Domain-specific market segmentation

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ABSTRACT

In this paper, domain-specific market segmentation is proposed as a promising approach compared with the segmentation based on general and brand-specific variables. Domain-specific variables are active, wheras general and brand-specific variables are passive in the formation of the segments. Product differentiation as the counterpart to market segmentation is modeled in a supply-demand model, related to meaning structure analysis. Domain-specific market segmentation is most effectively done with canonical analysis.

The rule for assigning persons to segments and the criteria for profitable segments are also discussed.

INTRODUCTION

Since the introduction of the concepts of product differentiation and market segmentation by Wendell Smith in 1956, marketing researchers recognize differences between groups of consumers to be opportunities in the market. Market segmentation is not only the subdivision of a (consumer) market in homogeneous subgroups. The subgroups, the segments that are distinquished must form a sound basis for product and communication policy. Market segmentation is then the counterpart of product differentiation. Product development and marketing communication can be aimed and focussed at specific segments in the market.

More attention has been given to market segmentation than to its counterpart: product differentiation. Product development and improvement should be related to the preferences of homogeneous groups of consumers. Only in a market of scarcity products may be developed for 'everyone' in the market. In more developed markets products should be adapted to the desires of large and small subgroups in the market.

How then to identify viable market segments or types of people as target groups for marketing activities?

The main question we address in this paper is how fruitful several approaches are to identify market segments. At which level of abstraction should one identify market segments? How are market segments related to differentiated products and services?

In order to do so, we will first review the approaches to segment markets. Then the domain-specific segmentation approcach, the segmentation methodology and techniques as well as the evaluation of segmentation outco-

mes will be discussed.

In market segmentation research a number of decisions have to be made. We will discuss the major decision points involved in such a study, such as:

*   What person characteristics are chosen to categorise people?
*   What decision to make on the segmentation method?
        We will also address application issues, such as:
*   How to evaluate the outcomes of a segmentation study.
*   How to implement the market segmentation results in marketing policy: in product differentiation and communication policy aimed at one or more market segments.

SEGMENTATION VARIABLES

Social class used to be a major segmentation variable. Now society has become less vertically organized with more buying power across larger layers of society, the social class concept has lost its unique segmentation value. Other demographic variables such as age, family type, education, often easier to operationalize, are used in addition. As buying power and social class have lost their discriminative power at a brand level, other more psychological characteristics such as values and attitudes are being used as a basis for segmentation.

In table 1, the segmentation variable are classified according to their objective versus subjective character. Objective variables are measured or registered without much disagreement among researchers. It includes census data, scanning data, and consumer panel data on substitution and brand switching.

Subjective variables are normally measured in surveys and interviews. It includes the perceptions, evaluations, lifestyle, attitudes, and intentions of consumers.

The second dimension of table 1 concerns the level of generality of the variables. At the most general level, stable behavioral patterns, person characteristics, lifestyle, and values are the basis for market segmentation. These variables are largely stable and permanent characteristics of consumers. A market segmented according to these variables provides segments that apply in principle to all products and services.

Table 1. Classification of segmentation variables.

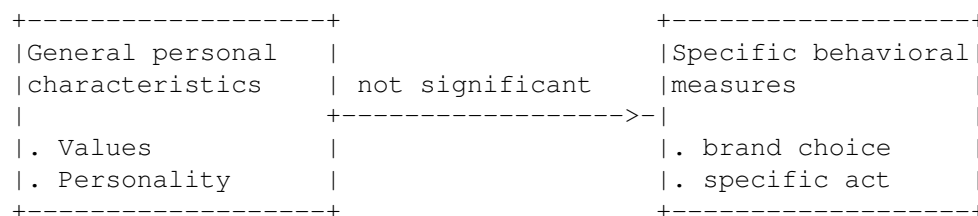|	Objective	Subjective
A. GENERAL	- income	
(behavioral	- age	- life-style
patterns;	- education	- personality
person	- behavioral	- general values

```
characteristics     |     patterns        |
------------------+---------------------+-----------------------
B. DOMAIN-          | - situation         | - opinions
   SPECIFIC         | - frequency of use  | - perception
(product-class      | - substition        | - attitude
 usage)             | - behavior          | - domain-specific
                    |                     |   values
------------------+---------------------+-----------------------
C. BRAND-           | - brand loyalty     | - brand loyalty
   SPECIFIC         |    (behavior)       |    (attitude)
(brand-usage)       | - frequency of use  | - preference
                    | - actions           | - evaluation
                    |                     | - purchase intention
------------------------------------------------------------------
```

   At the domain-specific level, variables relate to domains of behavior and their related product classes. A market segmented according to domain-specific variables pertains only to a domain where one product class or related product classes play a role, e.g., vacations, automobiles, or banks.

