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MARKET SEGMENTATION:

HOW TO ?

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INTRODUCTION

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

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

Recently psychographic characteristics have become en vogue to typify and to describe groups of people. How fruitful are these psychographic variables, these personal values and value-systems to describe people and to explain behavioural differences such as brand choice?

The main question we address in this paper is how fruitful psychographic variables are to identify market segments and annex to this: how fruitful are psychographic typologies for segmentation purposes.

In order to do so, we shall first inventory what approaches there exist to do segmentation research and then evaluate the use of psychographic variables and personal typologies based on such variables.

SETTING UP A MARKET SEGMENTATION STUDY: DECISION POINTS

In both typology and market segmentation research a number of decisions have to be made. We shall discuss the major decision points involved in such a study.

1. What person characteristics are chosen to typify people?
 - 1.1 The decision on active segmentation variables
What person characteristics, demographics, psychographics serve as a basis to discriminate persons into segments or types.
 - 1.2 The decision on passive variables
What other person characteristics can be involved in a study to describe and further typify the different segments or person types
2. The decision on the segmentation method
 - 2.1 What type of segmentation methodology can be used: the forward, backward or simultaneous segmentation method.
 - 2.2 This affects the choice of segmentation techniques such as factor and cluster analyses in view of the segmentation purposes.

3. How to evaluate the outcomes?

3.1 What criteria do we use to evaluate the outcome, the fruitfulness of a typology or segmentation study.

Demands such as:

- a) insightful types
 - b) sufficiently large subgroups
 - c) stability and homogeneity of segments found
- have to be met for a successful study.

3.2 Implementation

How to implement the typology or segmentation results in marketing policy: in product differentiation and communication policy aimed at one or more market segments.

This paper is only concerned with the theoretical issues. Point 3 will not be elaborated here, as other speakers will address this more elaborately. From Point 2.2, only main issues will be discussed here. For further elaboration on this point, see Verhallen, Van Onzenoort and Barzilay (1989).

1. THE DECISION ON SEGMENTATION VARIABLES TO INCLUDE

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

1.1 GENERAL PSYCHOGRAPHICS

Recently the VALS and LOVS types are being introduced in market research. The usage of psychological characteristics to typify people has a long tradition in psychology. Personality types such as the introverts and the extraverts go back to early psycho-analysis. More recently types, such as the A and B types, are introduced in the stress literature. In personality psychology many of these types and even more scales to measure them are used in extenso for instance in a book such as Robinson and Shaver (1985) we find among others:

- Survey of Interpersonal Values (Gordon)
- Personal Value Scales (Scott)
- Value Profile (Bales and Couch)
- Dimensions of Values (Withey)
- Changes in Moral Values (Retting and Pasamanick)
- Inventory of Values (Ewell)
- Value Survey (Rokeach)
- Ways to Live (Morris)
- Test of Value Activities (Shorr)
- Variations in Value Orientations (Kluckhohn and Strodtbeck)
- Many others

All of these scales have been heavily researched at in the social sciences. In marketing research the most popular personal value characteristics are the VALS and the LOVS. The list of values (LOVS) from Kahle, 1983, consists of the following personal values:

- Self-respect
- Security
- Warm relationships with others
- Sense of accomplishment
- Self-fulfillment
- Sense of belonging
- Being well respected
- Fun and enjoyment in life
- Excitement

People are asked how important these values are for their lives. This list is a subset of a more complete list of Rokeach (1973) which consists of a list of 18 terminal values and 18 instrumental values. The terminal values measure the relative importance of goals people have in their lives, the instrumental values express the importance of ways of behaving in reaching these goals.

Rokeach Value Survey

Instrumental values

- Ambitious
- Broadminded
- Capable
- Cheerful
- Clean
- Courageous
- Forgiving
- Helpful
- Honest
- Imaginative
- Independent
- Intellectual
- Logical
- Loving
- Obedient
- Polite
- Responsible
- Self-controlled

