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Abstract

The purpose of this study was to investigate the exis-
tence of generalized, or non-product-specific, market
segments using general Life Style measures. Demo-
graphically similar segments were derived which indi-
cated quite different life styles. These segments
demonstrated no overt differences in product usage; but
they did use different criteria for product evaluation,
indicating the potential for product positioning.

Introduction

Life style is a concept which has been considered by
behavioral scientists, particularly sociologists, for a
number of years. Although introduced to marketers by
Lazer (1963) some years ago, it was not used in segmen-
tation studies until the mid 1960's (Wilson, 1966) and
not extensively until fairly recently.

In his seminal work, Lazer (1963) states:
"[Life style is concerned with those unique ingredi-
ents or qualities which describe the style of life of
some culture or group, and distinguish it from others.
It embodies the patterns that develop and emerge from
the dynamics of living in society.

Life style, therefore, is...the aggregate of consumer
purchases, and the manner in which they are con-
sumed..."

While this is a fairly straightforward statement, the
operationalization of life style has engendered some
confusion. From as early as Wilson (1966), researchers
have freely interchanged such concepts as life style
and psychographics. This confounds the process of ana-
lyzing prior work in the life style area. In a criti-
cal review of the psychographic literature, Wells
(1975) found no single definition of life style, while
in twenty-four articles, he found thirty-two defini-
tions of psychographics.

In general, life style research has been found to con-
tribute to a market segmentation effort in three some-
what different manners: 1) to aid in describing exist-
ing market segments, 2) to contribute new and useful
segmentation variables, and 3) to develop new segments
(Wells, 1974). In describing existing segments, some-
times referred to as a "backward segmentation," life
style information enriches the profile of the consumer.
It may enable the marketer to understand why the seg-
ments behave differently and may suggest better ways
to reach the consumer through product modification,
promotional appeals, or type of retail outlet or chan-
nel of distribution (Darden and Perreault, 1975;
Plummer, 1974).

In creating new variables or dimensions from life style
information, the researcher is primarily concerned with
developing scales to measure differences in consumer
propensities. Work in this area has investigated such
concepts as risk-proneness, dogmatism, venturesomeness,
and creativeness (Demby, 1974; Wells, 1974). Pessemier
and Tigert (1966) used AIO's to develop scales for pre-
diction of a variety of consumer behavior, such as

media usage, brand recognition, and product usage.
Frank and Strain (1972) were also able to develop pre-
dictor scales of product use based on AIO items.

Within the broad area of AIO-based life style segmenta-
tion, efforts have been divided by the use of either
"general" or "specific" measures to segment the market
(Frank, et. al., 1972). Specific AIO's are those which
are thought to have some direct relationship to the pro-
duct category under study. General AIO's can cover any
area and seek to establish a broad-based pattern re-
flecting the consumer's life style.

The thrust of most research seems to be in favor of us-
ing specific as opposed to general AIO statements (Hus-
ted and Pessemier, 1974; Pernica, 1974; Young, 1970;
Ziff, 1971). The logic behind this preference is unde-
niable. The more closely tuned to a particular problem
a set of AIO's is, the more likely it is that good re-
sults will be obtained (Wells, 1972).

There are some disadvantages, however, in a heavy empha-
sis on product-or situation-specific variables. For
one, if carried to extremes the study might develop a
very redundant life style profile. Wells (1974), for
example, refers to the possibility of finding that hea-
vy users of ski resorts are consumers who enjoy active,
vigorous, cold-weather outdoor sports, especially ski-
ing. These results would not be particularly illuminat-
ing.

Another major disadvantage is that, since each study
uses very product oriented AIO's, cross tabulating and
comparing obtained segments becomes problematical.
This would be particularly disadvantageous for multi-
product, multi-brand companies. Wind and Green (1974)
further state that the result of this approach is to
make each study an ad hoc, isolated exercise requiring
repetition for each new problem.

Therefore, this study addressed the question, "Are there
segments in the consumer market which are based on some
enduring, underlying life style dimensions such that the
segments are cohesive regardless of the product under
consideration?" On this basis, the current research
used AIO's of a general nature to develop life style
segments to explore the view that there are broad-based
life style segments of an enduring nature.

Overview of Research Method

While a full treatment of the research method is beyond
the scope of this paper, a brief summary is provided
here. The data were collected using a judgment sample
of consumers from a variety of social and civic organi-
zations in a medium-sized midwestern city. Cooperation
was solicited from the subjects through the officers of
the organizations, who were asked to approach their
respective memberships.

