering interviews with 15 shoppers (This is from the study Drivers of Choice conducted by the European Food Information Council and directed by Sophie Hieke and Klaus G. Grunert.). The laddering took point of departure in actual choices made by the respondents as documented in cashier tills, which were used to elicit attributes to start the laddering interview. The results in Fig. 3 show that two consequences dominate in the meaning that these consumers attach to yoghurt, namely, *enjoyable consumption* and *good for health*, a result that is rather ubiquitous for this type of study in the food domain. These consequences are inferred from a range of attributes, mostly linked to ingredients and the sensory profile of the product. Interestingly, enjoyable consumption and healthiness are interlinked – the enjoyable consumption is perceived to lead also to consuming a more healthy, balanced, and moderate diet,

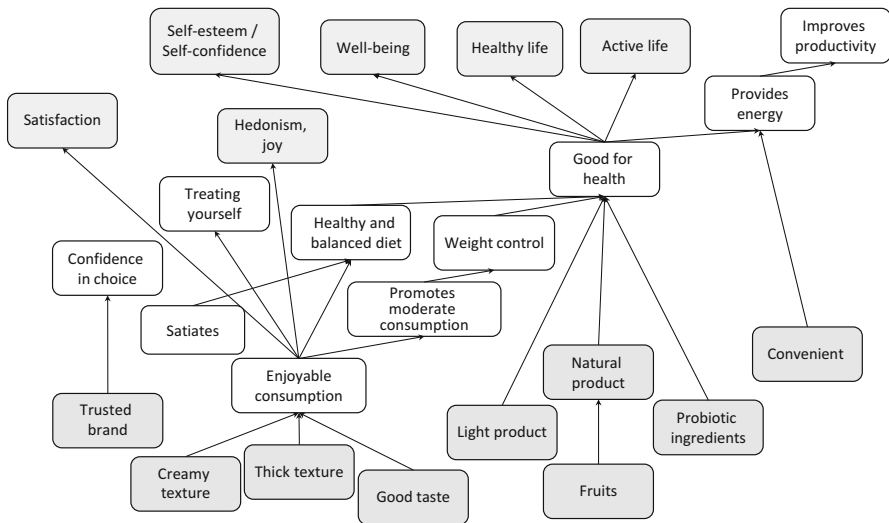


Fig. 3 HVM for yoghurt, Italian respondents

which in turn is perceived to affect health. Both health and enjoyment are related to a range of values from mostly hedonic and individualistic value domains.

The study from which Fig. 4 is derived (De Ferran and Grunert 2007) is an example of research trying to understand what a particular product attribute means to consumers, in this case the attribute “fair trade” in the coffee category. Based on a sample of French consumers, the study shows that consumers link trade to a number of socioeconomic benefits like economic aid, equality, and human rights, which in turn are linked to both collectivistic and individualistic values. In addition, fair trade products are also perceived as being of better taste and quality. The study also showed that the meaning that consumers attach to the fair trade attribute differs depending on where consumers buy these products – those buying them from specialty stores perceive them differently from those buying them in supermarkets (only the latter are shown in Fig. 4).

Arsil et al. (2018) also investigated the meaning that consumers attach to a credence attribute, namely, halal slaughtering of meat, in Indonesia and Malaysia. Figure 5 shows the results from the Malaysian sample. The central perceived self-relevant consequence is ordinance to Allah, which in turn is related to a range of more spiritual values but also to an expected consequence of better health.

Our final example, in Fig. 6, relates to a food service. Jeng and Yeh (2016) used the laddering approach to analyze the way in which restaurant customers in Taiwan view restaurants that position themselves as “green.” The results show that the “green” positioning means to consumers both environmental benefits like energy conservation and use of recyclable materials and expectations about better taste and use of local ingredients, leading to the attainment of both personal and social values.