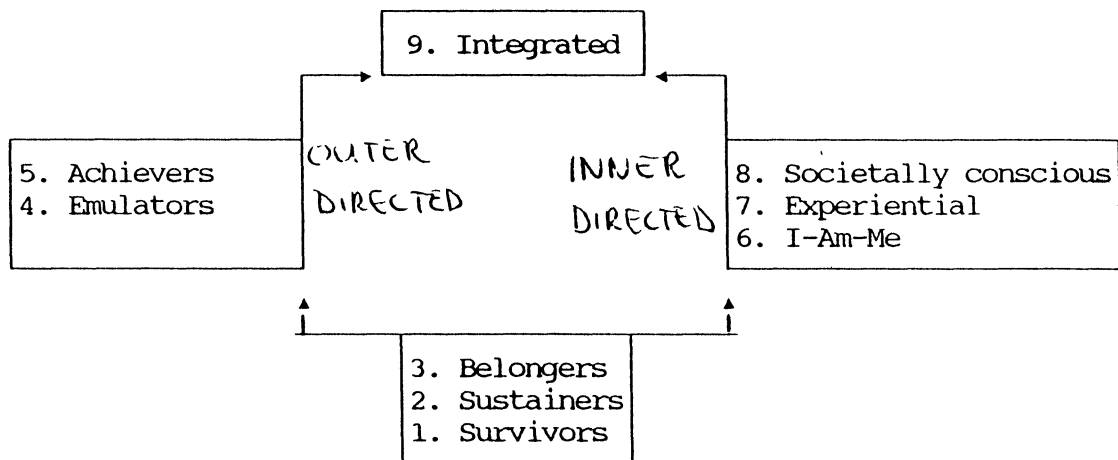
Terminal values

- Comfortable life
- Exciting life
- A world at peace
- Equality
- Freedom
- Happiness
- National security
- Pleasure
- Salvation
- Social recognition
- True friendship
- Wisdom
- A world of beauty
- Family security
- Mature love
- Self-respect
- A sense of accomplishment
- Inner harmony

Social research shows 'happiness' and 'honesty' to be relative important values across the world. Rokeach also shows (1971) that people differ in their value orientation. Another way to measure personal value orientation is by asking people about desired Activities Interests and Opinions, the so-called AIO's.

These variables in combination with demographics express the life-styles of people. The VALS-approach (SRI, Mitchell, 1983) consists of measuring personal Values and Life-Styles (VALS).

On the bases of these variables people are grouped into nine types:



In these nine personality types a personal development according to Maslov is assumed. In the lowest development phase people are need-driven: surviving (survivors) becoming sustainers. When these basic psychological needs are satisfied a person can develop and orient himself more socially. The next development is the 'belonger', mainly socially oriented. Then people can further develop along one of two lines:

inner directed, respectively I-Am-Me, Experiential and societally conscious or along the outer directed lines: emulator and achiever.

A fully developed personality is labeled an 'integrated' personality.

A lot of research has been done with regard to this typology. Some key demographics of the VALS segments are given in table 1.

TABLE 1

KEY DEMOGRAPHICS OF THE VALS SEGMENTS

	Age (median)	Sex (% female)	Race (% white)	Education (years)	Income (household)
I. <u>Need Driven</u>					
Survivors	66 ^a	60%	55%	8.5	<\$ 5,000
Sustainers	32	52	57	10	9,000
II. <u>Outer Directed</u>					
Belongers	54	60	92	11	14,000
Emulators	28	48	76	12.5	19,000
Achievers	42	39	95	13.5	35,000
III. <u>Inner Directed</u>					
I-Am-Me's	20	42	87	11.5	12,500
Experientials	26	61	96	14	26,000
Societally Conscious	38	54	89	15	30,000
IV. <u>Integrateds</u>	40	54	93	16	34,000

^a Age is expressed as median years, education as mean years completed, and income as median 1980 dollars per household in each segment.

Source: SRI International, VALS-Values and Lifestyles of Americans (Menlo Park, Calif., SRI International, undated) p. 4.

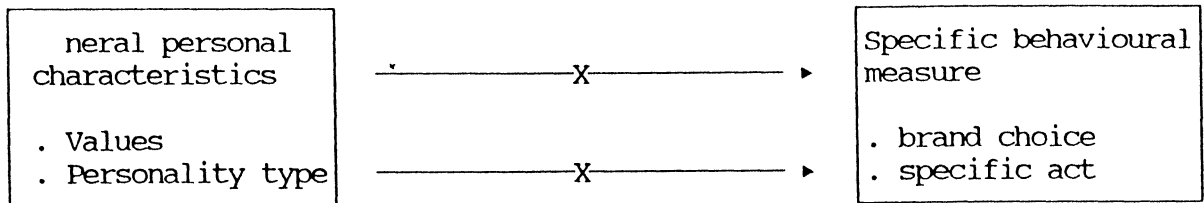
1.2 PSYCHOGRAPHICS AND BEHAVIOUR

The LOVS and the VALS represent two approaches to the use of psychographics in advertising and marketing research. The LOVS and Rokeach use the scores of people on the separate scales to relate to verbal or overt behaviour measure 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 life-style score patterns form the types that are being distinguished. These types are then compared with one another on behavioural characteristics.

