COMMENTARY

Laddering in the practice of marketing research: barriers and solutions

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Abstract

Purpose – The paper seeks to present discussion on laddering application in the practice of marketing, considering both academic and market researches.

Design/methodology/approach – It provides summary points of laddering as a qualitative research technique and the importance it can have in better understanding behaviour.

Findings – The paper argues that laddering is a useful and powerful technique but still underused by scholars and practitioners. The authors consider that the main apparent barriers precluding its proper use can be related to the following aspects: time-consuming and expensive interviews; artificial set of answers; researcher biases; and simplistic analysis of the results.

Originality/value – This paper contributes to a better practice of laddering since it highlights its limitations and suggests alternatives to cope with them.

Keywords Interviews, Marketing theory, Research, Behaviour

Paper type Viewpoint

Introduction

This paper aims at presenting the laddering technique and discussing its application in the practice of academic and market researches. For this purpose, it reviews the central literature of laddering and along with the authors' experiential reflections, highlights its use particularly in marketing. Initially the paper describes the fundamentals of laddering which embraces its definition as well as explanations on its emergence and relationship with Means-End Theory. The main steps of the technique and the results obtained from them are briefly explained. Then traditional laddering is compared with hard laddering. Finally, the paper addresses the main barriers precluding its use and the alternatives to cope with them.

Fundamentals of laddering

Laddering is a useful technique of qualitative research in understanding behaviours. It has been utilized specially in marketing in order to explore individuals' opinions, attitudes and beliefs. It is highly recommended in researches that approach customer value according to the models of the Means-End Theory (Botschen *et al.*, 1999; Dibley and Baker, 2001;

Gengler *et al.*, 1999; Gengler and Reynolds, 1995; Lastovicka, 1995; Lin, 2002; Reynolds and Gutman, 1988; Reynolds and Whitlark, 1995; Valette-Florence and Rapacchi, 1991; Vriens and Hofstede, 2000; Wansink, 2000, 2003; Woodruff and Gardial, 1996). A comprehensive definition of laddering is given by Reynolds and Gutman (1988, p. 12):

> Laddering refers to an in-depth, one-on-one interviewing technique used to develop an understanding of how consumers translate the attributes of products into meaningful associations with respect to self, following Means-End Theory.

Dibley and Baker (2001) describe shortly the emergence of laddering. The technique was originated by Kelly's (1955), work who as a researcher in the field of psychotherapy developed a general theory to interpret and anticipate individuals' experiences. This work contributed to the advancement of cognitive interpretation and to the belief that a set of internal processes such as thoughts, images and constructs is accountable for behaviours. Hinkle (1965) – discussed by Bannister and Mair (1968) – developed the laddering technique as a means to access systems of individuals' personal meaning. In marketing domain and specifically in the field of consumer behaviour, Gutman (1982) to understand cognition is known as Means-End Theory and his work, jointly developed with Reynolds (Reynolds and Gutman, 1988), disseminated the idea of laddering application in the marketing area. In their conception, products are bought and consumed because they represent something to people.

According to Means-End Theory, it is possible to link sequentially in a value hierarchy, product attributes (A) to consequences of product use (C) and to individuals' values (V), forming a chain called ladder, A-C-V sequence or means-end (MEC). A considerable number of marketing studies have already been conducted from this approach involving different kinds of products, such as tangible goods like beverages (Gutman, 1997), yogurts (Vriens and Hofstede, 2000), snacks (Dibley and Baker, 2001), cars (Allen, 2001), houses (Coolen and Hoekstra, 2001), breakfast items (Manyiwa and Crawford, 2002), services like those offered by museums (Thyne, 2001), hotels (Orsingher and Marzocchi, 2003), schools (Veludo-de-Oliveira and Ikeda, 2004) courses (Goldenberg *et al.*, 2000), recycling (Bagozzi and Dabholkar, 1994) and infant feeding (Gengler *et al.*, 1999). The next section describes the main steps of laddering and its results.

Main steps and results
Laddering provides a guide not only for conducting interviews, but also for analysing data. In the laddering probe the respondent is asked about the types of characteristics that might describe or distinguish brands or products. According to Reynolds and Gutman (1988) this can be obtained in three ways. The first one refers to a technique termed "triadic sorting" where three distinct products or brands are presented and the respondent is asked to indicate differences and similarities that two of them have in relation to the third one. Taking an example of airline services the interviewer can ask the respondent: "what could distinguish first class from business class or economy class"? In the other technique termed "preference-consumption differences" the respondent is asked to indicate why a brand is more desirable in comparison to others. For instance, "in your opinion, why is first class the most preferable one"? The last recommended technique is termed "differences by occasion" where the customers are

inserted in a consumption context and asked to describe the features regarding this consumption. An illustrative probe could be: "how could you describe the last time you travelled by first class"?