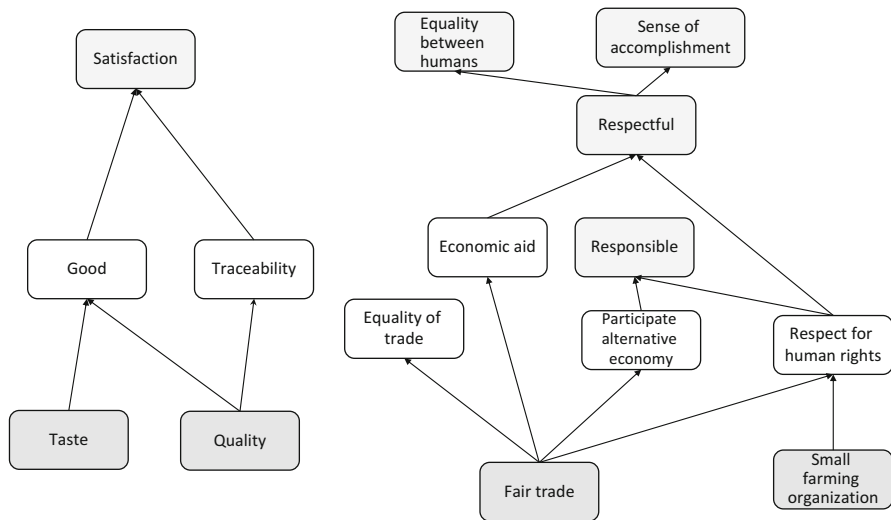


Fig. 4 HVM for fair trade coffee bought in supermarkets, French respondents. (Adapted from De Ferran and Grunert 2007)

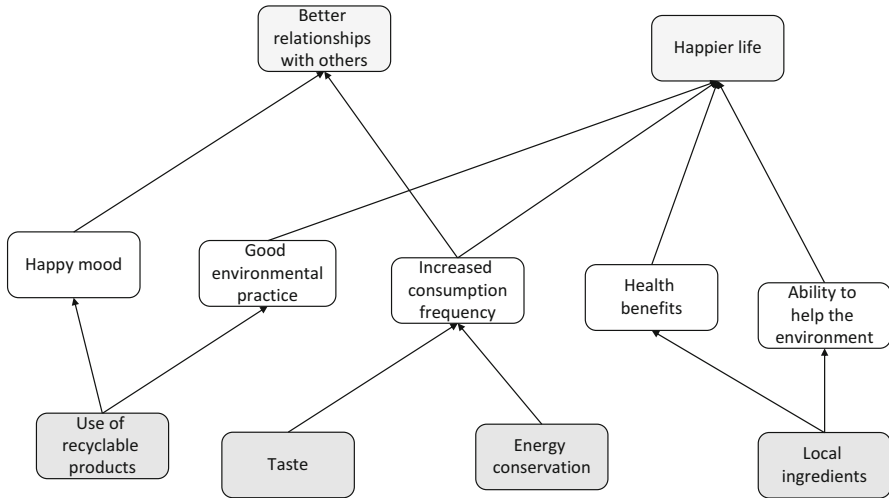


Fig. 5 HVM for halal meat, Malaysian respondents. (Adapted from Arsil et al. 2018)

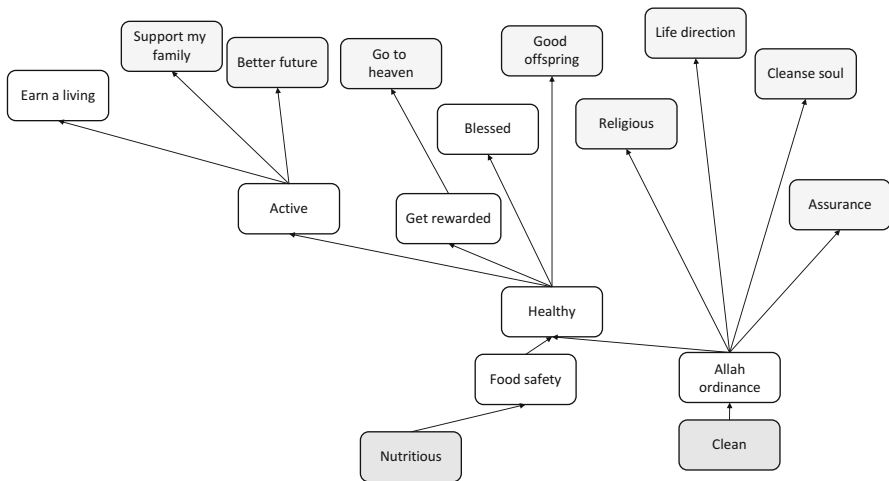


Fig. 6 HVM for restaurant with green positioning, Chinese respondents. (Adapted from Jeng and Yeh 2016)

As the examples show, the means-end approach allows us to understand the way in which consumers attach meaning to options that they have when making food-related decisions – which product to buy and which restaurant to choose. The insights obtained are thus at a microlevel, related to the thousands of decisions that consumers make related to food. Can the means-end approach also be applied to obtain a better understanding of the role that food in general has in the life of people? This we will address in the next section.