   At the specific level, variables pertain to brands and brand usage. A segmentation at this level will lead to brand attribute evaluation segments, relevant to product managers and retailers in these areas.

   In this article, we argue that in general the domain-specific level is the most feasible level of segmentation, providing the most meaningful results. Segments at the general level are unlikely to provide meaningful predictions on product usage, while segments at the specific level are too detailed to be relevant. However, general-level segments may be useful for marketing-communication purposes, while specific-level segments may be useful for product managers and product improvement.

Figure 1. Person characteristics and corresponding behavior.

```
+------------------+                    +------------------+
|General personal  |                    |Specific behavioral|
|characteristics   | not significant    |measures          |
|                  +----------------->-|                  |
|. Values          |                    |. brand choice    |
|. Personality     |                    |. specific act    |
+------------------+                    +------------------+
```

   From consumer studies and from psychology we may expect general person characteristics not to be good variables to predict specific behavior in the market and hence not a good base for segmentation purposes. See figure 1 for an example.

   As alternative variables specific attitudes and opinions are suggested. In comtemporary attitude theory (Fishbein and Ajzen, 1975) it is agreed that for a maximum correspondence between a person characteristic and

a behavioral variable both have to be defined in similar elements with regard to time, context and target at which the behavior is directed. Often this has been operationalized in studies as the need to very precisely describe attitudes and corresponding acts. However, the more defined the context is in which an act (brand choice) has to be explained, the less attractive it is for a researcher to measure corresponding attitudes. Why not measure behavior directly then? Recent theorising (Weigel and Newman, 1976; Foxall, 1983; Verhallen and Pieters, 1984) argues for broadening the scope of the behavioral measure into a behavioral category or a behavioral domain or field.

Also in segmentation studies there has been a plea to choose a middle level of generalisation somewhere between general behavioral measures and act-specific measures: the domain-specific segmentation approach. A domain can be described as an area of behavior that is aimed at the same goal: vacation, dieting, traveling, etc. In figure 2, this theoretical idea with regard to the relationship between person characteristics and behavioral measures is depicted.

Figure 2. The intervening role of domain-specific variables.

```
                         +-----------------+
            +--------->--| DOMAIN-SPECIFIC +-->-------+
           S|            |     VALUES      |          |S
            |            +-----------------+          |
            |                                         |
     +-----------+                         +-----------------+
     | GENERAL -+--------------------------| SPECIFIC PRODUCT |
     | VALUES   |            NS            |    EVALUATION    |
     +-----------+                         +-----------------+
```
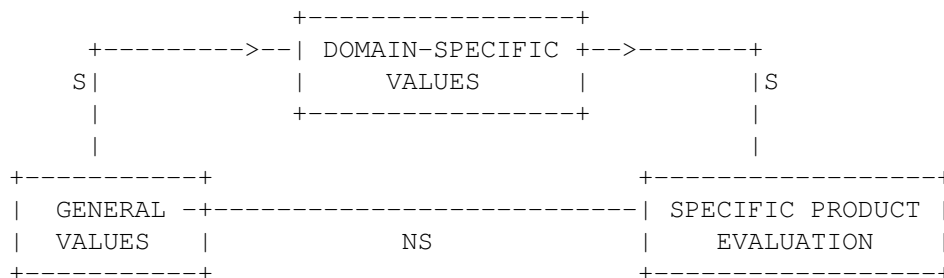
Note: S: significant relationship.
      NS: non-significant relationship.

In order to explain specific behavior, values and attitudes with regard to the behavioral domain will better explain than general personal values. Results from a small scale study may clarify this, see figure 3.

Figure 3. Breakfast example.

```
        +---->----------- BREAKFAST ------>-------+
       S|                  VALUES                 |S
        |                                         |
     GENERAL ----------------------------> BREAKFAST PRODUCT
     VALUES                  NS               EVALUATION

----------------------------------------------------------------
    (domain-specific)           |      (domain-specific)
  +-> Breakfast: fast >-+        |   +> Breakfast: extensive >+
 S|                 |S       |  S|                          |S
```
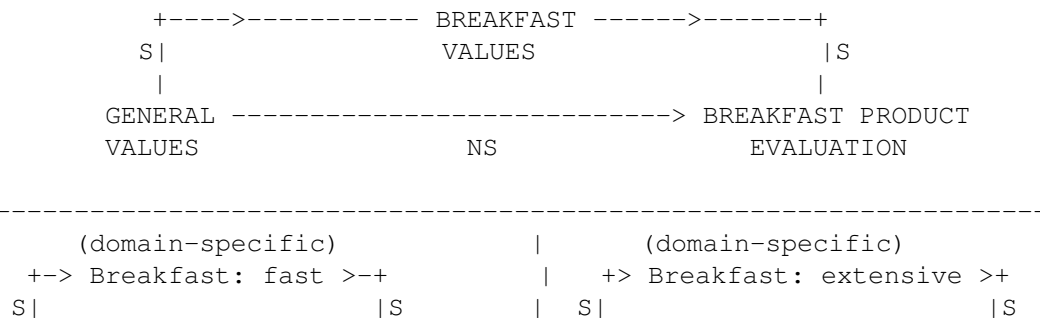
```
  |                     |       |  |                              |
Life:      NS    Margarine:      |  Life:      NS    Margarine:
ambitious ------> spreadability  |  family ---------> taste
(general)        (specific)      |  security          (specific)
                                 |  (general)
-----------------------------------------------------------------
```

