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STIMULUS VARIATION AND CONSUMER  
SATISFACTION/DISSATISFACTION AND ACTION-TAKING

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## STIMULUS VARIATION AND CONSUMER

### SATISFACTION/DISSATISFACTION AND ACTION-TAKING

At a time when there are increasing numbers and types of products, it is apparent that consumers are dissatisfied with a large number of these products (Day and Bodur, 1977; Day and Ash, 1979). It is therefore interesting to consider the types of life experiences and preference patterns which may lead to dissatisfaction with a product. In this paper these are discussed within the conceptual framework of stimulus variation. In addition, the way in which stimulus variation affects the person's propensity for taking action when dissatisfied is discussed. More importantly, the types of dissatisfaction experienced and the types of action taken are also linked to stimulus variation.

First the concept of stimulus variation and the theoretical network are explained. Next several measures are constructed for stimulus variation and their convergent validity is established. Next to be examined are the elements of the individual's background which create the desire for stimulus variation. In the next two sections stimulus variation is linked to consumer satisfaction/dissatisfaction and to action-taking. Finally the implications for public policy makers and managers are discussed and future research needs are detailed.

The purpose of this paper is to empirically explore some concepts which may help explain the frequency and types of dissatisfaction and action-taking engaged in by consumers. The goal is to examine the link between these behaviors and other behaviors, all of which can be postulated to be partially generated from the same internal motivation, namely, desires for stimulus variation.

### Stimulus Variation

As society has modernized, the number of types of new and different experiences available to the individual has increased (Inkeles and Smith, 1974). That is, the variety in the types of people and groups with which an individual is in contact has increased as society has modernized and industrialized. Social structures have become more cross-cutting such that very few individuals' activities and socialties overlap to a large extent. For example, two people may belong to the same bridge club, but it is becoming less and less common to find people whose social networks and activities overlap substantially (Blau, 1974). This, of course, was not the case in more rural and less industrialized societies.

This overall increase in the complexity and variety available within the social structure has opened the opportunity for the emergence of stimulus variation. Stimulus variation is the extent to which an individual exposes himself or herself to a large number of mental stimuli which provide new and different or varied types of information or content. In short, stimulus variation refers to seeking a large amount of varied stimuli.

Although the overall variety in stimulation has increased as society has modernized, there remains a wide range in the amount of stimulus variation sought by individuals within that society. We can therefore conceive of a dimension along which all individuals could be denoted according to the extent of stimulus variation existing in their current life pattern and activities. This dimension would then show variation across societies as well as between individuals within a particular society.

The main thesis of this work is that stimulus variation is a central explanatory variable with respect to consumer satisfaction/dissatisfaction. This causal relationship will be discussed conceptually and then examined empirically.



Background as a Mechanism for Encouraging Stimulus Variation

It appears from the literature on developmental psychology that the pattern of stimulation sought as an adult is molded by the pattern of stimulation to which one is exposed as a child, although the adult pattern on occasion dramatically shifts as a result of adult experiences (Inkeles and Smith, 1974). In particular, those individuals exposed to a stimulation-rich environment as children will be more likely to seek such an environment as adults for several reasons. First, the stimulating childhood environment offers the child the opportunity to develop the cognitive ability to understand and appreciate complexity and fine discriminations or distinctions. Second, such people grow to expect stimulation, variety, newness, and complexity rather than the simplicity of a narrow routine. Experiences which do not contain such stimulation become to be seen as boring or dull, and therefore the individual is motivated to seek stimulation. Third, being confronted with a diverse set of experiences causes the individual to create new mental linkages between these activities by comparing their similarities and dissimilarities. These linkages help the individual cognitively handle a set of activities and interests which others may find too complex or too diversified.

Examples of elements of a stimulation-rich environment abound. For the child these would include high parental levels of education, emphasis on education, and encouragement to read and try new experiences. Later stimulation may come from seeking an education which introduces the individual to new areas of knowledge and stimulation, and an occupation which challenges the individual to constantly solve new and unusual problems rather than following a strict routine.