From this stage, the line of questioning proceeds from product characteristics to user characteristics (Durgee, 1986), which is associated to the second level of the sequence A-C-V. If relaxing environment is cited as a feature of airline first class, the interviewer can ask why it is an important characteristic of this kind of service. The interviewee's answer can be: "Because I feel more comfortable and less fatigued when I travelled on it." Thus, less fatigue could be considered as a consequence of use allied to airline first class travel mode. The idea is to stimulate the respondents up a ladder of abstraction until the moment they reach the level of values. For this purpose, repetitive and interactive questions are made firstly considering the product attributes (A), secondly the consequences of its use (C) and finally the values (V).

After administering laddering interviews, the researchers should follow certain steps for data analysis and interpretation. Gengler and Reynolds (1995) sum them up, suggesting the process of data reduction as the first step. In this stage, data are converted into separated phrases – the basic elements in which the subsequent analyses are based. This involves a thorough review of the verbatim notes of tapes of the interviews to identify the elements that better represent the expressed concepts by each person individually. The second step is the content analysis of the elements previously selected. The third one is the summation of relations in content codes, which results in an implication matrix of all paired relationships. Finally, the so-called "Hierarchical Value Map" is built in order to show the main relationships among all elements identified. For further details regarding these procedures, we recommend the paper written by Reynolds and Gutman (1988). A set of hypothetical results of ladder-type studies is showed in Table I.

Taking the airline services as an example once more, one chain may reveal the following sequence: first class → relaxing environment → less fatigue → feel important → safety → self esteem. First class will set a chain of events in motion that lead to self esteem. To the passengers, the relaxing environment is an important attribute implying that the airline service will help to deliver the consequence of less fatigue. Moreover, this may make them feel important, leading to the values of safety and self esteem. The topic traditional laddering versus hard laddering is examined in the following section.

Traditional laddering and hard laddering
Traditional laddering is also labelled soft laddering and requires the highly skilled expertise of a researcher to be implemented. Hard laddering is a variation of the laddering technique with greater structuring in data collection that demands less skill of the researcher during the interview. While soft laddering provides respondents more freedom of expression and is typified by the question "why is this important to you?" hard laddering uses more structured interview and data collection procedures. In the Grunert and Grunert (1995, p. 216):

> Hard laddering refers to interviews and data collection techniques where the respondent is forced to produce ladders one by one, and to give answers in such a way that the sequence of the answers reflects increasing levels of abstraction.

Level of abstraction		Houses and flats	Clothing stores	Shampoos	Energetic beverages	Airline services
(+)	Values	Liberty	Belonging	Happiness	Success	Self esteem
		Privacy	Conformity	Beauty	Employment	Safety
		Keep the family together		Attractive	Better job	Feel important
	Consequences	Space for all	Feel good	Stylish	More concentration	Less fatigue
			Fit well	Modern		Relaxing environment
(−)	Attributes	Comfortable	Good sizes	Bottle shape	Strong	First class
		Five rooms	Many alternatives		Caffeine	

Table I.
Hypothetical results of
ladder-types studies

Generally, data collection not involving personal interviews refers to hard laddering, such as mechanisms of computerized data collection and self-administered questionnaires (paper-and-pencil version). Gengler and Reynolds (1995) cite examples of proposals that are aimed at easing data collection using hard laddering. Among them, is Gengler's (1990) attempt to use a computer program in order to assess the strength of associations among concepts, that were in principle, derived from a focus group. The authors also refer to Valette-Florence and Rapacchi's (1990) experience that used card sorting based on concepts that were mentioned by one group of interviewees.

Botschen *et al.* (1999) state that the advantage of hard laddering is the efficiency in data collection. However, they state that little is known about the validity and reliability of this procedure, and about its compatibility with results obtained via the traditional laddering interview. The authors recommend the development of more evidence that compare the two versions of the technique. Gengler and Reynolds (1995) believe that hard laddering interferes in one of the core assumptions of the method, which is to enable the interface with the answers created spontaneously by the respondent.

Grunert and Grunert (1995) assert that the soft approach is potentially better when types of problems, on the respondent's side, are caused by very weak or very elaborate cognitive structures. In fact, they believe that when a respondent's level of knowledge about a product is too low or too high, the interviewer should prefer the soft laddering method because there are more chances to conduct an appropriate interview. Besides, the soft approach produces more redundant data, which facilitates the reconstruction of the meaning in the step of content analysis and coding at the stage of laddering data analysis and interpretation. On the other hand, when the researched area is well known and when no problems are encountered in the reconstruction of meanings, hard laddering has the advantage in minimizing a researcher's influence.

Barriers precluding laddering use
As theory and practice are not widely synchronized, the use of laddering by scholars and practitioners engender some challenges. The most apparent barriers precluding the proper use of the technique can be related to:

- time-consuming and expensive interviews;
- artificial set of answers;
- researcher biases; and
- simplistic analysis of the results.

