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Attributes used in choosing books

H. Leemans and M. Stokmans *

This study tries to identify the perceived attributes used in the elimination and comparison phase of the decision-making process regarding the purchase of literary and non-literary fiction written for adults. In order to ascertain which attributes were used, the respondents were asked to work through an elimination and a comparison phase in that order. For each phase, the respondents were asked to indicate which attributes they used. To this end, open questions and subsequently 50 attributes specified by the researcher were submitted to the respondents. The results indicated that most of the frequently used attributes expressed a degree of knowledge regarding the product class. Contrary to what was expected, respondents used more attributes in the elimination phase (on average 29) than in the comparison phase (on average 12). This can be better understood by taking into account that a heterogeneous set of books was used in the assigned task. Consequently, a given attribute is only significant for a small number of books and therefore only useful in eliminating those books.

1. Introduction

The vast majority of books in the Netherlands are, as in most other countries with a market economy, produced and distributed commercially. The production and distribution of books through the market system implies that both producers and distributors – publishing houses and bookshops – are dependent on the judgements of consumers; the buyers and readers of books. Consumers express their preferences by buying a limited number of books while neglecting other titles. The concentration of book sales on a limited number of titles combined with the difficulties in forecasting the commercial success of a particular title, make the book industry a very risky business. Furthermore the book trade is facing, at this time, a serious problem; since 1980 booksales have dropped 2% a year on average.¹

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¹ See *Gids voor de Informatiesector* (1991). This is an annual guide containing annual statistics of the publishing industry.

For all parties in the book trade, knowledge of book-buying behavior of consumers becomes more urgent when the market conditions under which publishing houses and bookshops have to operate become more demanding. Insight in the decision-making process of book buyers consists of, among other things, awareness of selection criteria, relevant sources of information and existing preferences. These serve as important information for the design and implementation of commercial policies.

Book-buying behavior is an aspect of consumer behavior in general. Loudon and Della Bitta (1988: 8) define consumer behavior as: 'The decision process and physical activity individuals engage in when evaluating, acquiring, using, or disposing of goods and services'. According to this definition, consumer behavior is a subset of human behavior. The disciplines collectively referred to as behavioral sciences have studied human behavior for some time. Research on consumer behavior has borrowed heavily from the advances made in the behavioral sciences. As a result, the study of consumer behavior is multidisciplinary in nature.

The definition of consumer behavior indicates that the decision-making process is one of the major research objects of this discipline. The decision-making process can be described, in general terms, as a process in which the products under consideration are identified as well as evaluated on the basis of attributes they possess or are believed to possess. This general description should be related to choice behavior towards books. Therefore attention will be given to the concept of 'attributes' and to the decision-making process, in that order.

It is assumed by a number of economists that the attributes of a product are objective physical aspects of a product (Lancaster 1966, 1977). An example is the amount of carbohydrates in food. But the aspects of a product used in a decision-making process are at best the perceived counterparts of the physical aspects (Stokmans 1992). In this paper the definition of a product attribute will be used in a much wider sense. It seems preferable to adopt Grunert's definition: 'Any aspect of the product itself or its use that can be used to compare product alternatives. Each alternative can (but need not) be characterized by all aspects, i.e. using one aspect does not preclude using another' (Grunert 1989: 229).

It was already mentioned that the aspects of products used in the decision-making process are perceived attributes. The perception and interpretation of an attribute depends on the knowledge and experience the consumer has regarding the product class (for example fiction). The decision-making process thus presupposes a model of the consumer's cognitive structure with regard to a product class. Among these models the most relevant types seem to be those which use the network concept (Grunert 1989: 233). The elements (nodes) of cognitive structure, which are relevant to consumer behavior are product uses, product alternatives and product attributes. These elements are linked in an associative network.

An associative network is a hierarchical structure consisting of nodes and links. In order to get a hierarchical structure, at least two kinds of nodes should be distinguished. One type refers to classes of phenomena which have something in common (a category, in the case of books, for example a particular genre). The second kind of nodes refers to specific instances of the category (an exemplar, in the case of books, for example a particular title) (Grunert 1986). Abstractness can be viewed as inversely related to how directly an attribute denotes particular objects or events (Paivio 1971).