Both these approaches are well-known in main stream 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, etc., see e.g. Edwards (1970). Recently it is recognised that such personality scales and personality types, except in psychopathological cases, do not explain behavioural differences very well. In personality psychology therefore the interaction of situation and personality is advocated as alternative for the traits/type approaches to personality. (Mischell, 1979).

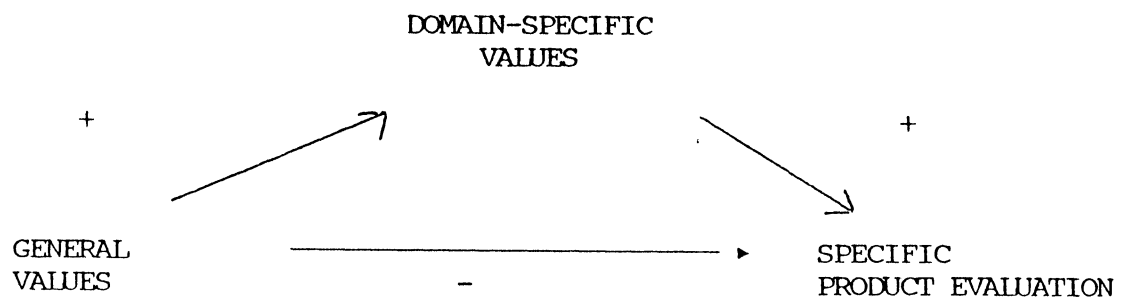
The general conviction nowadays is that general personality characteristics are not very well suited to explain specific behavioural differences. This same conclusion has also been drawn for the area of consumer behaviour decennia ago by Van Veldhoven, 1973. In reviews such as Kassarian's in 1971, it is concluded that at most 10%; others mention 2 to 5%, of behavioural 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.

FIGURE 1: PERSON CHARACTERISTIC AND CORRESPONDING BEHAVIOUR



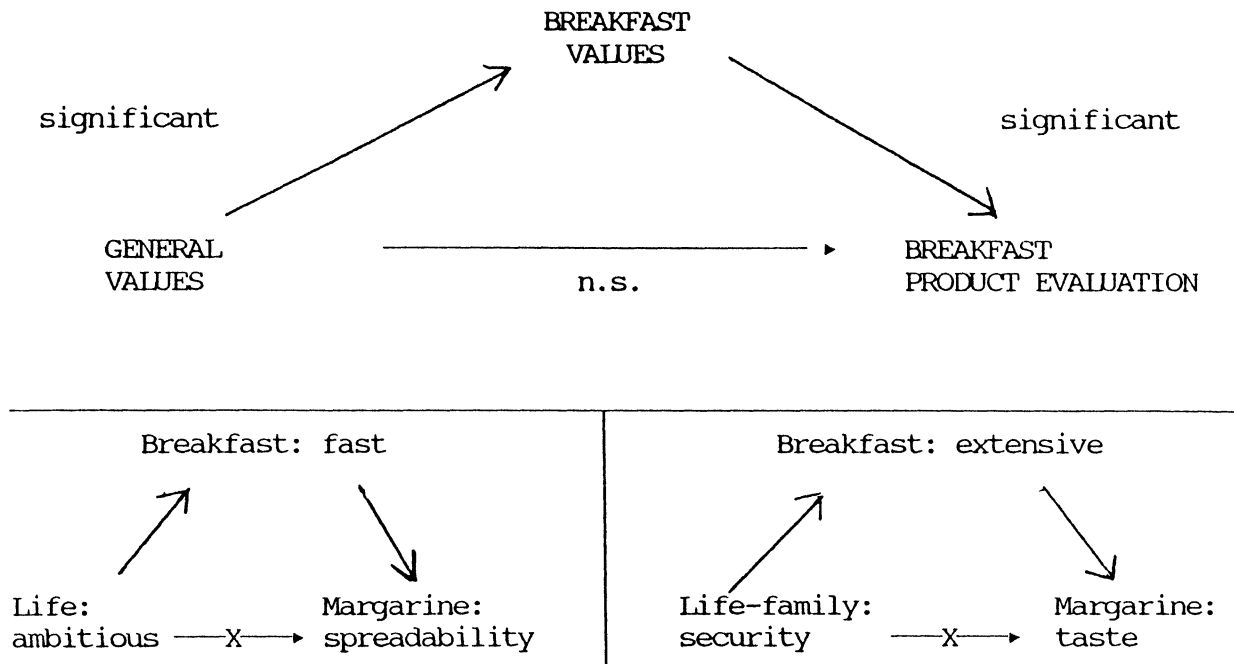
As alternative variables specific attitudes and opinions are suggested. In contemporary attitude theory (Ajzen and Fishbein, 1977) it is agreed that for a maximal correspondence between a person characteristic and a behavioural variable, both have to be defined in similar elements with regard to time, context and target at which the behaviour is directed. Often this has been operationalised 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 behaviour directly then? Recently theorising (Weigel and Newman, 1976, Foxall, 1984, Verhallen and Pieters, 1984) argue for broadening the scope of the behavioural measure into a behavioural category or a behavioural domain or field. Also in segmentation studies there has been a plea to choose a middle level of generalisation somewhere between general behavioural measures and act-specific measures: the domain-specific segmentation approach (Vinson, et al, 1977). A domain can be described as an area of behaviour that is aimed at the same goal: vacation, dieting, travelling, etc.