Thus a stimulating background, both as a child and as an adult, creates in the individual the cognitive ability to understand the world from a number of points of view by using a large number of evaluative and

descriptive dimensions. The extent to which an individual possesses this ability is termed the degree of cognitive complexity of the individual. Once the development of this cognitive ability in the individual is begun, the process is self-sustaining and ever-increasing. That is, it leads to experiences which are even more stimulating, which then further develop the cognitive skills. Thus the cognitive skills open the individual to new experiences and the experiences further encourage the development of the cognitive skills.

Cognitive complexity would enable an individual to evaluate an object or product independently on a large number of dimensions (toothpaste: taste, color, abrasiveness, presence of fluoride, price, presence of ADA approval, stain removal ability) rather than the smaller number likely to be used by a person who is less cognitively complex (toothpaste: taste, price). This is known as the differentiation skill. Cognitively complex individuals also have the ability to bring this information together when evaluating the object. This is known as the integration skill (Bieri, 1966). Cognitive complexity therefore refers to the structure, and not the content of cognition (Scott, 1962).

An adult pattern of stimulus variation, then, can be conceptually linked to a childhood pattern which was stimulation-rich as well as the development of the cognitive ability (cognitive complexity) to handle a wide variety of experiences. Society modernizes and creates the opportunity to be exposed to a wide variety of stimuli. The individual's level of stimulus variation is the extent to which the individual takes advantage of these opportunities. Thus the following proposition can be advanced: The greater the individual's level of education and occupational stimulation, the person's parents' levels of education and occupational stimulation, and the lesser the individual's feelings of closeness to an ethnic group, the greater will be the individual's degree of stimulus variation.

### Behavioral Manifestations of Stimulus Variation

Stimulus variation in the adult can manifest itself in any of several different ways. Individuals who seek stimulus variation geographically have long been termed cosmopolite (Rogers and Shoemaker, 1971). These are individuals who travel frequently, communicate with people in geographically distant places, and generally have broad geographic horizons. Individuals may also seek stimulus variation by becoming members of a large number of overlapping groups. This form of stimulus variation seeking has been termed role accumulation (Wallendorf, 1978). Another way of seeking stimulus variation is by exposing oneself to a breadth of types of mass media vehicles (e.g. Time, Vogue, Field and Stream instead of Time, Newsweek, U.S. News and World Report). By doing this, the individual can receive information about a wide variety of topics. A fourth form of stimulus variation seeking is the pursuit of leisure time activities which constantly expose the individual to new and different types of information or interactions.

All of these are behavioral manifestations which indicate a high level of stimulus variation seeking.

Of course there should be a positive relationship among the forms. However, it is unlikely that any one individual would have the time and/or interest to seek high levels of stimulation in all ways. Most likely, individuals seeking stimulus variation would do so in those domains which most fit with their current life pattern and preferences.

### Advantaged/Disadvantaged Consumer Status

It seems conceptually valid to hypothesize that people who are low in cognitive complexity and stimulus variation would also be likely to be disadvantaged consumers. That is, low levels of cognitive complexity and stimulus variation may be causal factors with respect to disadvantaged con-

sumer status. Similarly, high levels of cognitive complexity and stimulus variation may be causal factors with respect to advantaged consumer status. Individuals who, when compared with others in their society, do not have the cognitive abilities nor the life pattern of experiences to give them access to information which is varied and stimulating are disadvantaged in consumption settings. They do not have access to varied information about products, and do not have the cognitive abilities necessary to process and use this information when it is available. This is both important and interesting because of the related public policy issues concerning information disclosure and dissemination as well as cognitive processing of available information. These policy implications will be discussed after the empirical findings have been presented. But first, the conceptual relationships between stimulus variation and consumer satisfaction/dissatisfaction and action-taking will be discussed.