The products chosen for study are two categories of
food products and two categories of health and beauty
aid (HBA) products. This set was chosen to enable an
analysis of intra-class and inter-class evaluations of
frequently purchased consumer products. Specifically,
the products used in the study are soft drinks, break-
fast cereals, pain relievers, and bath soaps.

After the selection of the products to be used, attention turned to a consideration of the particular Activity, Interest, and Opinion (AIO) items to be included in the study. There were a number of compelling circumstances in favor of using standard items. For instance, standard items are generally more reliable than custom-made items (Wells, 1975). Reliability may be thought of as an item's stability or consistency, the degree to which it would give consistent results if used from time to time (Wilson, 1966). There also exists quite a body of collected AIO's which have been used and appear reliable in past studies (Tigert, 1969; Wells and Tigert, 1971). The AIO Item Library (Wells, 1971) was chosen as a basic source from which to choose the items for this study.

The first item decision having been made, the second decision involved the number of items to include in the study. Given that the items to be used in this study were taken from research where the researchers generated fifteen to twenty life style scales (see, for example: Tigert, 1969; Wilson, 1966) and that three to five items per scale were deemed sufficient (Darden and Perreault, 1975; 1976), the author chose to use seventy-five AIO items. It should be noted that the items selected generally loaded highly on the factors (scales) which the prior researchers reported. Theoretically, if an item has a factor loading of 1.0, the item is the scale and should not have to be supplemented with other items in order to tap that dimension of the subject's life style. With minor exceptions, the items chosen for this study loaded at least at the 0.4 level and generally at greater than the 0.5 level.

The questionnaire consisted then of the following:
1. The seventy-five Activity, Interest, and Opinion (AIO) items. These items were scored on a five-point scale from 1 (Definitely Disagree) to 5 (Definitely Agree).
2. Four product categories for which the respondents, one category at a time, indicated their degree of usage of each of three types of products within each category, using a five-point scale from 1 (Very Often) to 5 (Don't Use).
3. An object description task, performed by each respondent, immediately after having stated degree of usage, on the product type she most often used. The object description task is a method by which respondents were forced to externalize their perceptions of their most used products. In this task the respondent indicated if, and to what degree, she perceived a product to contain an attribute and if she felt positively or negatively about the association between the product and the attribute. The object description task used in this study is a modification of the measurement instrument developed and used by Price (1972).

Of the 635 questionnaires distributed, 317 were returned, for a response rate of 49.9%. Of these returns, 246, or 38.7% of the total, were considered usable. (The unusable returns consisted primarily of those with blank pages or apparent incorrect following of instructions.) The 246 returns were used in the cluster analysis portion of the study.

Results

Scale Development

As discussed previously, there are no established, widely-accepted scales to measure consumer life style. Therefore, it was felt that it was necessary to establish some measure of the reliability and validity of the scales used in this research. With this in mind, thirteen scales were proposed in accordance with the

results of the prior research (Pessemier and Tigert, 1966; Tigert, 1969; Wilson, 1966). These scales are presented in Table 1, with a representative item from each scale.

TABLE 1

SCALES USED FOR CLUSTERING SAMPLE
WITH A REPRESENTATIVE ITEM

1. Price Consciousness - I shop a lot for specials.
2. Venturesome - I like to try new brands of products I use the first time I see them in the store.
3. Arts Interest - I enjoy going through an art gallery.
4. Housekeeping Interest - I usually keep my house very neat and clean.
5. Television Watching - Television has added a great deal of enjoyment to my life.
6. Child Orientation - I take a lot of time and effort to teach my children good habits.
7. Fashion Consciousness - I usually have one or more outfits that are of the very latest style.
8. Credit Use - I buy many things with a credit card or charge card.
9. Religiosity - I pray several times a week.
10. Sports Interest - I like to watch or listen to baseball or football games.
11. Weight Consciousness - I am careful about what I eat in order to keep my weight under control.
12. Information Seeking - I usually like to wait and see how other people like new products before I try them.
13. Community Interest - I like to work on community projects.

The thirteen scales contained forty-four separate items. These forty-four items were submitted to a principal components factor analysis routine using the observations from the two hundred forty-six usable returns, resulting in a sample to variable ratio slightly better than the five to one proposed by Gorsuch (1974).