In this view, the cognitive structure which represents knowledge about the product class is an important determinant not only regarding which attributes consumers use in a decision-making process but also in how they interpret them. Consequently, individual differences can be expected in the number of attributes used in the decision-making process as well as in their content and interpretation. Before investigating individual differences in the attributes used, it is necessary to know which attributes can be expected to be used. In this paper an attempt will be made to identify the attributes used in the decision-making process regarding books in general. Individual differences will not be dealt with.

So far, our attention has been focused on the concept of attribute and how it can be applied to books. In the following section the decision-making process will be dealt with.

2. The decision-making process

In the literature on consumer behavior, three consumer decision strategies are distinguished: extensive problem solving, limited problem solving and routinized response behavior (Engel et al. 1986: 22). *Extensive problem solving* is often applied to products with which the consumer is highly involved and which are highly differentiated, as in the case of durables. Furthermore, the consumer can take as much time as needed to come to a choice (Engel et al. 1986: 27–35). A major characteristic of extensive problem solving is that very little is known about the product class in advance and the consumer is highly motivated to search and evaluate a good amount of information in order to come to a choice.

Limited problem solving is a less thorough procedure. This strategy is often applied to products with which the consumer is less involved, which are not widely differentiated. An added limitation is the amount of time the consumer has in which to make a choice (Engel et al. 1986: 36). In applying this strategy, the consumer searches and evaluates some information in order to come to a choice.

Routinized response behavior is characteristic of a consumer who buys the product on a regular basis, such as in the case of daily commodities. In that

case, the consumer makes a straight repeat purchase, without searching or evaluating any information regarding the product.

What kind of decision strategy is more likely to be applied in book buying? The decision-making process regarding books resembles the decision-making process of durables as well as daily commodities, but at the same time it manifests a number of differences. It resembles deciding on the type and brand of a durable such as a washing machine, as both product classes are highly differentiated and require an active search for and use of information about alternatives. Furthermore, both entail a rather elaborate and complex evaluation of alternatives. In contrast with purchasing a consumer durable, however, buyers of books have distinct experience in and therefore knowledge of how to select a book.

The decision-making process for books also resembles the one for daily commodities: they are both purchased quite regularly (most of those consumers who buy books do so at least once a month; *Gids voor de Informatiesector*, 1991). Consequently, most books available at the first buying instance are also available at the next buying instance. Therefore, the consumer can rely on prior knowledge when buying a book. The purchase of a book is, however, not routinized response behavior as is the case of most daily commodities: nobody buys a book twice for himself. Moreover, the book market changes rapidly. Most titles available now are no longer available one year later. This makes it worthwhile to build up and maintain knowledge which can be used when purchasing a book is anticipated.

In our opinion, buying books can best be regarded as a decision-making process in which information on alternative titles is searched for and evaluated continuously. This ongoing search (Bloch et al. 1986) can be more or less intensive. This decision-making process will be dealt with more in depth in the next section.

2.1. The iterative decision-making process

The best approximation of the decision-making process in the case of book buying is provided by the iterative decision strategy. The iterative decision strategy is similar to the extensive problem solving, but differs on two crucial points. Firstly, the initial stage of an iterative decision strategy is 'problem structuring', while extensive problem solving starts with 'problem recognition'. In the framework of ongoing search, information search activities are independent of specific purchase needs or decisions. In other words, ongoing search does not occur in order to solve a recognized and immediate purchase problem. Ongoing search may involve two basic motives (Bloch et al. 1986: 120–121). The first is to acquire a bank of information which is potentially useful in the future. The second motive is pleasure or recreation. It is fun to shop around (Holbrook and Hirschman 1982).

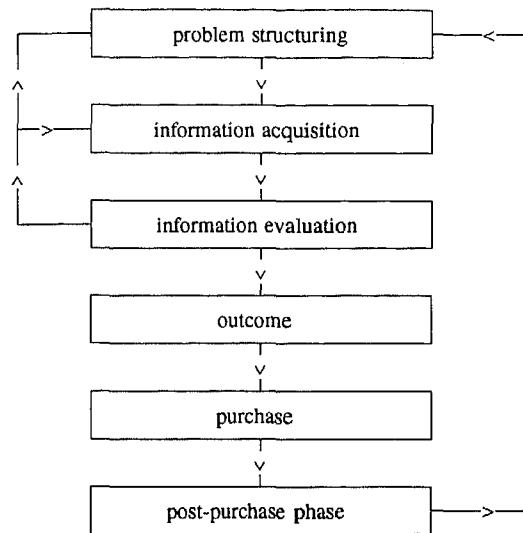


Fig. 1. An iterative model of the decision-making process.