SITUATION

The role of situation in consumption has become more important. Products and brands are selected not only baed on personal preference, but as a combination of preference and fit to the situation.

Five types of situations can be distinguished:
1.   Purchase situation;
2.   Usage situation as part of the service (actively sought), example Club Méditerranée;
3.   Usage situation as anticipated with the purchase;
4.   Usage situation as a behavioral domain;
5.   Usage situation as a context (passive).

The purchase situation is clear. Package, price and other point-of-sale information is dominant at this situation, whereas other attributes and benefits may dominate the usage situations.

The usage situation is often part of the purchase of services. The servive is often 'consumed' at the spot. Time and place play a dominant role in the evaluation of the service, such as the atmosphere of a restaurant or the friendliness of the personnel.

With many purchases one anticipates the usage situation. How would it be to drive this car? Which impression will this Château Neuf du Pape make on the visitors? Will my guests appreciate this restaurant? Will my mother like these flowers? Products are often bought for special occasions and for gifts. The usage or gift presentation situation will then be anticipated.

The usage situation is also a behavioural domain. We talk about breakfast, recreation, and body-care products, referring to a domain of consumption. This is both an opportunity and a constraint for products. If cheese is perceived as a breakfast product, this is a barrier to promote cheese as a snack, cheese with dinners or other usage situations.

Finally, the usage situation may be a context. In the context of environmental concern, consumers may make other product selections than in the context of efficiency. Attributes become salient and brands become 'fit' depending on the context.

Segmentation can thus be based on situations and person/situation interactions. See Mischel (1979) for this interactionist approach.

PSYCHOGRAPHICS AND BEHAVIOR

The LOVS (Kahle, 1983), the VALS (Mitchell, 1983) and the Rokeach (1973) values represent two approaches to the use of psychographics in advertising and marketing research. Psychographic variables are at the general level. The LOVS and Rokeach values use the scores of people on the separate scales to relate to verbal or overt behavior measures such as brand choice. The VALS represent the typology approach in which score patterns are made per individual. Groups of people with similar value and lifestyle score patterns form the types that are being distinguished. These types are then compared with one another on behavioral characteristics (forward segmentation).

These value approaches provide the overall value orientations of segments of consumers. But missing are the linkages of these values to product characteristics and benefits.

Both these approaches are well-known in mainstream psychology and denoted as the personality trait and the personality type approach. In personality psychology a lot of theorising and research has been devoted to the fruitfulness and predictive power of personality scales such as the Gordon Profile, the Edwards Personal Preference Schedule. See e.g. Edwards (1970). Recently it is recognised that such personality scales and personality types, except in psychopathological cases, do not explain behavioral differences very well. In personality psychology therefore the interaction of situation and personality is advocated as alternative for the traits/type approaches to personality (Mischel, 1979).

The general conviction nowadays is that general personality characteristics are not very well suited to explain specific behavioral differences. This same conclusion has also been drawn for the area of consumer behavior decennia ago by Van Veldhoven (1973). In reviews such as Kassarjian's (1971), it is concluded that at most 10% - others mention 2 to 5% - of behavioral differences such as differences in brand choice can be explained on the basis of general personality variables. For elaborate examples of such early studies see Evans (1959) and Koponen (1960).

In this small scale study both general personal values were measured as well as the same values hold with regard to breakfast. Also the evaluation of breakfast products such as margarine was assessed.

General values corresponded significantly with domain-specific (breakfast) values, but not with product evaluations. These breakfast evaluations correlated significantly with the specific product evaluations.

It was found for instance that housewives scoring high on family security as an important general life value wanted to have an extensive

breakfast: the whole family at the table, completely with dishes, teapot and all other things. Persons wanting an extensive breakfast rated taste as an important characteristic for margarine. However, family security did not correlate directly with taste importance for margarine. Another example from the same study: the general value 'ambition' correlated highly with a fast breakfast which correlated significantly with spreadability of margarine. A direct relation between the general value and the specific product evaluation could, however, not been found.