Nunnally (1967) proposes two conservative tests to determine if a factor exists beyond the confines of the subjects studied, and whether there can be confidence that the factor is not the result of capitalizing on chance. The first test includes computing the average correlation among variables which are thought to compose a factor. These results are displayed in Table 2. Then these average values are compared to the standard error of a correlation coefficient, which is approximately the reciprocal of the square root of the sample size. In this case, the reciprocal of the square root of 246 is approximately 0.064. Therefore, a correlation greater than 0.15 would be significant at the 0.01 level, and there could be confidence with factors based on an average correlation of greater than 0.30, as seen in Table 2. The second test deals with an examination of the multiple correlation of the variables with the factors they load highly on. This should be considerably higher than the value arrived at above i.e., 0.15. Since the multiple correlation will be at least as high as the square of the highest factor loading, examination of Table 2 would indicate that the factors defined are not statistical artifacts.

It was therefore concluded that the thirteen scales

were sufficiently reliable and valid for further use in the study.

TABLE 2

VERIFICATION OF SCALES

Scale	Average Correlation Among Variables	Range of Factor Loadings
1. Price Consciousness	0.43	0.58 - 0.78
2. Venturesome	0.31	0.47 - 0.69
3. Arts Interest	0.47	0.74 - 0.83
4. Housekeeping Interest	0.36	0.50 - 0.76
5. Television Watching	0.39	0.68 - 0.76
6. Child Orientation	0.36	0.69 - 0.74
7. Fashion Consciousness	0.33	0.63 - 0.70
8. Credit Use	0.36	0.69 - 0.73
9. Religiosity	0.58	0.77 - 0.86
10. Sports Orientation	0.47	0.83 - 0.84
11. Weight Consciousness	0.26	0.61 - 0.70
12. Information Seeking	0.46	0.71 - 0.79
13. Community Interest	0.41	0.73 - 0.75

Segments Produced

The next step was to produce the thirteen scale scores by summing the appropriate items for each and submitting the scores to the Parks (1969) clustering routine. As a result of the clustering, five distinct groups were formed. Determining where to stop in a hierarchical clustering routine is a judgmental matter. In this study, the average within cluster distance (AWCD) was used as a guide. Clustering was continued until the clusters were large enough for evaluation, the AWCD was still small, and AWCD was just about to increase suddenly (Lessig and Tollefson, 1972).

The clusters with relative sizes and AWCD's are presented in Table 3. Of the 246 respondents entered into the clustering procedure, 148, or 60.2%, were included in the final groups. The remaining respondents were clustered into numerous small groupings which did not lend themselves conveniently to further analysis.

TABLE 3

CLUSTERS GENERATED ON SCALES

Cluster	Size	AWCD
1	34	.08
2	35	.07
3	34	.07
4	22	.06
5	23	.07

For subsequent analysis, the five groups were randomly reduced to fifteen subjects per segment. This was done to provide orthogonal cell sizes in the analysis of variance tests to be run. The segments were examined for difference on the thirteen summated scale scores. This was done to examine the hypothesis that the segments were psychographically significantly different and not simply the result of clustering on trivial differences. The results of this test are displayed in Table 4.

As can be seen, the segments demonstrated very different responses on the life style scales and can be considered heterogeneous between. Furthermore, the scales themselves are significantly different measures. The significant interaction effect between the segments on the scales offers interesting insights into the life style make-up of the segments.

To highlight this interaction the mean of each segment on a given scale was divided by the mean of that scale for all segments, which provided an index for each scale for each segment.

To more clearly highlight which scales were generally more favorable and which were more unfavorable for each segment in light of this response

TABLE 4

ANALYSIS OF VARIANCE: SEGMENTS BY SCALE SCORES WITH REPEATED MEASURES

Source	SS	DF	MS	F	Sig
Between Segments	673.55	74			
Segments	530.98	4	132.75	65.17	$p < 0.001$
Error	142.57	70	2.04		
Within Segments	20838.46	900			
Scales	14584.01	12	1215.34		$p < 0.001$
Segmented Scales	720.49	48	15.01	2.28	$p < 0.001$
Error	5533.96	840	6.59		

bias, the scale indices were compared to the mean index for each segment:

Segment 1 people appear to be interested in "solid values." They are price conscious and see value in the use of credit. Not terribly concerned with fashion or sports or the advice of others, they are interested in the loftier concepts of children, church, and culture.