The second difference between extensive problem solving and the iterative decision strategy involves the hierarchical character of the extended problem solving framework (one stage is followed by the next one, and no feedback loops are included). In the iterative strategy three feedback loops are explicitly taken into account (see also figure 1).

Each of the six stages of the iterative strategy with feedback loops will now be discussed briefly. As has already been indicated, a buyer of books has considerable prior knowledge of titles worth considering and about attributes on which an evaluation can be based. This knowledge is used in problem structuring to structure the choice problem if the consumer is considering buying a book (this can be a planned purchase or an impulse). Problem structuring results in a 'problem space' (Newell and Simon 1972; Montgomery 1983) in which the books considered as well as a similarity or a preference structure between these books are represented (Jungermann et al. 1983). This similarity or preference structure is determined by product attributes; in the case of books, examples of product attributes are genre and author.

The problem space provides insight into what information is needed about a book in order to solve the choice problem (Klix 1983; Jungermann et al. 1983). Consequently, the problem space determines which information is acquired next. In figure 1, this is represented by the arrow from problem structuring to information acquisition.

When a consumer uses prior knowledge to structure the choice problem, the next stage of the decision-making process, information acquisition, is

already entered into. Retrieving information from memory is called internal search. Prior knowledge is in most cases not sufficient for making a choice. Both the book supply and the information regarding books change very rapidly. Therefore, knowledge stored in memory rapidly becomes outdated, incomplete and inadequate for making an immediate choice. In these circumstances information is also likely to be acquired from external sources such as reviews, friends whose judgements can be regarded as relevant or the back of the book.

In the third stage of the decision-making process the information acquired is evaluated. In the evaluation stage the attractiveness of an attribute is specified. Decision rules are applied to the attractiveness of the attributes. Two types of decision rules can be distinguished: compensatory and non-compensatory. In a compensatory decision rule, the attractiveness scores of the attributes are combined into an overall attractiveness score for the product (preference). Consequently, the low attractiveness of one attribute can be compensated for by the high attractiveness of another.

In non-compensatory strategies, the attractiveness scores of attributes are not combined into an overall attractiveness of the product. The attractiveness score of a single attribute is either compared with a criterion value or with the attractiveness score of the same attribute on the other choice alternatives. Consequently, low attractiveness cannot be compensated for by high attractiveness.

On the basis of the limited processing capacity of the consumer it can be claimed that a book buyer searches for some information, evaluates it and again searches for more information. The consumer makes intermediate evaluations regarding books on the basis of limited information (Einhorn and Hogarth 1981). In figure 1 this is expressed by the loop between information acquisition and evaluation.

The intermediate evaluations are stored in memory and used to refine the problem space (illustrated by the arrow from information evaluation to problem structuring in figure 1). An example will illustrate this. Because of a negative intermediate evaluation, a product can be eliminated from consideration. Products are a part of the problem space. Therefore the elimination of a product changes the problem space.

Ultimately, the evaluation stage results in an outcome. In terms of the problem space, this means that a particular book is preferred most or that none of the books is good enough. Consequently, a consumer can decide to buy the most preferred book or deliberately postpone a buying decision and wait until a new book is published or detected.

After the product is bought, it is evaluated by comparing expectations with the actual performance (Kamphuis 1992). This comparison determines to what extent an optimal choice has been made. This behavior is described as the post-purchase stage. The evaluation of the chosen product results in

additional knowledge about the product class such as the usefulness of particular attributes in selecting a product for that class. This knowledge is stored in memory and retrieved when a similar choice problem is anticipated. Thus, it affects problem structuring in the next decision-making process. In figure 1 this effect of the post-purchase stage on problem structuring is expressed by an arrow from the post-purchase stage to problem structuring.