#### Satisfaction/Dissatisfaction and Action-Taking

It also appears that cognitive complexity and stimulus variation may be causal factors with respect to consumer satisfaction/dissatisfaction and action-taking. The greater the cognitive complexity of the individual, the greater the number of attributes or dimensions of information used in classifying and evaluating products. Also, the greater the degree of stimulus variation sought by an individual, the greater will be the desire for new and different products. Therefore, the consumer who is high in cognitive complexity and stimulus variation has an inherently greater potential for being dissatisfied with a product. Since the product is evaluated on a large number of dimensions, a "gourmet" syndrome may occur in which no product is completely satisfactory on all dimensions. The person who views a product more simply may be more likely to be satisfied with a product (e.g.



hairdryer: Does it blow hot air? If yes, then consumer is satisfied). The person who views the product in a more complex manner may be more likely to experience some dissatisfaction with the product on at least some dimensions (e.g. hairdryer: Does it blow hot air? Does it convert from 110 to 220 volts? Does it match the color of the bathroom? Is it lightweight and small for traveling? Is it energy efficient? etc.) Therefore, a proposition which can be derived is: The greater the degree of stimulus variation of the individual, the more frequently product dissatisfaction will be experienced.

There may be, however, only particular situations in which this proposition holds. A useful distinction may be drawn between product malfunction (that is, the product fails to perform its basic function) and product inferiority (that is a product which performs its basic function adequately, but which lacks positive features possessed by other models). There is no a priori reason to expect that product malfunction would occur either more or less often to those who are high in stimulus variation as opposed to those who are not. That is, individuals' levels of stimulus variation are not expected to account for the frequency with which dissatisfaction from product malfunction is experienced. However, it is expected that the greater the degree of stimulus variation of the individual, the more frequently product dissatisfaction attributed to product inferiority will be experienced.

This is postulated to be due to the ability of consumers seeking high levels of stimulus variation to evaluate products on a broader range of attributes and to possess a higher level of information about alternative products.

Given that this dissatisfaction exists, the question can then be raised regarding the relationship between stimulus variation and action-taking. The following proposition can be advanced: The greater the degree

7  
Prod  
/ inferiority  
decision

of stimulus variation, the more frequently action will be taken in response to product dissatisfaction. Individuals with high levels of stimulus variation have the characteristics likely to produce high self-efficacy deriving from frequent experiences which have outcomes which indicate that they are successfully able to direct their lives. Those with low levels of both stimulus variation and cognitive complexity are unable to locate and process the information which is necessary for consistently making successful choices in a complex world. The frequent feedback which they derive from these experiences is that they are unable to take action in ways which will provide the desired outcomes. Clearly, low self-efficacy will lead the individual to decide not to take action in response to product dissatisfaction.

However, it may be the case that not only the frequency of action-taking but also the type of action taking is affected by stimulus variation and cognitive complexity. In other words, given that an individual is going to take action in response to product dissatisfaction, which channel will be used? Two possible channels are personal actions and direct actions. Personal actions are taken in one's close social network and are aimed at retaliatory effects rather than redress effects. Examples include discontinued patronage or purchase and conversations with family and friends describing the dissatisfaction. Direct actions are taken either within the channel of distribution or with a public agency and are aimed at redressing the problem resulting from the specific incident. Examples include requests for refunds, return of the product, filing a complaint with the Better Business Bureau or governmental agency, or filing legal suit.

Because consumers who are low in stimulus variation and cognitive complexity have narrow social networks and limited access to information, it may be more likely that they would take personal rather than direct action

on those occasions when they decided to take some action. Consumers who are high in stimulus variation and cognitive complexity have the ability to locate and process the information necessary for filing a complaint or initiating a lawsuit. Therefore, a difference in the type of action taken as well as the frequency of action-taking might be expected. This proposition can be stated as follows: The greater the degree of stimulus variation, the more frequently direct as opposed to personal actions will be taken in response to product dissatisfaction. This follows the frequent finding that the consumers who are most likely to voice and act upon dissatisfaction are generally affluent, well educated, and professionally employed (Andreasen, 1975; Bourgeois and Barnes, 1976; Caplovitz, 1967; Friedman, 1971; Hermann, 1974).

The overall pattern of relationships discussed thus far is shown in Figure 1. This figure shows the proposed causal linkages beginning with the individual's background and flowing through cognitive complexity, stimulus variation, and leading to consumer dissatisfaction and action-taking.