Time-consuming and expensive interviews
The repetitive questions may make the interview tedious and the interviewee to lose patience in answering them following the ladder structure (Woodruff and Gardial, 1996). As the interviews take a long time to be finished, it can be difficult to find people disposed to participate as a respondent in such a task. Vriens and Hofstede (2000) reinforce the restriction of the technique related to its implementation in large-scale, by means of representative samples. Since, laddering requires interviewers with qualitative skills, an implementation in large-scale could rapidly become too costly and take too long to be completed. This idea is endorsed by Botschen *et al.*(1999) thoughts. The authors (1999) remind that soft laddering demands highly trained interviewers to perform data collection and that content analysis necessary for this method is too time-consuming for the researcher, and can result in high costs and great complexity.

Artificial set of answers
Some respondents want to appear to be intelligent and respectable. Given this, they may answer in a rational way, trying to find arguments to justify their behaviour (Botschen *et al.*, 1999). Sometimes they present difficulties in going to higher levels of abstraction following the sequence A-C-V. If the respondents do not know how to answer the question, they can give a response only to meet the expectations of the interviewer, which can distort the reality. According to Wansink (2000, p. 31):

> Often times, the right questions are hard to come by, the interviewee may be nervous or uncomfortable with the line of questions or the interviewee simply isn't the brand champion they claim to be.

The more the respondent is going up the levels of abstraction, the more the questions are becoming personal. Certain people do not feel comfortable in talking about questions at the level of values.

Researcher biases
The technique presents subtle procedures that may lead to the jeopardized interference of the researcher if they are not carefully applied. The selection of elements for the composition of the means-end chains depends on the sensibility of the researcher in realizing differences and similarities among data of all the interviews. The elimination of relevant elements may cause mistakes in the establishment of marketing strategies. The process of separating elements into groups of attributes, consequences and values is also delicate. The success of research is a function of the researcher's capability in doing an accurate content analysis. The risk associated to this process is the generation of an oversimplified reality. In this sense, Lin (2002) points out:

> The necessary process of simplifying A-C-V variables restricts the scope and depth of interviewee response to predetermined variables, which may not accurately reflect consumers' true desires. Identifying which variable is the attribute, consequence, or value is difficult, especially when the MEC methodology is applied to developing intangible product strategies.

Simplistic analysis of the results
Laddering always results in a drawing of chains linking adjacent elements. Interesting insights emerging from the interviews might not be examined because they do not fit in with the pattern imposed by the technique. Moreover, the questions are often made focusing on positive attributes, consequences and values, while a product can be characterized by negative features as well – the technique usually does not observe this aspect in practice.

Final thoughts
Laddering involves more than a simple in-depth interview since it gives a more structured analysis following the Means-End Theory. Bearing in mind the barriers precluding its proper use, we suggest some alternatives to researchers overcome them. Naturally the list is not comprehensive and we raise the most cited in the literature and what we noticed in practice.

Dealing with time-consuming and expensive interviews
- Before starting the interview elucidate the general laddering procedures to the respondent as well as clarify its expected length of time.
- Do not force the interviewees; respect their limits and willingness (Wansink, 2000).
- Consider the use of hard laddering for focus groups instead of individual in-depth interviews. Depending on the research context, they can also provide great insights.

Dealing with artificial set of answers
- Provide specific training in laddering for highly skilled interviewers.
- Ask the respondents to give examples and to make analogies. It will help them to go up to different levels of abstraction.
- Use redirecting techniques such as silence and communication check to assess the consistency of the answers. Third-person probe can help the interviewees to project their perception as well (Reynolds and Gutman, 1988). Rather than interrupt interviewees, ask follow up questions afterwards.
- Assure confidentiality and anonymity to the respondents.

Dealing with researcher biases
- Adopt the "auditing approach" asking for a group of researchers to discuss the choices of the elements and results of laddering. Peers acting as auditors can help in improving the findings.
- Be honest about own feelings and predetermined judgments in relation to the topic of the research. Identify personal value systems and recognize situations that indicate a lack of neutrality in the interpretation of data.
- Apply the "respondent validation" technique. The researcher could display the outcomes to the interviewees, who in turn give opinions concerning the researcher' interpretation. The means-end chains could be refined in light of these comments.

Dealing with simplistic analysis of the results
- Use more than one method of data collection or a combination of techniques to enhance the rigour of the research.
- Analyse to what extent the findings fit in with the existing literature and critically evaluate them.
- Ask questions negatively instead of positively – what the respondent dislike rather than what they like. Develop negative chains of attributes, consequences, and values.

Aside from barriers, laddering shows itself as an advantageous tool for understanding behaviour and can contribute to numerous researches in marketing. It should be kept in mind, however, that this is not the only technique that aims at such goals. Gengler *et al.* (1999) comment that although the laddering approach is well suited to uncovering consumers' rationale for their choices, other methods may be more successful in

uncovering deeper meanings, such as metaphor elicitation (Zaltman, 1997), storytelling (Thompson, 1997) or ethnography (Arnould and Wallendorf, 1994). The technique should be further explored to aid product planning, segmentation and positioning as well as to detect problems with goods, services and corporate image. Laddering is also viable to be used in other fields besides marketing like human resource management and organizational behaviour. Its application should be emphasized by both academics and practitioners since it contributes significantly to the development of sustainable business strategies focusing on consumers.

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