Intermediate evaluations make it possible to apply a hybrid or phased decision-making strategy (Bettman 1979; Wright 1975; Stokmans 1991). A phased decision strategy is one in which the consumer can use more than one decision-rule successively. Most empirical studies focusing on phased decision strategies confirmed that the decision-making process consists of an elimination phase followed by a comparison phase (Wright 1975; Wright and Barbour 1977; Van Raaij 1977; Hauser 1978; Sundström 1987; Stokmans 1991). Non-compensatory strategies are used in the elimination phase. Products in the choice set which fail to pass the threshold set for a particular attribute used in the elimination phase are dropped from consideration. In the comparison phase, compensatory strategies are applied to get an overall evaluation of the remaining products. This requires the integration of more information about each remaining product.

This paper focuses on the perceived attributes used in the decision-making process aimed at literary and non-literary fiction written for adults. It is assumed that the decision-making process regarding books consists of an elimination phase and a comparison phase. On the basis of research results obtained on the decision-making process regarding durables and commodities, it can be hypothesized that consumers will use fewer attributes in the elimination phase than in the comparison phase (Bettman 1979).

3. Research method

In order to track down the perceived attributes used in the elimination and comparison phase of the decision-making process, the subjects were explicitly asked to use an elimination phase and a comparison phase successively. (A phased decision-making strategy was simulated.)

3.1. Respondents

The respondents ($n = 50$) were a random sample, selected from the telephone book of Tilburg (the Netherlands) and the immediate surrounding area. The respondents selected had all recently purchased (not longer than six months before) a book belonging to one of the genres included in the study, and were older than sixteen. This was to ensure that the respondents were involved with the product (books), and did not belong to the group of

adults who practically never buy books (62% of adults buy a book less than once a year; *Gids voor de Informatiesector*, 1991). The respondents received a small monetary reward (Dfl. 10,-/US \$5.00).

3.2. *Decision task*

The set of books the respondents could choose from was a sample of literary and non-literary fiction written for adults which was available in the bookstore at the time of the research. In that way, the attributes generated on the basis of this sample of books could be regarded as representative for the attributes usually used in choosing literary and non-literary fiction.

The study was conducted with a sample of 60 books from a large local bookstore. In order to get a representative sample of the aforementioned category of books, a stratified sampling procedure was used. The stratification variable was genre. Some genres were excluded from the sampling-frame, because they were generally purchased by only small groups of consumers ('poetry' for instance). The sample consisted of three groups of genres: literary fiction (novels, short stories; 36 books), romantic fiction (regional novels, family sagas, historical novels and novelettes; 12 books) and 'exciting books' (science fiction, thrillers, detectives, war books, horror, spy novels and adventure stories; 12 books). More titles were included in the genre literary fiction as more heterogeneity was expected to occur in the perception of these titles. All of the books were written by Dutch authors or translated into Dutch, with the exception of six books, written in English.

The respondents were asked to divide the sample of 60 books into two groups: those books which they would definitely not buy and those which he/she might buy. This task was viewed as the elimination phase of the decision-making process. Then the respondents were asked to select a book from the set of books which might be bought. This task was viewed as the comparison phase of the decision-making process.

3.3. *Design and procedure*

The sample of 60 books was presented to the respondent as a whole. The respondents were asked to perform five tasks.

- (1) The respondents were asked whether the book or the author was known to them and whether they had read and or bought a book by the author in question.
- (2) The respondents were told to divide the set of books into two piles: those books which would definitely not be bought by the respondent and those which might be bought. The attributes used in this division were identified in two ways. First, open questions were asked (Why are some books

on the pile 'I might buy' and others on the pile 'I definitely will not buy?'). Subsequently, by indicating which of 50 attributes specified by the researcher were used in dividing the set of books into the two piles. The attributes specified by the researcher had been generated and used in two previous studies (Van Leemans and Maris forthcoming; Leemans and Verdaasdonk 1990). Each of these attributes were presented on a separate card. In order to indicate which attributes were used, the respondents were told to divide the pile into those attributes used and those that were not used.

- (3) The respondents were told to select the most preferred book from the pile 'I might buy'. Again the respondent was asked by means of an open question (Why was this book chosen?) and subsequently by means of the 50 attributes specified by the researcher, to indicate which attributes were used in selecting the most preferred book.
- (4) The respondents were asked to indicate the five most important attributes used in making the final choice. Furthermore, they were asked to rank them according to their importance.
- (5) The respondents were then asked to answer a short questionnaire, on their frequency of reading and the size of the collection of books at home.