A Means-End Approach to Food-Related Lifestyle

Theory

If we can use the means-end approach to analyze the meaning that individual food products have to people, we should be able to do something similar to understand the role that food in a more general sense has in the life of people. Everyday observation suggests that the role of food in life differs between people. Everybody needs to eat, but not everybody is equally interested in food. For some people, food just seems to be a necessity, and the important things in life are something else. For other people, food is enormously important, and they spend considerable resources in terms of both time and money on buying food, preparing meals, eating at home, and eating out. In terms of the means-end approach, this suggests that for some people food has a major role in achieving these peoples' life values, whereas other people try to attain their central life values in other domains of life, not food. People thus differ in the degree of their involvement with food (Bell and Marshall 2003), and they differ in the reasons for the degree of involvement that they have with food.

This basic idea has been embodied in the food-related lifestyle (FRL) concept (see Brunsø et al. 2004). Food-related lifestyle tries to map how people use – or don't use – the food domain to achieve those values that are central to them. Just like product-related means-end chains, it is a cognitive concept that tries to uncover how people, in their minds, relate a range of food-related behaviors to the attainment of life values. The products that people buy are a part of this, but food-related lifestyle also covers those cognitions, both declarative and procedural, that govern shopping behavior, meal preparation, consumption situations, and purchase motives. It is conceived as a means-end approach to lifestyle, providing the bridge between concrete behaviors and preferences on the one side and abstract life values on the other side in a specific domain of life, food.

The concept of food-related lifestyle was originally developed as a segmentation tool to be used by the food industry. Lifestyle is a popular concept in a segmentation context, although it is often only loosely defined and covers an eclectic mix of behavioral and attitudinal concepts. In addition, lifestyle is mostly conceived as a general construct covering all domains of life. The food-related lifestyle concept differs by being defined as a cognitive construct, as being restricted to the domain of food, and by being embedded in a nomological network proposing that food-related lifestyle is related to concrete food-related behaviors on the one side and to general life values on the other. The concept of food-related lifestyle is illustrated in Fig. 7.

Methodology

A questionnaire instrument to measure food-related lifestyle was developed by Brunsø in 1997 (Brunsø 1997; Brunsø and Grunert 1998; see also Grunert et al. 2001), covering domain-specific declarative and procedural knowledge in the areas

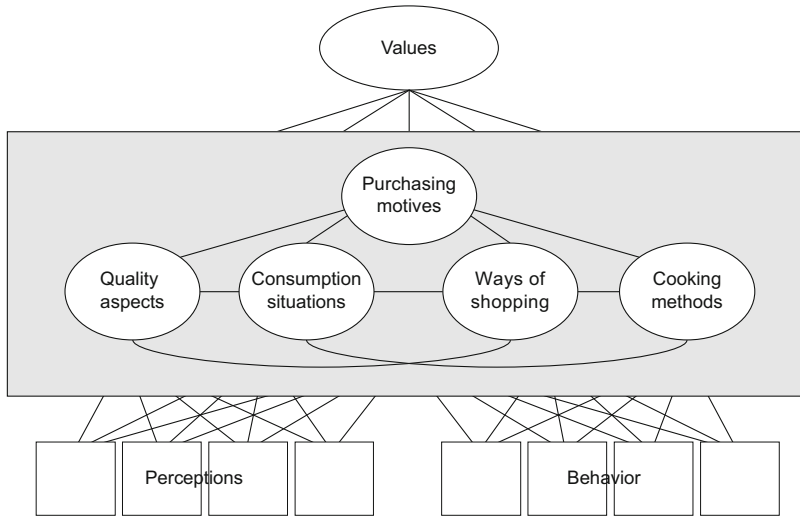


Fig. 7 The concept of food-related lifestyle

ways of shopping, cooking methods, importance of quality aspects, consumption situations, and purchase motives. Each area has several dimensions, each of which is measured by 3 items, resulting in a relatively complex instrument of 69 items. As noted above, the instrument was originally developed for distinguishing groups of consumers based on the role that food plays in their life or, to use the marketing term, to use it as an instrument for domain-specific segmentation of consumers (Grunert 2019). The segments derived can then be profiled by additional variables, like consumer demographics, but especially concrete behaviors, most notably the degree of buying certain types of foods.