Segment 2 people are contented homemakers. While somewhat price conscious and interested in buying new things, they eschew the use of credit to satisfy their desires. Happy with themselves, they turn their attention to their children, their God and their homes.

Segment 3 people seem to be a self-centered group. They are concerned with their appearance and the appearance of their houses, while their children and the outside community take a back seat to their personal satisfaction.

Segment 4 people could be characterized as the active fashion plates. They are very concerned with personal appearance and sports and are not troubled by price or the use of credit to achieve their ends. Traditional values such as home and family and relaxed pursuits such as the arts or television watching are unimportant in their lives.

Segment 5 people are a conservative group. Externally

oriented, they are primar)\ concerned with God and country.

It is of interest to consider whether these same segments would have been generated using demographic and socioeconomic variables. Tests indicated little difference in these groups on the objective characteristics. While there is some variability in the groups, it is only on the wife's education that there was some significant difference between the life style segments.

Behavioral Differences

At this point, an exhaustive series of tests were performed to determine if there were any overt behavioral differences based on usage of the product types by the different segments. The tests included several ANOVA, chi-square, MANOVA, and t-tests using assorted data forms. With only minor exception, there were no overt differences in the use of the products by the segments.

Considering the need for the existence of behavioral variation among segments to constitute and justify a market segmentation strategy, this was an unsettling finding.

Perceptual Differences

The final stage of this study involved determining the components of the criterion vectors to be used in perceptual analysis. A matrix was constructed by summing each respondent's scores across the product categories. This 30 sum score by 246 respondent matrix was then factor analyzed.

Principal components generated two factors explaining 71.2% of the variance in the summed association measures.

Using the factor matrix as a guide, ten words were selected for further use, five in each of the two scales. Selection criteria were a loading of 0.80 or better on one factor with a 0.30 or less loading on the other factor.

For examination of perceptual differences of the products between segments, composite scores were then produced by multiplying the association measures by their respective valence measures within each product category. To provide more reliable measures of the segments' perceptions (Nunnally, 1967), the ten composite scores were summed into their two respective scales. The results appear in Table 5.

TABLE 5

MULTIVARIATE ANALYSIS OF VARIANCE:
SEGMENTS BY PRODUCT CATEGORIES
(ASSOCIATION, -2 TO +2; VALENCE, -2 TO +2)

Source	DF	F	Sig.
Segments	8,446	2.37	p<0.05
Categories	6,446	8.91	p<0.05
Segments by Categories	24,446	0.59	N.S.

When the summated scales were examined the segments manifested significant differences in their perceptions of the products overall. While diluted by a lack of overt behavioral variation among the segments, this is an encouraging finding. As for the consistency question, the segments did not hold consistent perceptions

across product categories. There was also no interaction effect. So, while the segments did not perceive all the products the same on identical scales, the segments did demonstrate different uses of those scales.

Conclusions

In terms of the specific goal of segment development, the results of the study must be considered quite successful. In the face of a dearth of established, tested scales for measuring consumer life style, a number of meaningful, consistent scales were developed which conform well with the results of prior research.

Further, based on these very general scales, it was possible to divide a single, demographically homogeneous sample of consumers into several psychographically distinct homogeneous segments. These segments not only varied greatly on the individual scales, but also exhibited meaningful life style profiles. Given that a set of scales and component items have been identified and tested, these results would definitely seem to be encouraging for the life style researcher and to provide an additional base for more work in the area. Further research might be fruitfully aimed at replicating these scales in other circumstances and in adding to the nucleus of component items.

The results of the investigation for behavioral variation, however, were not as fruitful. After an exhaustive exploration of the usage data, it was found that there was no evidence that segments derived on general criteria behave differently in specific situations.

If, as it appears, the segments do differ in their product perceptions, there is evidence that these segments have different inferred responses to market stimuli, but manifest similar objective responses to market stimuli.

This is a clear call for product positioning. While these segments use the same types of products, and possibly the same brands, they use them for different reasons, seeking different benefits. In this case, the marketing decision maker should use a different set of creative appeals to reach the different markets for the same product.

One overall conclusion to be drawn from this study is that life style measures can successfully divide a group of consumers into psychographically different segments. These measures provide a great deal of insight into the nature of the segments and are rich in creative description. The utility of segments so derived is limited, however, by the gross level of discrimination. At least at the current stage of development, segmentation studies might be better performed at a product-specific level.

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