In this paper, only the data of the second and third task, the simulation of the decision-making process, will be analyzed.

The identification of the attributes which were used by the respondent in the decision-making process were ascertained by means of both open and closed questions. This was done to ensure that the data would include all attributes used. Respondents usually find it much easier to recognize an already formulated attribute than to formulate one themselves. Furthermore, it is likely that when respondents state that they use an attribute to eliminate or compare a book belonging to the sample of sixty books, they mean that they use this attribute in general: i.e., to eliminate or compare books *not* included in the sample. Consequently, the frequency with which the freely expressed attributes are mentioned is expected to be lower than for those given on a card.

4. Results

The open question on the attributes used yielded a set of 39 attributes which were not already included in the 50 attributes specified by the researcher. The total number of 89 attributes (50 specified by the researcher and 39 generated freely by the respondents) were reduced to a smaller number of attributes. This was accomplished by excluding those attributes which were

used by only a few respondents (less than 10 respondents in the phase where the attribute was used most frequently) and by omitting the value (a negative, neutral and a positive value) attached to an attribute²). This reduction resulted in a list of fifty attributes (see also the appendix, table A1). A number of these attributes were not included in the fifty attributes specified by the researchers.

The number of respondents who used an attribute from the reduced list in the elimination and comparison phase respectively are given in the appendix, table A1. If table A1 is examined, one could argue that some attributes have the same meaning or content. Given the exploratory character of this research, no attempt was made to cluster these attributes. Furthermore, the attributes mentioned by the respondents were derived from the cognitive structure the respondent has regarding books. This cognitive structure determined the exact meaning and interpretation of the attribute. Consequently, one cannot cluster attributes on the basis of an interpretation the researcher may attach to them.

Most of the attributes used by at least 75 percent of the respondents express the degree of the respondent's knowledge about the product class (see table 1). Attribute no. 3 'Genre' for example consists of, among other things, the attributes 'regional novel', 'detective' and 'family saga'. Two exceptions are no. 8 'Recommended by friends or relatives' and no. 10 'Book has been reviewed in the literary section'.

On average the respondents used more attributes in the elimination phase than in the comparison phase (on average 29 attributes in the elimination phase and 12 attributes in the comparison phase).

In the elimination phase, six attributes were used by 92 percent or more of the respondents. In the comparison phase, on the other hand, the percentage of the six most frequently used attributes varied from 62 to 74. Table 1 gives the six most frequently used attributes in the elimination and comparison phase, respectively.

Table 1 indicates that four of the six most frequently used attributes in the elimination phase were also reported as the six most frequently used attributes in the comparison phase. These attributes were: 'You know/don't know the author' (no. 1), 'You are familiar with the author' (no. 2), 'Genre' (no. 3), and 'Theme' (no. 4). The remaining two frequently used attributes in the elimination phase were the attributes no. 5 'You know what to expect from this author' and no. 6 'The book has an interesting theme'. These two attributes were also frequently applied in the comparison phase (by 58% and 44% of the respondents) but were not reported as one of the six most frequently used attributes in this phase. The two attributes which were

² Twenty-three of the thirty-nine freely mentioned attributes (59%) had a negative content (for example 'doesn't like the genre').

Table 1

The six most used attributes in the elimination phase or the comparison phase.

Attribute	Percentage
<i>Elimination phase</i>	
1. You know/don't know the author of the book	100
2. You are familiar with the author's work	100
3. Genre	100
4. Theme	96
5. You know what to expect from this author	96
6. The book has an interesting theme ^a	92
<i>Comparison phase</i>	
4. Theme	74
3. Genre	72
1. You know/don't know the author of the book	66
2. You are familiar with the author's work	64
27. The book is written in a beautiful style	64
7. Style of writing	62

^a This prespecified attribute has the same meaning as no. 4 'Theme (does appeal)'.

frequently used in the comparison phase and were not reported as one of the six most frequently used attributes in the elimination phase were the attributes no. 27 'The book is written in a beautiful style' and no. 7 'Style of writing'.

The only attribute which was used more often in the comparison than in the elimination phase was attribute no. 27 'The book is written in a beautiful style' (third most frequently used attribute in the comparison phase and only the 26th most frequently used attribute in the elimination phase).