These studies lead to the following conclusions:

–   General personal values/typologies do not correlate sufficiently with specific market behavior, domain-specific values however do.

–   General values and life-style types are interesting additional characteristics to describe people.

We may conclude from this that variables can be classified in three categories:

1.   <u>General person characteristics:</u> General personality types, general personal values are suited for a further description people and be used as passive segmentation variables.

2.   <u>Domain-specific characteristics:</u> Domain-specific values, domain-specific attitudes and domain-specific person characteristics are suited as <u>active</u> segmentation variables.

3.   <u>Specific characteristics:</u> Brand usage/preference effect of situation. The problem is the generalizability of the segmentation. Again, specific variables can be used as passive segnmentation variables.

MARKET SEGMENTATION AND PRODUCT DIFFERENTIATION

The three levels of variables, the general, domain-specific and specific level, can be used for product differentiation (A) and for market segmentation (B). See figure 5.

A. On the supply side (product differentiation) we distinguish products and product characteristics.

The <u>product</u> column consists of brands at the specific level, product classes at the domain-specific level, and goods categories at the general level. A product class is a set of products and product types that have same or similar functions. These products are substitutes for each other. Product classes may also be complementary within a domain. In this sense, detergents and fabric softeners are complementary product classes within the domain of washing. Often consumers perceive product classes differently than producers. They might also perceive different substitutions and complementarities than producers. From our prespective, the consumer orientation is

more relevant. With higher product involvement, consumers often define more precise domains and product classes.

Product characteristics have a column related to a means-end chain. At the specific level physical and psychosocial product attributes give rise to functional and psychosocial consequences or benefits (Haley, 1968, 1971). And consequences give rise to utility. An example may clarify this. A automobile possesses an econometer (a physical attribute). This gives rise to economical driving (a functional consequence or benefit). Economical driving leads to utilities such as less air pollution, lower use of fuel, and the saving of money.

Based on the positive consequences (benefits) markets may be segmented. Haley (1968) gives the example of the toothpaste market. The principal benefits people seek in toothpaste are: nice flavor and product appearance, brightness of teeth, decay precention, and price. Price is however not a benefit but a cost (negative consequence) consumers like to reduce, especially for the price conscious or independent (as Haley calls it) segment. Note that price consciousness and independence are consumer values. Haley (1968) further states that flavor and product appearance are sought by highly self-involved consumers. Brightness of teeth is sought by sociable consumers. Decay prevention is important for the 'worriers', people that are concerned about their health.

Brand positioning is also often based on consequences or product benefits. The selected positioning may then be 'proven' with the relevant technical product attributes or related to values and utility. Brand positioning is a kind of product differentiation and should be related to market segmentation.

The means-end chain of product characteristics resembles a meaning structure "ladder" (Reynolds and Gutman, 1984). In meaning structure analysis, however, attributes lead to consequences, and consequences lead to values. In our case, consequences lead to utility, which is an interaction of product characteristics and values.

B. On the demand side (market segmentation) we distinguish consumer evaluations and consumer behavior.

Consumer evaluations consist of three levels. At the specific level product attributes are evaluated in terms of favorable/ unfavorable, according to the model of Fishbein and Ajzen (1975). Attitudes are not related to attributes but to products or the consequences of using a product or a service. More general than attitudes are values. Values are independent of concrete objects and more stable and permanent than attitudes.

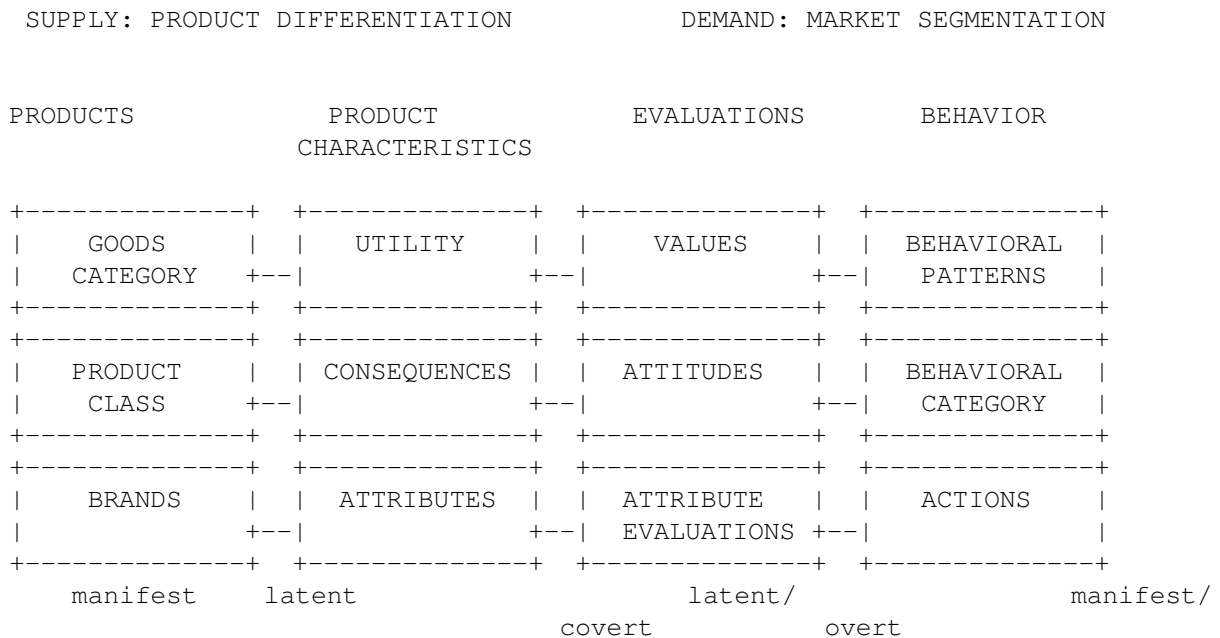Three levels of behavior can be distinguished: single acts, behavio-