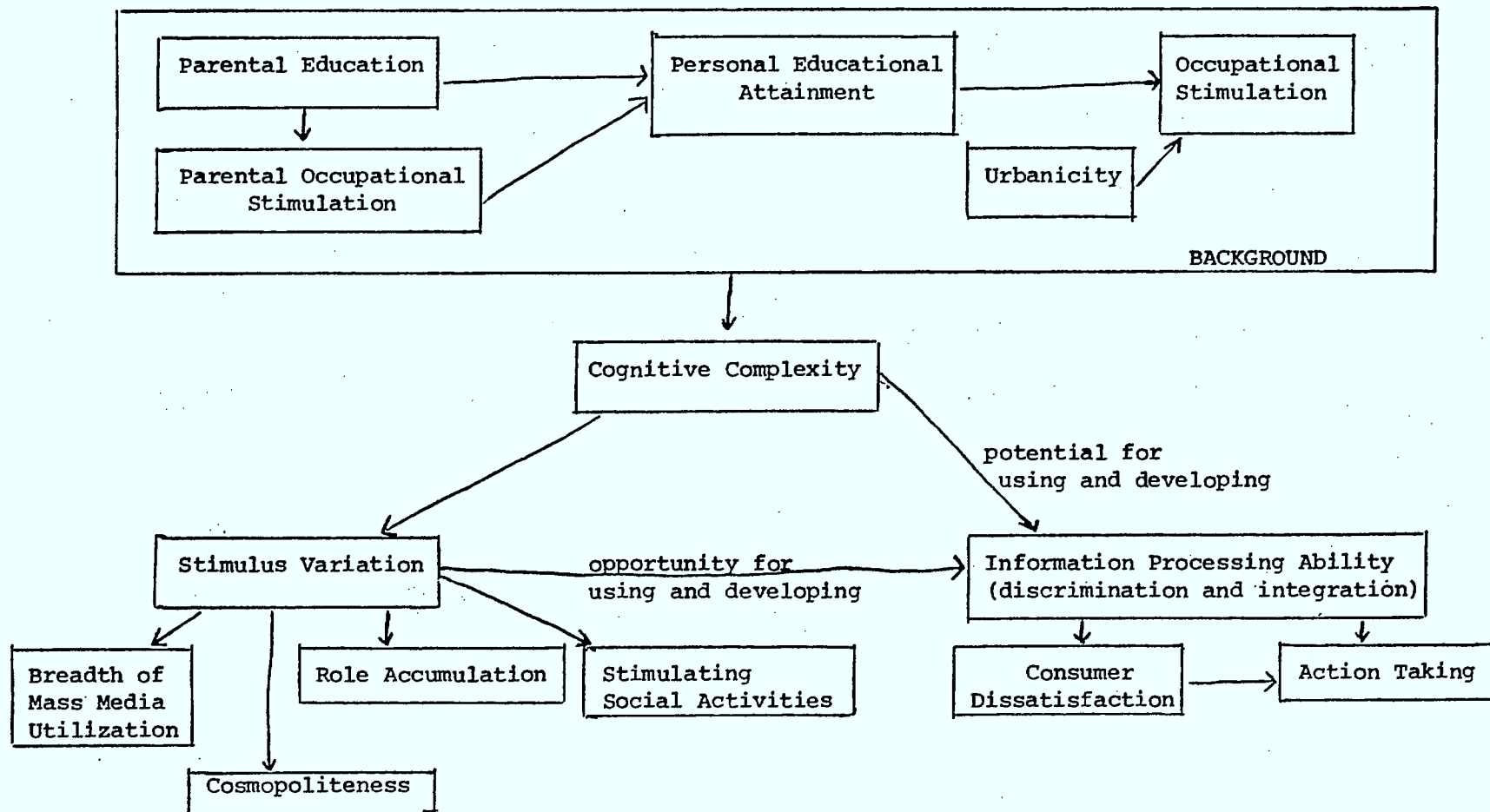
#### Study Design and Data Collection

In order to empirically explore these propositions, a national survey was conducted in Canada concerning consumer satisfaction/dissatisfaction and complaining behavior. The sample was derived using a five stage probability technique (stratification by geographic region, stratification by community size, selection of interviewing locations, selection of census tracts, and selection of blocks).