The results described thus far, are all absolute frequencies in which the attributes were used within a particular phase in the decision-making process. In order to gain more insight into the probability of an attribute being used in one phase as compared to the other, two findings have to be accounted for. Firstly, more attributes were used in the elimination phase than in the comparison phase. Therefore, the prior probability of a particular attribute being used in the elimination phase was larger than in the comparison phase.

Second, some attributes were used more frequently than others in the total decision-making process (not differentiated according to phases of the decision-making process). Consequently, these attributes have a larger prior probability of being used in either phase.

In comparing the frequency of using an attribute in the phases of the decision-making process, one has to account for these different prior probabilities. Consequently, an expected frequency must be computed based on the aforementioned prior probabilities. The expected frequency indicates the

frequency with which an attribute is used in a phase of the decision-making process, under the restriction that the probability of using an attribute in one phase does not differ from the probability of using the attribute in the other phase.

The difference between the expected and observed frequencies is reflected in a Chi-square value. The Chi-square value for the table which specifies how often each of the 50 attributes was used in the two phases of the decision-making process (included in table A1) is: $\chi^2_{r,48} = 113.87$. This Chi-square value was significantly different from zero ($p < 0.01$). Therefore, it can be concluded that some probabilities of using an attribute in the elimination phase differ from those in the comparison phase. This leaves the question of which attributes have a higher probability of being used in the elimination phase as compared to the comparison phase and reversely. This question can be answered by means of correspondence analysis (see for instance Sikkel and Bethlehem 1981; Matthijs and Daemen 1985).

In correspondence analysis, the attributes as well as the two phases distinguished are presented as points on the same plot (as row- and column-points respectively). The number of dimensions to be distinguished in the plot is in this case arbitrary, as there are only two columns in the matrix, representing the elimination and comparison phase. Consequently, one dimension fits perfectly. The results of the correspondence analysis are given in the appendix, table A2.

The distance between the point and the origin reflects the extent to which the expected frequency of an attribute in either the elimination or comparison phase differs from the observed frequency. The attributes which have a large distance to the origin are given in table 2.

Table 2 shows that eight attributes had a higher frequency of being used in the elimination phase than could be expected, namely the attributes 'Unclear what the book is about' (no. 11), 'The book is not written in Dutch' (no. 20), 'The book or its author received an award' (no. 33), 'Title' (no. 37), 'The book is a literary classic' (no. 34), 'The book belongs to womens' or minority literature' (no. 17), 'Saw the film/TV-series' (no. 44) and 'Good publisher/series from a publishing house' (no. 50). In the comparison phase, four attributes had a higher frequency, namely the attributes 'The book is written in a beautiful style' (no. 27), 'Theme' (no. 4), 'Genre' (no. 3) and 'Style of writing' (no. 7).

5. Discussion and conclusion

The main objective of the research reported in this paper was to identify the attributes used in the elimination and comparison phase of the decision-mak-

Table 2

Attributes primarily used according to the correspondence analysis.

Phases	Attributes
Elimination	11. Unclear what the book is about (13.0)
	20. The book is not written in Dutch (8.0)
	33. The book or its author received an award (6.0)
	37. Title (5.0)
	34. The book a literary classic (4.2)
	17. The book belongs to women's or minority literature (4.1)
	44. Saw the film/TV-series (3.7)
Comparison	50. Good publisher/series from a publishing house (3.3)
	27. The book is written in a beautiful style (12.5)
	4. Theme (5.1)
	3. Genre (3.9)
	7. Style of writing (3.7)

Note: The figure in parentheses represents the percentage of total variance explained by the attribute. Only attributes explaining 3% or more of the total variance are included in this table; each attribute is expected to explain 2% of the total variance if each of the 50 attributes in the list explains an equal proportion of the total variance; i.e., if the frequency of use of each attribute is equal.

ing process regarding literature and non-literary fiction written for adults. In order to do this a two-phased decision-making process was simulated.

The following results deserve special attention.

(i) Most attributes used by at least 75% of the respondents expressed the degree of the respondent's knowledge about the product class or are categories of attributes. In the case of durables most of the attributes used are related to the product itself (Peter and Olson 1987: 106), and less to experiences with the product.