ral, categories and behavioral patterns. Single acts or actions are specific acts, described in time and space, such as taking Ajax detergent from the shelf or putting the thermostat down. Single acts can normally be observed as they involve body movements.

A behavioral category is a set of actions which have at least one consequense or outcome in common, e.g., buying behavior, or energy saving (Verhallen and Pieters, 1984). Behavioral categories cannot be observed directly. They have to be inferred from specific acts. It is for instance not possible to observe consumer energy conservation. Energy related behavior can be observed. It depends on the context, the common consequence or goal, and/or the intentions of the person, whether these acts belong to a behavioral category "energy conservation".

Fishbein and Ajzen (1975) combine several single acts into a behavioral category by simply counting them. The resulting multiple act index can include a weighing factor: $M = Ó$ (actj * weightj).

A disadvantage of this method is that single acts are counted irrespective of their intercorrelation, assuming the unidimensionality of the acts.

Figure 5. Product differentiation and market segmentation.

```
 SUPPLY: PRODUCT DIFFERENTIATION        DEMAND: MARKET SEGMENTATION


PRODUCTS          PRODUCT           EVALUATIONS        BEHAVIOR
                  CHARACTERISTICS


+-------------+  +-------------+  +-------------+  +-------------+
|   GOODS     |  |   UTILITY   |  |    VALUES   |  | BEHAVIORAL  |
|  CATEGORY  +--|             +--|            +--|  PATTERNS   |
+-------------+  +-------------+  +-------------+  +-------------+
+-------------+  +-------------+  +-------------+  +-------------+
|   PRODUCT   |  | CONSEQUENCES|  |  ATTITUDES  |  | BEHAVIORAL  |
|    CLASS   +--|             +--|            +--|  CATEGORY   |
+-------------+  +-------------+  +-------------+  +-------------+
+-------------+  +-------------+  +-------------+  +-------------+
|   BRANDS    |  |  ATTRIBUTES |  |  ATTRIBUTE  |  |   ACTIONS   |
|            +--|             +--| EVALUATIONS +--|             |
+-------------+  +-------------+  +-------------+  +-------------+
   manifest   latent                latent/               manifest/
                                    covert       overt
```

At the general level, behavioral patterns encomprise several behavioral categories with a common denominator. Lifestyle, defined as a set of related behavioral activities, belongs to this level. Behavioral patterns are relatively stable and invariant over time.
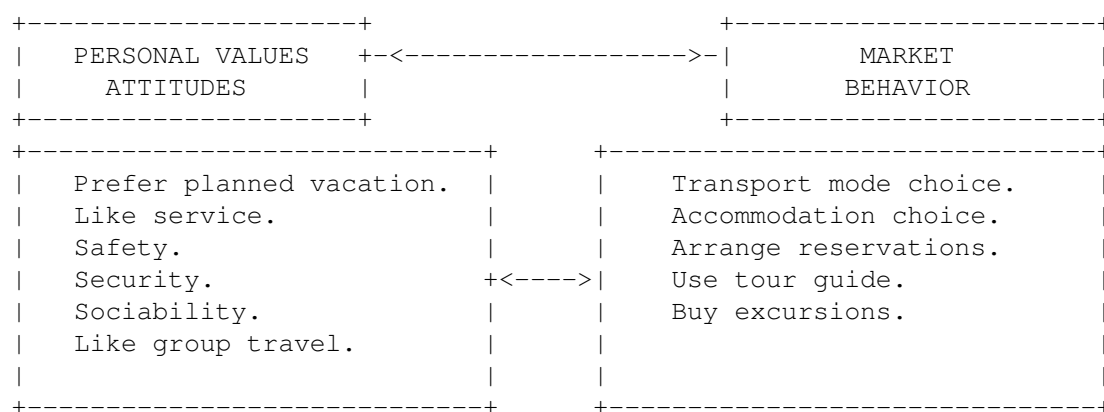
SEGMENTATION METHODS

Three approaches to segmentation can be distinguished: forward, backward, and simultaneous segmentation.