Given the large number of products to be investigated, they were divided into three categories and a questionnaire was developed for each. Respondents were then assigned to one of the three product categories. There were six questionnaires in all including an English and a French version for each of the three different product categories: Food and clothing, Durables, and Services.

Figure 1

Proposed Causal Linkages



Interviews were conducted among 3123 adult Canadians, both males and females, eighteen years of age and over. These interviews were divided as follows:

|                   |      |
|-------------------|------|
| Food and Clothing | 1041 |
| Durables          | 1030 |
| Services          | 1052 |

The data from each of the three categories compare favorably with Statistics Canada census information.

In order to ensure that both language versions of the three questionnaires had an identical semantic and emotional impact, each questionnaire was pretested on at least twenty respondents (half English and half French speaking). All pretesting and field work was done by professional interviewers who received specific training on the administration of the questionnaire.

Interviews took place in April and May, 1979. Questionnaires were left at the homes of respondents, and then picked up and checked by interviewers in the presence of the respondents to ensure that they were accurately filled out. Validation of fieldwork was conducted to ensure the accuracy of the data collection procedures.

#### Measures of Stimulus Variation

Since stimulus variation can become manifest in any of several different forms, measures were constructed to fit each of these forms.

#### Cosmopolitaness

An index of cosmopolitaness was constructed from the services data using items concerning the frequency of purchase of several services used in connection with moving and travel. The specific items and coding scheme are shown in Exhibit 1.



Exhibit 1

Measure of Cosmopolitaness

Categories

1. Moving and storage services
2. Services of travel agencies
3. Credit card services
4. Rooms in hotels, motels, tourist resorts
5. Air commuter service, air charter service
6. Major scheduled air line service

Cosmopolitaness Index

C = number of services used within last two years

Maximum = 5

Minimum = 0

$\bar{X} = 2.08$

s.d. = 1.64

### Role Accumulation

An index of role accumulation was constructed using the number of types of groups or organizations to which the respondent belongs. This measure was used because it takes into account the variety in content or information represented by the set of groups or organizations to which the individual belongs. The specific items included in the index and the coding scheme are shown in Exhibit 2.

In order to cross validate the pattern of responses on these items, the three data sets were compared. Using a t test for the difference between means, no statistically significant differences between any of the pairs were found. This indicates that the distribution of responses to these items is comparable across the three data sets. This is shown in Table 1.

### Mass Media Utilization

A similar index was constructed for the breadth of mass media vehicles used. Again, the focus was on the variety in the types of vehicles used. The specific items included in the index and the coding scheme are shown in Exhibit 3. Again, in order to cross validate the pattern of responses on these items, the three data sets were compared using a t test for the difference between means. These values are shown in Table 2. None of these differences are statistically significant, therefore indicating that the three data sets are comparable with respect to this concept.

### Social Activities

The fourth way in which stimulus variation can manifest itself in behavior is through the types of lesiure time activities in which the individual chooses to engage. Two measures were constructed for this form

Exhibit 2

Measure of Role Accumulation

Some people have the time and interest to belong to organized groups and others do not. Could you please indicate to which, if any, of the following types of groups you belong?

|                                | <u>Yes</u> | <u>No</u> |
|--------------------------------|------------|-----------|
| Consumer groups                | 1          | 1         |
| Business or job-related groups | 1          | 2         |
| Religious groups               | 1          | 2         |
| Recreational groups            | 1          | 2         |
| Community groups               | 1          | 2         |
| Social groups                  | 1          | 2         |
| Political groups               | 1          | 2         |

Role Accumulation Index

RA = number of types of group memberships held

|           | <u>Food</u> | <u>Durables</u> | <u>Services</u> |
|-----------|-------------|-----------------|-----------------|
| Maximum   | 6           | 7               | 7               |
| Minimum   | 0           | 0               | 0               |
| $\bar{X}$ | 1.21        | 1.28            | 1.32            |
| s.d.      | 1.78        | 1.85            | 1.80            |