The instrument was originally developed with the aim to be used in different languages and in different cultural contexts, in order to be able to investigate whether the same types of consumers can be found in different cultural contexts and, if yes, if their frequency distribution varies. For this reason, there has hence been some effort to investigate the instrument's cross-cultural validity. A rigorous analysis of measurement invariance across several European countries (Scholderer et al. 2004, later confirmed by Thøgersen 2017) showed that the instrument did exhibit configural and metric invariance, but not scalar invariance, indicating that while the meaning attached to the different parts of the instrument seems to be almost identical across cultures, there are still culture-specific biases in intercepts such that scale means of the different dimensions cannot be compared across cultures. When applied to distinguish different types of food-related lifestyle, indeed similar types emerged across a range of different applications. The instrument can also be used for tracking the incidence of different types of food-related lifestyles over time, although only one such study is known to us at present (Hansen et al. 2018).

The domain of food can be further subdivided, and accordingly lifestyle types can also be distinguished for more narrow domains. Two examples that have been

prominent in the literature are wine-related lifestyle and convenience food-related lifestyle (see below for examples of this).

Finally, as the instrument has been shown to be related to a variety of food-related behaviors, the dimensions of the FRL or a subset of them can be directly used as predictors of food-related behavior, but this application is more remote from our focus on measuring the meaning of food.

While early applications of the instrument used all 69 items, later applications have sometimes selected only some of the dimensions or, when the purpose was to distinguish different consumer groups, have used only 1 item per dimension. In addition, the instrument has been validated by relating it to various aspects of self-reported food-related behavior with good results, and it has been demonstrated that the lifestyle construct indeed mediates between life values and food-related behaviors (Brunsø et al. 2004). Attempt to use the instrument outside a Western cultural context has been less successful, though (Grunert et al. 2011; Reid et al. 2001).

The FRL instrument is a complex and well-validated instrument for measuring the meaning of food in the life of people. It has been used in more than a 100 studies. Its complexity is also a limitation in its applicability, and it seems to be culturally bound to Western cultures (most studies have been conducted in Europe and to a lesser extent in Australia and North and South America). In addition, as the instrument is from 1997, some parts of it appear no longer up-to-date. For example, aspects of social responsibility and especially sustainability are not dealt with in the instrument.

Examples

As noted above, the FRL instrument was originally designed for international segmentation, i.e., to distinguish groups of consumers across national borders that exhibit distinct patterns in how they use food to attain their life values. In spite of this, only relatively few studies have actually attempted this kind of cross-country analysis (see Grunert 2019, for an overview and Thøgersen 2017, for a recent example). As noted above, the FRL instrument has been shown to exhibit metric invariance at least within Western cultural contexts, but lacks scalar invariance, implying that scale means originating from different cultures or countries are not immediately comparable. Early uses of the FRL solved this by analyzing the data on a per-country basis and then making comparisons across countries by qualitative interpretation; a modern solution to this issue is to use multilevel analysis incorporating classification by countries and segments (applied by Thøgersen 2017).

In a paper summarizing several of the earlier studies using the FRL (Grunert et al. 2001), it was shown that by analyzing data from Denmark, France, Germany, and the United Kingdom independently on a countrywide basis, archetypical types of segments seemed to emerge: an *uninvolved* segment of consumers where food did not seem to have much meaning in their life beyond ensuring survival, with low scores on most dimensions of the FRL; a *careless* segment that also puts low priority on food but that nevertheless appreciated novelty and convenience in food products; a *conservative* segment where food is important in attaining life values, mostly by

sticking to traditional products, dishes, regular meal patterns, and traditional ways of preparing meals; an *adventurous* segment where food is an important part of life, mainly by providing stimulation and enacting innovation, as a platform for social interaction and achieving self-fulfillment; and finally, a rational segment with a deliberative approach to food, prioritizing health, quality, and product information. Many later studies have found similar patterns of segments. As the process of identifying segments is almost always based on some form of cluster analysis, which is an exploratory statistical technique, clusters emerging on a per-country basis are never completely similar across countries, and the naming of the segments is based on a qualitative interpretation of the pattern of segment means across the FRL dimensions. Likewise, it means that additional segments turn up and are then interpreted as country-specific idiosyncrasies.