In the forward segmentation approach, the analysis starts with consumer characteristics. Here, consumers are assigned to groups by their similarity in one or more consumer characteristics. Subsequently, the differences between the groups are related to behavioral differences. Two types of consumer characteristics are distinguished: general characteristics, such as sex, age, stage in life cycle, lifestyle, or personality; and situation-specific consumer characteristics, such as attitudes, opinions, perceptions, and preferences.

In the second approach, backward segmentation or the analysis of consumer response, consumers are assigned to groups on the basis of their similarity in behavioral response to the supply of goods and services. Subsequently, the differences between the groups are related to general and/or object- and situation-specific consumer characteristics.

In the third approach, the simultaneous analysis of consumer characteristics and consumer response, consumers are assigned to groups on the basis of the relationships between consumer characteristics and the behavioral response to the supply of goods and services.

Figure 6. Simultaneous segmentation (Example: the organized vacation).

```
+--------------------+                          +----------------------+
|  PERSONAL VALUES   +-<------------------>-|    |        MARKET        |
|    ATTITUDES       |                      |    |       BEHAVIOR       |
+--------------------+                          +----------------------+
+----------------------------+      +------------------------------+
|  Prefer planned vacation.  |      |  Transport mode choice.      |
|  Like service.             |      |  Accommodation choice.       |
|  Safety.                   |      |  Arrange reservations.       |
|  Security.            +<---->|    |  Use tour guide.             |
|  Sociability.              |      |  Buy excursions.             |
|  Like group travel.        |      |                              |
|                            |      |                              |
+----------------------------+      +------------------------------+
```

In each approach, consumer characteristics are assumed to be relevant to the explanation of consumer response. Traditionally, the successive approaches, i.e., forward and backward segmentation, were used to specify segments. However, with canonical analysis the relationship between consumer characteristics and consumer response can be established directly (Kuylen and Verhallen, 1981).
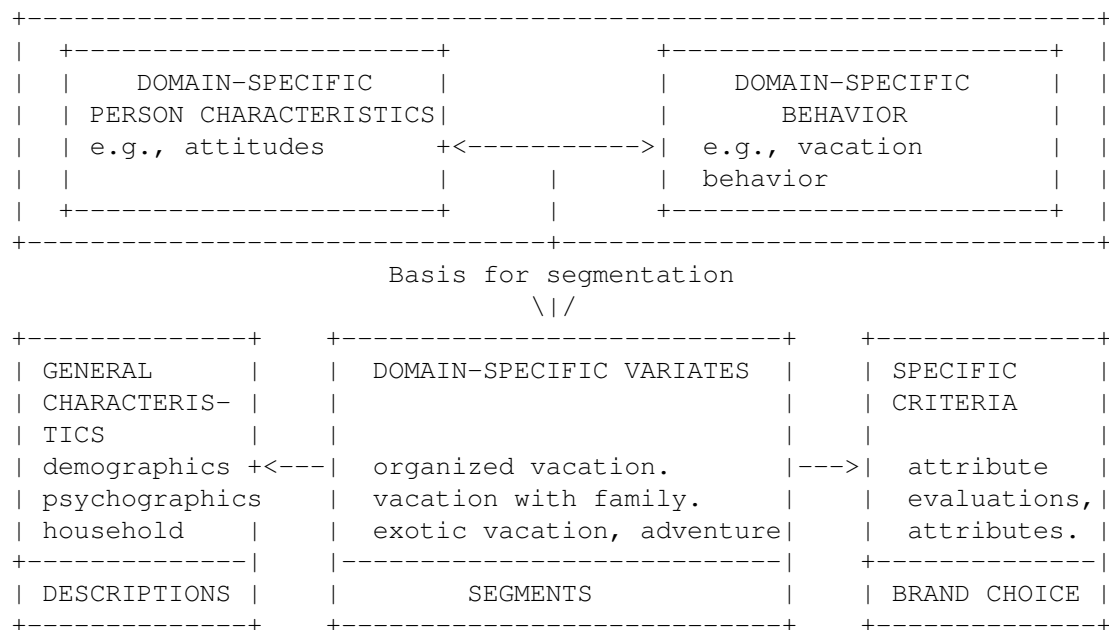
In figure 6 an example from such a simultaneous segmentation study is given. Oppedijk van Veen and Verhallen (1985) used canonical redundancy

analysis on vacation behaviors on one hand and domain-specific (vacation) motives and attitudes on the other hand. The first canonical variable or factor was "the organized vacation", comprising of behaviors such as using organised transport: bus, train, or airplane and corresponding values and attitudes such as "one should participate in organized excursions" or "service is important". These behavior-value combinations proved in this study to be a fruitful basis for vacation segmentation.