FIGURE 2: THE MODEL



In figure 2 this theoretical idea with regard to the relationship between person characteristics and behavioural measures is depicted. In order to explain specific behaviour, values and attitudes with regard to the behavioural domain will better explain than general personal values. Results from a small scale study may clarify this. (Verhallen and De Nooij, 1982, unpublished material).

FIGURE 3: EXAMPLE BREAKFAST



In this study both general personal values (Rokeach) 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.

An other example from the same study (Verhallen and De Nooij, 1982): 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 be found.

These studies lead to the following remarks:

- General personal values/typologies do not correlate sufficiently with specific market behaviour, domain specific values however do.
- General values and life-style types are interesting additional characteristics to describe people.

We may conclude from this:

- Domain specific personal psychographic variables: values, general attitudes are suited as active segmentation variables
- General person characteristics: general types, general personal values are only suited to further describe people and be used as passive segmentation variables.

1.3 SEGMENTATION METHOD

In the segmentation literature three approaches to segmentation are mentioned:

- forward segmentation
- backward segmentation
- simultaneous segmentation

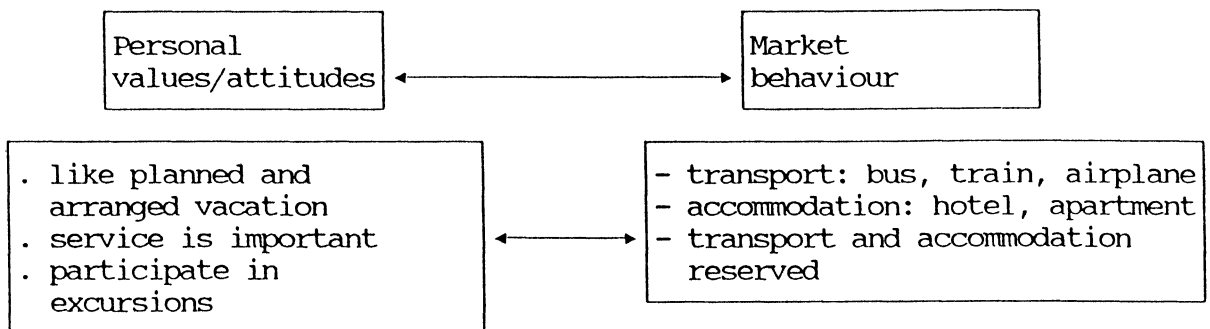
Forward segmentation is the analysis of consumer characteristics. Here, consumers are assigned to groups by their similarity in one or more consumer characteristics. Subsequently, the differences between groups are related to behavioral differences.

The second approach, the analysis of consumer response, assigns consumers to groups on the basis of their similarity in behavioral response to the supply of goods and services (e.g., the chosen vacation). Subsequently, the differences between groups are related to general and/or object- and situation-specific consumer characteristics (i.e., backward segmentation).