In order to achieve a more quantitative comparison of segments across countries, Grunert et al. (2001) computed correlations of FRL dimension means for segments in four countries and visualized their patterns by putting them into a MDS algorithm. The result, shown in Fig. 8, shows that segments that had been named similarly in the different countries indeed tend to be similar, although not perfectly so. Most

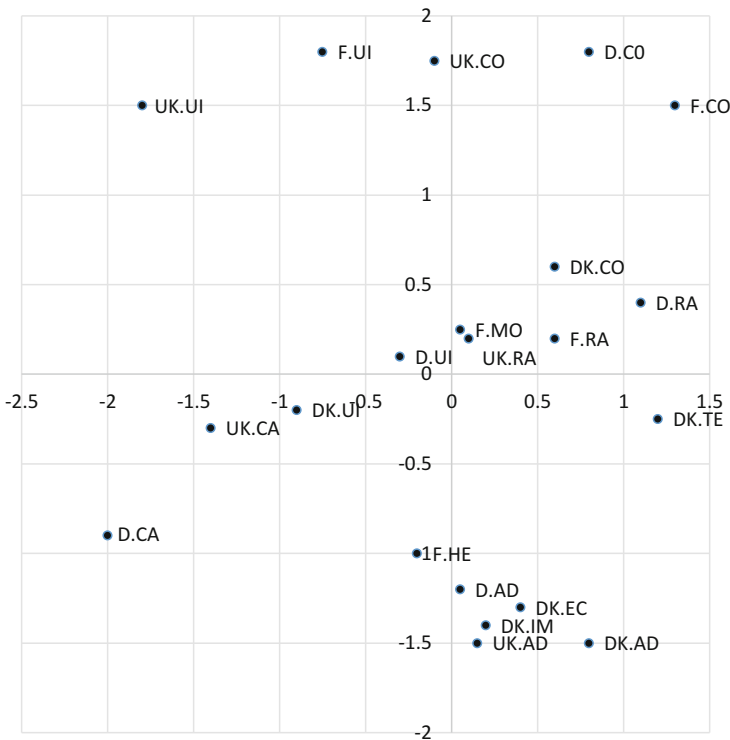


Fig. 8 MDS configuration of FRL segment means. (From Grunert et al. 2001). *DK* Denmark, *F* France, *G* Germany, *UK* United Kingdom, *UI* uninvolved, *CA* careless, *AD* adventurous, *COP* conservative, *RA* rational, *GE* hedonic, *MO* moderate, *EC* eco-healthy, *IM* impulsive, *TE* traditional involved

interesting, though, is the dimensional structure of the configuration in Fig. 8. The horizontal dimension seems to be a kind of food involvement dimension, with those segments with less interest in food – the uninvolved and the careless segments – on the left and the rest on the right. The vertical dimension seems to mirror a tradition vs. innovation dimension, with the adventurous segments at the bottom and the conservative segments in the top. Food involvement and food innovativeness thus emerge as two basic dimensions of food-related lifestyle.

An instrument like the FRL that has been around for 25 years should be ideal for tracking over time, but to our knowledge, there is only one study that has actually tried to do this, and it has used only a part of the instrument. Hansen et al. (2018) used a subset of FRL items to characterize Danish consumers by their degree of quality consciousness, as measured by their emphasis on novelty, naturalness, and convenience when shopping for food, and their general engagement with food shopping and meal preparation. They collected yearly data in the period 2014–2018 and subjected them to latent class cluster analysis, deriving three segments, the quality conscious, the moderate majority, and the uninvolved. Their results show that the size of the quality conscious segment fell continuously from 39.6% in 2014 to 24.7% in 2017, with a small rise to 26.4% in 2018. They also analyzed how these segments relate to satisfaction with food products and willingness to pay for additional quality.