THE SEGMENTATION MODEL AND SEGMENTATION PROCEDURE

In the foregoing the use of general and domain-specific person charac-teristics were discussed in relation to segmentation. It is further argued to use the domain-specific person characteristics as <u>active</u> segmentation variables in conjunction with domain-specific behavioral measures. This leads to the segmentation model described in figure 7.

<u>Figure 7</u>. Domain-specific segmentation model.

```
+-----------------------------------------------------------------+
|  +----------------------+          +-----------------------+  |
|  |    DOMAIN-SPECIFIC    |          |    DOMAIN-SPECIFIC    |  |
|  | PERSON CHARACTERISTICS|          |       BEHAVIOR        |  |
|  | e.g., attitudes       +<---------->|  e.g., vacation      |  |
|  |                      |    |     | behavior             |  |
|  +----------------------+    |     +-----------------------+  |
+------------------------------+----------------------------------+
              Basis for segmentation
                       \|/
+-------------+   +--------------------------+   +-------------+
| GENERAL     |   | DOMAIN-SPECIFIC VARIATES |   | SPECIFIC    |
| CHARACTERIS-|   |                          |   | CRITERIA    |
| TICS        |   |                          |   |             |
| demographics +<---| organized vacation.     |--->|  attribute  |
| psychographics   | vacation with family.    |   | evaluations,|
| household   |   | exotic vacation, adventure|   | attributes. |
+-------------|   |--------------------------|   +-------------|
| DESCRIPTIONS |   |         SEGMENTS          |   | BRAND CHOICE |
+-------------+   +--------------------------+   +-------------+
```

The basis for the proposed segmentation approach is then to relate domain-specific person characteristics with the domain-specific behavioral measures. By including the person characteristics simultaneously with the behavioral measures, the segments found are per definition as predictive in terms of behavioral criteria as possible. Canonical correlation analysis on these variables provides a canonical variates solution. A variate is compo-sed of a predictor part (domain-specific person characteristics) and a criterion part (domain-specific behavioral measures). To interpret the variates, canonical loadings (contrary to canonical weights) can be used

(Kuylen and Verhallen, 1981).

Grouping persons into segments may occur in several ways. Segments can be found by using a cluster algorithm on either the predictor or the criterion variate scores.

Clustering directly on variate scores, however, does not necessarily preserve the correspondence between person and behavioral characteristics, as computed by canonical analysis. In order to avoid this disadvantage, two alternative approaches, using assignment rules, can be followed.

The first alternative approach is to define segments by using one canonical variate at a time. Segments are defined on the basis of the highest loading variables at each canonical variate, i.e. on the criterion or predictor part of the variate.

Since the variates are bipolar, two possible segments can be defined, for each variate. Assuming a canonical correlation solution with significant variates leads to defining six (3 times 2) segments. A consumer belongs to a segment if he or she scores positively (or negatively) on all defining variables. If a person does not score extreme on a variate, the consumer is not assigned to segments based on this variate.

The second approach differs from the first in assigning consumers to segments based on the variate scores of all the variates together. Suppose a canonical correlation analysis reveals a three-variate solution. For theoretical purposes, the assumption of a consistent relation between the predictor and criterion variate part on each variate is made.

Segments can be defined now on the basis of either a positive or a negative variate score on each variate. Applying this assignment rule, eight possible segments and one rest segment (with consumers who do not meet the assumption of a consistent relation between the predictor and criterion variate part on each variate) can be defined. See table 2.

Table 2. Defining eight segments on the basis of an assignment rule.

	Variate 1	Variate 2	Variate 3
Segment 1	+	+	+
Segment 2	+	−	−
Segment 3	+	_	+
Segment 4	+	+	−
Segment 5	−	+	+
Segment 6	−	−	−
Segment 7	−	−	+
Segment 8	−	+	−

Rest segment

The plus-sign indicates a positive variate score, wheras the negative sign indicates a negative variate score.

A consumer belongs to segment 1, if he or she has a positive variate score on variates 1, 2 and 3. By assuming a consistent relation between the predictor and criterion variate part on each variate, not all consumers can be assigned to a segment. In the rest segment consumers with only one or two consistent variate relations will be present. If this rest segment becomes too large, a cluster algorithm is used to assign these consumers to one of the segments. Mean variate scores of each segment are used as starting points in the cluster algorithm (Research International Nederland, 1989, unpublished material).