(ii) Contrary to what was expected, the respondents used more attributes in the elimination phase (on average 29) than in the comparison phase (on average 12). The large number of attributes used in the elimination phase can be explained by considering both the choice-set and the decision strategy applied in book buying. In the choice-set 60 books were presented which were quite diverse. Consequently, the respondents had to eliminate a good number of books, before a manageable set was obtained. Furthermore, a particular attribute could only be used to eliminate a very small number of books because that attribute was relevant for only a small number of books. These results support the view that the decision-making process is an iterative process, in which an elimination strategy is applied many times with different attributes until a manageable set is reached (Stokmans 1991).

(iii) Four of the six most frequently used attributes in the elimination phase were also included among the six most frequently used attributes in the

comparison phase (table 1). This does not necessarily mean that the same attributes were used in both phases (or that no distinction could be made between an elimination and comparison phase). One should remember that the list of attributes analyzed was a reduced list of attributes mentioned. The reduction was accomplished by, among other things, omitting the value (a negative, neutral and a positive value) attached to an attribute. It is possible that attributes used mainly in the elimination phase had a negative value. For the attributes used in the comparison phase, on the other hand, no advantage could be reached by using primarily negatively evaluated attributes. By omitting the evaluation of the attribute the difference between attributes used in the two phases of the decision-making process was reduced.

(iv) In the elimination phase the six most frequently used attributes (table 1) were not the attributes which had a higher frequency of being used than was expected in that phase (table 2). On the other hand, the attributes which had a higher frequency of being used in the comparison phase than expected, were also the most frequently used attributes in this phase. These results are less surprising when two other findings are taken into account. Firstly, the respondents used more attributes in the elimination phase than in the comparison phase. Consequently the expected frequency of using an attribute in the elimination phase was higher than the one in the comparison phase. Secondly, four of the most frequently used attributes in the elimination phase were also the most frequently used in the comparison phase.

One can conclude that the results reported above indicate that the decision-making process regarding books differs from the decision-making process often described in literature. These differences can be attributed to the decision task. In the case of books, the number of alternatives one can choose from is extremely large and the choice alternatives are highly diverse.

Furthermore, most of the frequently used attributes express the degree of the respondent's knowledge of the product class. The interpretation and content attached to an attribute is derived from the cognitive structure of the consumer. Consequently, one can expect large individual differences in attributes used.

Appendix

Table A1
Frequencies and percentages of attributes used in the elimination or comparison phase ($n = 50$).

Attribute	Elimination phase		Comparison phase	
	Frequency	%	Frequency	%
1. You know/don't know the author of the book ^a	50	100	33	66
2. You are familiar with the author's work ^a	50	100	32	64
3. Genre ^a	50	100	36	72
4. Theme ^a	48	96	37	74
5. You know what to expect from this author	48	96	29	58
6. The book has an interesting theme	46	92	22	44
7. Style of writing ^a	42	84	31	62
8. The book was recommended by friends or relatives	41	82	12	24
9. You know what the story is about	40	80	22	44
10. The book was reviewed in a literary section	39	78	14	28
11. Unclear what the book is about ^b	39	78	0	0
12. The book gives a gripping description of people or relations between people	36	72	22	44
13. Entertainment book/A pleasant read	36	72	21	42
14. Difficult or easy to read/tough going	35	70	18	36
15. The book has great depth/substance or is too simple ^a	35	70	20	40
16. The book was written by a famous author	34	68	14	28
17. The book belongs to women's or minority literature ^a	33	66	5	10
18. The book broadens the mind	31	62	17	34
19. The appearance of the book ^a	29	58	12	24
20. The book is not written in Dutch ^a	29	58	1	2
21. Good or bad author ^b	29	58	8	16
22. The book is humorous/funny/satirical	28	56	6	12
23. Exciting book	28	56	11	22
24. Saw the author of the book on television	27	54	9	18
25. The book is easy to read	27	54	12	24
26. Cover ^a	26	52	7	14
27. The book is written in a beautiful style	26	52	32	64
28. The price of the book (expensive/cheap)	25	50	8	16
29. The theme of the book links up with the respondent's own experiences; it is recognizable	25	50	7	14
30. The book gives a good picture of history or the future	25	50	10	20
31. The book was written by an author with an international reputation	24	48	10	20
32. Literary book	23	46	10	20
33. The book or its author received an award	23	46	1	2
34. The book is a literary classic	22	44	2	4
35. Book suitable for work or study	21	42	4	8
36. Typical holiday book	20	40	9	18
37. Title ^b	20	40	1	2
38. It is a topical book	18	36	11	22