A number of studies have used the FRL as a point of departure for developing instruments that can classify consumers not according to their general food-related lifestyle but with regard to a more specific part of it. Two examples will be named here. Buckley et al. (2007) segmented British consumers according their “convenience food lifestyle.” They took departure in the FRL and added items that were dealing specifically with the role of convenience foods. They found four segments, two who were critical of convenience foods and two who were positive. The two who were critical, dubbed *food connoisseurs* and *home meal preparers* by Buckley et al., appear quite similar to the adventurous and conservative segments described above. The two convenience-friendly segments were called *kitchen evaders* and *convenience-seeking grazers*. Kitchen evaders are generally not much into cooking and regular meals, whereas the convenience-seeking grazers adhere to more traditional meal patterns but seek for convenience solution. Buckley et al. showed that the segments were related to a broad range of self-reported behaviors with regard to different types of convenience foods.

As another example of an instrument developed for a narrower set of food- and drink-related life, Bruwer and Li (2017) developed a wine-related lifestyle instrument, using the FRL as conceptual inspiration but developing their own items. In a series of studies in Australia, they found relatively stable segment solutions involving *involved, knowledge-seeking wine drinkers, conservative, knowledgeable wine drinkers, basic wine drinkers, enjoyment-oriented social wine drinkers, and younger, relative inexperienced wine drinkers*. In addition, here the basic distinctions based on degree of involvement (here with wine) and tradition vs. innovation seem to play a role.

Finally, the dimensions of the FRL have been used to predict/explain various food-related behaviors directly, without distinguishing between different groups of

consumers. For example, Nijmeijer et al. (2004) specified and estimated a structural model involving FRL dimensions on quality aspects, ways of shopping, cooking methods, and purchase motives to predict vegetable consumption. They found that the role of convenience in people's food-related life had a major impact and that the major determining factors otherwise were different between boiled vegetables and salad, with planning meals and having meals as social events being related to the consumption of boiled vegetables, but not of salad.

Perspectives

In this chapter, we have introduced the means-end approach to measuring the meaning of food to people. The means-end approach analyzes the assignment of meaning by looking at how people relate phenomena – food, meals – to goals that are relevant for them. In its original form, it is used to look at the meaning people attach to individual food products, usually employing the qualitative laddering interview technique. Numerous studies have been conducted in the food domain, mainly with regard to applications in new product development and communication. At the more general level, we have introduced the food-related lifestyle approach, which maps how consumers use the food domain to reach goals in their life. Again, numerous studies have been conducted with regard to food employing this technique, mostly with regard to deriving segments of consumers that differ in the role that food plays in their lives.

We believe that these approaches have a huge potential also in future food research. Food is increasingly being developed and marketed based on intangible properties like healthfulness and sustainability, and means-end analysis can both investigate whether consumers actually view these characteristics as part of the meaning of a food product and also give inspiration on how to further consumer demand for food products that will contribute to a healthier and more sustainable life. There is still room for methodological improvement, though. Most published applications of the means-end approach employ the qualitative laddering technique. There is much less published research on its quantitative equivalent, the APT technique (or on any other quantitative equivalent, for that matter), which means that validation of the results based on a broader sample of respondents is often missing. The complexity of the data analysis may be a reason for this, and specialized software for analyzing APT data may help in promoting the use of this tool.

The food-related lifestyle approach has been used for more than 30 years. This demonstrates its usefulness but also raises the question whether the instrument is ripe for some rejuvenation. The meaning of food in life has changed during these years, most notably regarding the role of sustainability and ethical aspects in food production, which are not covered in the FRL instrument. Likewise, newer aspects of shopping for food, like online sales and the use of mobile devices, are not dealt with. A revised instrument incorporating these aspects would ensure its usefulness also for the coming decades.