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

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; Sikkel and Van Nieuwenhuijze, 1989).

FIGURE 4: SIMULTANEOUS SEGMENTATION: THE ORGANISED VACATION

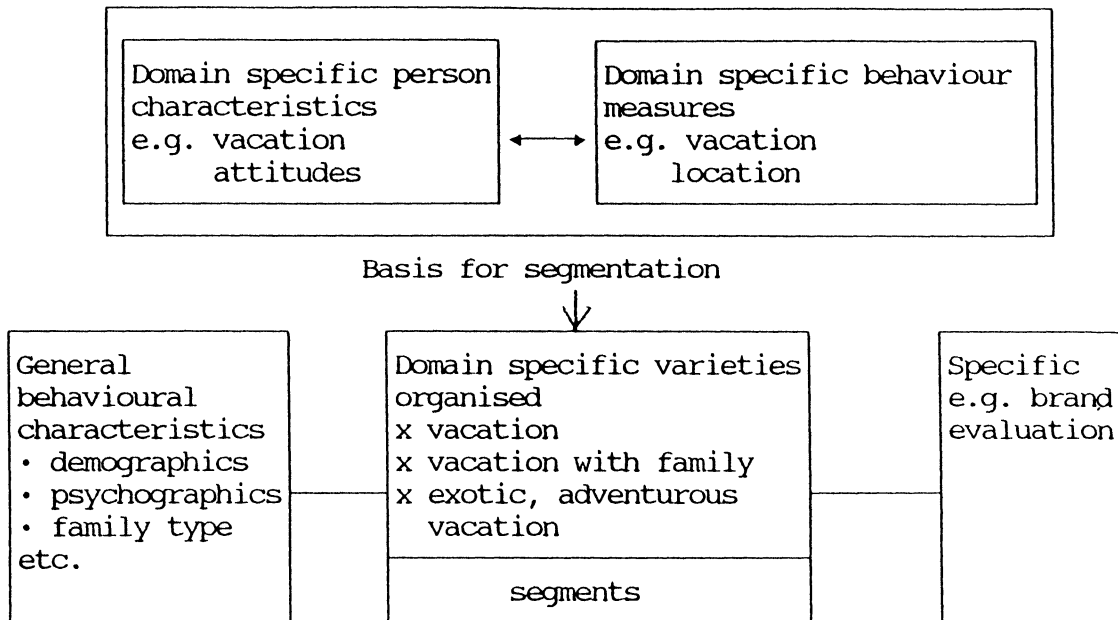


In figure 4 an example from such a simultaneous segmentation study is given. Oppedijk van Veen and Verhallen (1985) used canonical redundancy analyses on vacation behaviours at one hand and domain specific (vacation) motives and attitudes at the other. The first canonical variable or factor was 'the organised vacation' comprising of behaviours such as using organised transport: bus, train, or airplane and corresponding values and attitudes such as 'one should participate in organised excursions' or 'service is important'. These behaviour-value combinations proved there to be a fruitful basis for vacation segmentation. For details see this study (Oppedijk van Veen and Verhallen, 1985).

2.1 THE SEGMENTATION MODEL

In the foregoing the use of general and domain specific person characteristics were discussed in relation to segmentation. It is further argued to use the domain specific variables as active segmentation variables in conjunction domain specific behavioural measures. This leads to the segmentation model described in figure 5.

FIGURE 5: THE DOMAIN SPECIFIC SEGMENTATION MODEL



The basis of the proposed segmentation approach is then to relate first only domain specific person characteristics (e.g. vacation values) with domain specific behavioural measures. Canonical varieties form the basis for the segmentation. Persons with similar canonical variate scores are grouped in segments, e.g. the organised vacations. This may be achieved with clusteranalyses or latent budget analyses. Thereafter the segments found are further described, typified in terms of both general person characteristics such as demographics and psychographics. For each of the segments other specific behavioural information such as brand evaluations, preferred brands, is further investigated. By including the most important behavioural measures simultaneously with the person characteristics in the first segmentation phase the segments found are per definition as predictive in terms of behavioural criteria as possible. The latter behavioural descriptions are included to further validate the segmentation found. We will not discuss further, as mentioned earlier in this paper technical points. We refer here to Verhallen, Van Onzenoort and Barzilay (1989).

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