[continued overleaf]

Table A1 (continued)

Attribute	Elimination phase		Comparison phase	
	Frequency	%	Frequency	%
39. The book is representative of an important trend in literature	17	34	2	4
40. You can finish it quickly	17	34	10	20
41. Book is suitable for reading in bed	17	34	11	22
42. Too long/Long ^b	17	34	6	12
43. It is one of the best books by the author	16	32	2	4
44. Saw the film/TV-series ^b	16	32	1	2
45. A complex book	15	30	5	10
46. The book gives a good picture of modern times	15	30	10	20
47. Curious about the author or book ^b	15	30	6	12
48. The book is value for money	14	28	6	12
49. The book belongs to a popular genre	12	24	6	12
50. Good publisher/series from a publishing house ^b	10	20	0	0

Note: Only attributes which were used by at least 20% of the respondents are included in the list.

^a These attributes have a positive, a negative and sometimes a neutral value: none of the attributes with a negative value were specified by the researchers on the fifty cards.

^b These attributes were not specified at all; the respondents mentioned these themselves.

Table A2
Results of the correspondence analysis.

Attribute	Factor 1	% of explained variance	Rank order of explained variance
1. You know/don't know the author of the book	-0,199		
2. You are familiar with the author's work	-0,183		
3. Genre	-0,245	3,9	9
4. Theme	-0,281	5,1	5
5. You know what to expect from this author	-0,153		
6. The book has an interesting theme	-0,038		
7. Style of writing	-0,258	3,7	10
8. The book was recommended by friends or relatives	0,173		
9. You know what the story is about	-0,106		
10. The book was reviewed in a literary section	0,091		
11. Unclear what the book is about	0,664	13,0	1
12. The book gives a gripping description of people or relations between people	-0,159		
13. Entertainment book/A pleasant read	-0,136		
14. Difficult or easy to read/tough going	-0,073		
15. The book has great depth/substance or is too simple	-0,125		
16. The book was written by a famous author	0,031		
17. The book belongs to women's or minority literature	0,378	4,1	8
18. The book broadens the mind	-0,105		
19. The appearance of the book	0,029		
20. The book is not written in Dutch	0,592	8,0	3
21. Good or bad author	0,195		
22. The book is humorous/funny/satirical	0,281		
23. Exciting book	0,052		
24. Saw the author of the book on television	0,121		
25. The book is easy to read	-0,004		
26. Cover	0,204		
27. The book is written in a beautiful style	-0,533	12,5	2
28. The price of the book (expensive/cheap)	0,138		
29. The theme of the book links up with the respondent's own experiences; it is recognizable	0,189		
30. The book gives a good picture of history or the future	0,044		
31. The book was written by an author with an international reputation	0,026		
32. Literary book	0,006	6,0	4
33. The book or its author received an award	0,573	4,2	7
34. The book is a literary classic	0,483		
35. Book suitable for work or study	0,317		
36. Typical holiday book	-0,010	5,0	6
37. Title	0,561		
38. It is a topical book	-0,159		

[continued overleaf]

Table A2 (continued)

Attribute	Factor 1	% of explained variance	Rank order of explained variance
39. The book is representative of an important trend in literature	0,435		
40. You can finish it quickly	-0,140		
41. Book suitable for reading in bed	-0,189		
42. Too long/Long	0,098		
43. It is one of the best books by the author	0,423	3,7	10
44. Saw the film/TV-series	0,536		
45. A complex book	0,121		
46. The book gives a good picture of modern times	-0,204		
47. Curious about the author or book	0,044		
48. The book is value for money	0,013		
49. The book belongs to a popular genre	-0,060	3,3	11
50. Good publisher/series from a publishing house	0,664		
Elimination phase	0,169		
Comparison phase	-0,384		

Note: The distance between an attribute and the origin is given in column one ('factor'); a positive value indicates that the attribute is used more often in the elimination phase; a negative value means that the attribute is used more often in the comparison phase.

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