References

- Arsil, P., Tey, Y. S., Brindal, M., Phua, C. U., & Liana, D. (2018). Personal values underlying halal food consumption: Evidence from Indonesia and Malaysia. *British Food Journal, 120*, 2524–2538.
- Aurifelle, J.-M., & Valette-Florence, P. (1995). Determination of the dominant means-end chain: A constrained clustering approach. *International Journal of Research in Marketing, 12*, 267–278.
- Bech-Larsen, T. (2001). Model-based development and testing of advertising messages: A comparative study of two campaign proposals based on the MECCAS model and a conventional approach. *International Journal of Advertising, 20*, 499–519.
- Bech-Larsen, T., & Nielsen, N. A. (1999). A comparison of five elicitation techniques for elicitation of attributes of low involvement products. *Journal of Economic Psychology, 20*, 315–341.
- Bell, R., & Marshall, D. W. (2003). The construct of food involvement in behavioral research: Scale development and validation. *Appetite, 40*, 235–244.
- Brunso, K. (1997). *Fødevarerrelateret livsstil: Udvikling af et måleinstrument til markedsørværgning af forbrugere for fødevarerindustrien*. Doctoral dissertation, Aarhus School of Business, MAPP Centre.
- Brunso, K., & Grunert, K. G. (1998). Cross-cultural similarities and differences in shopping for food. *Journal of Business Research, 42*, 145–150.
- Brunso, K., Scholderer, J., & Grunert, K. G. (2004). Closing the gap between values and behavior – A means-end theory of lifestyle. *Journal of Business Research, 57*, 665–670.
- Bruwer, J., & Li, E. (2017). Domain-specific market segmentation using a latent class mixture modelling approach and wine-related lifestyle (WRL) algorithm. *European Journal of Marketing, 51*, 1552–1576.
- Buckley, M., Cowan, C., & McCarthy, M. (2007). The convenience food market in Great Britain: Convenience food lifestyle (CFL) segments. *Appetite, 49*, 600–617.
- Chiu, C. M. (2005). Applying means-end chain theory to eliciting system requirements and understanding users perceptual orientations. *Information & Management, 42*, 455–468.
- Chrysochou, P., Askegaard, S., Grunert, K. G., & Kristensen, D. B. (2010). Social discourses of healthy eating. A market segmentation approach. *Appetite, 55*, 288–297.
- Costa, A. D. A., Dekker, M., & Jongen, W. M. F. (2004). An overview of means-end theory: Potential application in consumer-oriented food product design. *Trends in Food Science & Technology, 15*, 403–415.
- De Ferran, F., & Grunert, K. G. (2007). French fair trade coffee buyers' purchasing motives: An exploratory study using means-end chains analysis. *Food Quality and Preference, 18*, 218–229.
- Grunert, K. G. (2010). Means-end chains – A means to which end? *Marketing Journal of Research and Management, 32*, 41–46.
- Grunert, K. G. (2019). International segmentation in the food domain: Issues and approaches. *Food Research International, 115*, 311–318.
- Grunert, K. G., & Grunert, S. C. (1995). Measuring subjective meaning structures by the laddering method: Theoretical considerations and methodological problems. *International Journal of Research in Marketing, 12*, 209–225.
- Grunert, K. G., & Valli, C. (2001). Designer-made meat and dairy products: Consumer-led product development. *Livestock Production Science, 72*, 83–98.
- Grunert, K. G., Larsen, H. H., Madsen, T. K., & Baadsgaard, A. (1995). *Market orientation in food and agriculture*. Boston: Springer.
- Grunert, K. G., Brunso, K., Bredahl, L., & Bech, A. C. (2001). Food-related lifestyle: A segmentation approach to European food consumers. In *Food, people and society* (pp. 211–230). Berlin: Springer.
- Grunert, K. G., Perrea, T., Zhou, Y., Huang, G., Sørensen, B. T., & Krystallis, A. (2011). Is food-related lifestyle (FRL) able to reveal food consumption patterns in non-Western cultural environments? Its adaptation and application in urban China. *Appetite, 56*, 357–367.