In defining segments a choice can be made between assigning consumers to only one segment or to allow overlap between segments.
By allowing overlap it is possible to account for a large variety of person and behavioral characteristics with only a small number of segments. Over-lapping segments result in a more differentiated and more complete descrip-tion of the individual consumers.

CONSTRUCTING A TYPOLOGY

The segments are formed on the basis of the active domain-specific variables. A further richer description of the segments can be obtained by crossing the segments with passive variables. These may be either general or specific variables.

In order to construct a typology, the segments based on the domain-specific segmentation approach should be further described and typified by crossing them with all other variables, i.e. with psychographics (LOVS, VALS, Rokeach), demographics, socio-economics, media exposure, and specific product and brand attitudes, or evaluations. A full description of each segment in terms of all sorts of characteristics is then obtained.

EVALUATION CRITERIA

A number of criteria have to be met in developing feasible segments for marketing policy. The following criteria are mentioned in the literatu-re. See Frank, Massy and Wind (1972) for a number of these criteria.

– _Measurability_: Identification of segments in terms of differences in individual and household characteristics or other 'measurable' cha-racteristics should be possible.

- <u>Accessibility</u>: Segments should differ in the usage of specific behavior. Segments are being reached in a 'communicative and distributive' manner. Segments should react differently to communicative, promotional, distributional and product-related stimuli.
- <u>Substantiality</u>: Segments should be of sufficient size for enabling specific marketing actions.
- <u>Stability</u>: The segments should be relatively stable over time. Also, switching of consumers from one segment to another shouldn't happen too often (stability at an individual level).
- <u>Congruity</u>: Homogeneity within segments in terms of behavioral responses.
- <u>Variation</u> (Engel, Fiorillo and Cayley, 1972): Heterogeneity between segments in terms of behavioral response.
- <u>Identification:</u> Differentiation of segment from other segments.
- <u>Potentiality:</u> The segments should have enough potential for marketing objectives, e.g. profitability.

These criteria can be met using a proper segmentation methodology inclusive a retest study to investigate the stability of the segments.

The discriminative power of the segmentation can be assessed by comparing the segments on specific criteria in the market such as brand choice, brand evaluations and brand attribute importance ratings. This provides the researcher with an independent criterion for the validity of the obtained segments.

CONSTRUCTION OF SEGMENT-SPECIFIC ASSIGNMENT RULES

Segmentation outcomes provide the policy maker with a differentiated view of the consumer market. The segments found may indicate possibilities for new products and better ways to communicate about products. In order to ensure that changes in market structure can be monitored, it is advisable to construct a device, a short questionnaire, that may easily identify people as belonging to a specific segment. Based on this an assignment rule has to be constructed.

For each segment an unique profile can be constructed. By selecting only those variables on which the segment mean scores differ significantly form the overall mean scores (for all segments together), a segment can be typified. The domain-specfic behavioral and/or person variables should be the first variables to be taken into account for selection. Using these profiling variables a segment-specific assignment rule can be developed. Identification of segments based on only a few (domain-specific) variables will be possible. This quick identification offers opportunities to monitor

the market in an efficient way. The number of persons in each segment can be followed over time using a panel set-up.

DISCUSSION

In most markets, there is – from the marketing managerial point of view – an obvious need for market segmentation in order to cope with th large diversity of specific behaviors.

The aim of market segmentation is to find homogeneous subgroups of people with different patterns of behavior and different preferences. These subgroups should be large enough for a differentiated marketing approach, and should be reachable for advertising and distribution.

Too often an unspecific segmentation approach is followed based on general person characteristics. The predictive value of such an approach and the stability over time of segments constructed on this basis is often not fully assessed.

General psychographics such as LOVS, VALS and Rokeach, turn out to be not very well suited to predict specific behavior and hence form no good active segmentation descriptors of people and therefore should be used as purely passive market segmentation variables.

In the present paper an approach to segmentation has been outlined with the following characteristics:

- The usage of domain-specific characteristics as active segmentation variables.
- Simultaneous segmentation on both domain-specific behavioral measures and domain-specific person characteristics. For this, canonical analyses techniques are advocated. Latent budget analysis has been proposed as an alternative to canonical correlation analysis also based on the simultaneous segmentation approach.
- The usage of general psychographic variables as passive, descriptive characteristics to typify people after the segments have been constructed.
- The construction of an assignment rule to easily identify people as members of a segment may also be recommended.

Following this route in segmentation, an alternative to life style segmentation is offered. The idea of staying as closely as possible in a product area ensures that strategic marketing decisions can be based on specific market knowledge.

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