- Gutman, J. (1982). A means-end chain model based on consumer categorization processes. *Journal of Marketing*, 46(2), 60–72.
- Hansen, G. L., Videbæk, J. N., & Bech-Larsen, T. (2018). *Kvalitetsindeks 2018: Fokus på udespisning*. DCA report. Aarhus: Aarhus University.
- Hill, C. W. (1997). *International business: Competing in the global market place*. Chicago: Irwin.
- Hinkle, D. (1965). *The change of personal constructs from the viewpoint of a theory of implications*. Unpublished Ph.D. thesis, Ohio State University.
- Hofstede, G. (1991). *Cultures and organizations. Intercultural cooperation and its importance for survival. Software of the mind*. London: McGraw-Hill.
- Jeng, M. Y., & Yeh, T. M. (2016). The effect of consumer values on the brand position of green restaurants by means-end chain and laddering interviews. *Service Business*, 10, 223–238.
- Kaciak, E., & Cullen, C. W. (2006). Analysis of means-end chain data in marketing research. *Journal of Targeting, Measurement and Analysis for Marketing*, 15, 12–20.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: W.W. Norton.
- Lundgren, B. A., & Lic, T. (2010). Customers' perspectives on a residential development using the laddering method. *Journal of Housing and the Built Environment*, 25, 37–52.
- Mintz, S. W., & Du Bois, C. M. (2002). The anthropology of food and eating. *Annual Review of Anthropology*, 31, 99–119.
- Nielsen, N. A., Bech-Larsen, T., & Grunert, K. G. (1998). Consumer purchase motives and product perceptions: A laddering study on vegetable oil in three countries. *Food Quality and Preference*, 9, 455–466.
- Nijmeijer, M., Worsley, A., & Astill, B. (2004). An exploration of the relationships between food lifestyle and vegetable consumption. *British Food Journal*, 106, 520–533.
- Poulain, J. P. (2017). *The sociology of food: Eating and the place of food in society*. London: Bloomsbury.
- Reid, M., Li, E., Bruwer, J., & Grunert, K. (2001). Food-related lifestyles in a cross-cultural context: Comparing Australia with Singapore, Britain, France and Denmark. *Journal of Food Products Marketing*, 7(4), 57–75.
- Reynolds, T. J., & Craddock, A. B. (1988). The application of the MECCAS model to the development and assessment of advertising strategy: A case study. *Journal of Advertising Research*, 28(2), 43–54.
- Reynolds, T. J., & Gutman, J. (1988). Laddering theory, method, analysis, and interpretation. *Journal of Advertising Research*, 28(1), 11–31.
- Reynolds, T. J., & Olson, J. C. (Eds.). (2001). *Understanding consumer decision making: The means-end approach to marketing and advertising strategy*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Scholderer, J., Brunso, K., Bredahl, L., & Grunert, K. G. (2004). Cross-cultural validity of the food-related lifestyles instrument (FRL) within Western Europe. *Appetite*, 42, 197–211.
- Schösler, H., De Boer, J., & Boersema, J. J. (2012). Can we cut out the meat of the dish? Constructing consumer-oriented pathways towards meat substitution. *Appetite*, 58, 39–47.
- Schwartz, S. H. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. C. Triandis, Ç. Kâğıtçıbaşı, S.-C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (Cross-cultural research and methodology series) (Vol. 18, pp. 85–119). Thousand Oaks: SAGE.
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53(3), 550–562.
- Schwartz, S. (1992). Universals in the content and structure of values: theory and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65.
- Shepherd, R., & Raats, M. (Eds.). (2006). *The psychology of food choice*. Wallingford: CABI.
- Steenkamp, J.-B. E. M., & van Trijp, H. C. M. (1997). Attribute elicitation in marketing research: A comparison of three procedures. *Marketing Letters*, 8, 153–165.

- Ter Hofstede, F., Audenaert, A., Steenkamp, J. B. E., & Wedel, M. (1998). An investigation into the association pattern technique as a quantitative approach to measuring means-end chains. *International Journal of Research in Marketing, 15*, 37–50.
- Ter Hofstede, F., Steenkamp, J. B. E., & Wedel, M. (1999). International market segmentation based on consumer–product relations. *Journal of Marketing Research, 36*, 1–17.
- Thøgersen, J. (2017). Sustainable food consumption in the nexus between national context and private lifestyle: A multi-level study. *Food Quality and Preference, 55*, 16–25.
- Valette-Florence, P. (1998). A causal analysis of means-end hierarchies in a cross-cultural context: Methodological refinements. *Journal of Business Research, 42*, 161–166.
- Vinson, D. E., Scott, J. E., & Lamont, L. M. (1977). The role of personal values in marketing and consumer behavior. *Journal of Marketing, 41*(2), 44–50.