Table 1

t Test for Differences Between Means  
Across Three Samples on Role Accumulation Index

|          | FOOD | DURABLES | SERVICES |
|----------|------|----------|----------|
| FOOD     |      | 1.182    | 1.829    |
| DURABLES |      |          | .625     |
| SERVICES |      |          |          |

Tabled Value of t for 2 tailed test,  $\alpha$ df is 2.576

Exhibit 3

Measures of Breadth of Mass Media Vehicles Used

Here is a list of some different kinds of magazines. Which kinds have you read during the past three months?

|                             | <u>Yes</u> | <u>No</u> |
|-----------------------------|------------|-----------|
| Consumer magazines          | 1          | 2         |
| News magazines              | 1          | 2         |
| Fashion magazines           | 1          | 2         |
| Sports magazines            | 1          | 2         |
| Travel magazines            | 1          | 2         |
| Home/gardening magazines    | 1          | 2         |
| Hobby/handicrafts magazines | 1          | 2         |
| Other magazines             | 1          | 2         |

Breadth of Mass Media Utilization Index

MMU = number of types of magazines read

|           | <u>Food</u> | <u>Durables</u> | <u>Service</u> |
|-----------|-------------|-----------------|----------------|
| Maximum   | 8           | 8               | 8              |
| Minimum   | 0           | 0               | 0              |
| $\bar{X}$ | 3.46        | 3.39            | 3.5            |
| s.d.      | 2.07        | 2.09            | 2.04           |



Table 2

<sup>t</sup> Test for Differences between Means  
Across Three Samples on Mass Media Utilization

|          | FOOD | DURABLES | SERVICES |
|----------|------|----------|----------|
| FOOD     |      | .821     | .412     |
| DURABLES |      |          | 1.236    |
| SERVICES |      |          |          |

Tabled Value of t for 2 tailed test,  $\infty$  df is 2.576

of stimulus variation. The first is the number of social activities out of a set of thirteen in which the individual participates at least one to three times a month. This set is shown in Exhibit 4. A comparison of the three data sets using a t test for the difference between means indicates that the only statistically significant difference is between the food data and the services data. These values are shown in Table 3. Therefore, further analyses using this measure may result in differences between the data sets due to differences in the responses to the items used in constructing this index.

A second measure of the degree of participation in a variety of stimulating social activities was constructed from a Principal Components factor analysis with varimax rotation of the thirteen social activities items shown in Exhibit 4. This was done in order to extract the underlying dimensions or types of stimulation inherent in these activities. The factor loadings and labels for the three data sets are shown in Tables 4, 5, and 6.

The factors are labeled here only for convenience and ease of communication. The importance of the factor analysis lies in the content of the factors and not in their labels. In each data set there is one factor containing high loadings on sports activities. Another factor which appears to occur in each data set is that which contains high loadings on cultural activities (attendance at concerts and plays) and, in two data sets, high loadings on activities which currently are enjoying popularity among primarily urban, upscale, young to middle aged exercise-minded individuals. These activities include tennis and skiing. Other examples not included in the questionnaire but which might be expected to be in this set are racquetball and jogging.

Exhibit 4

Measure of Number of Social Activities

How often, if ever, do you participate in the following activities?

|   | Never | Once a<br>Year or Less | 2 to 11<br>Times a Year | 1 to 3<br>Times a Month | Once a<br>Week or More |
|---|-------|------------------------|-------------------------|-------------------------|------------------------|
| Tennis                                      | 0     | 1                      | 2                       | 3                       | 4                      |
| Attending concerts or<br>ballets            | 0     | 1                      | 2                       | 3                       | 4                      |
| Attending plays                             | 0     | 1                      | 2                       | 3                       | 4                      |
| Spectator sports events                     | 0     | 1                      | 2                       | 3                       | 4                      |
| Golfing                                     | 0     | 1                      | 2                       | 3                       | 4                      |
| Attending movies                            | 0     | 1                      | 2                       | 3                       | 4                      |
| Skiing                                      | 0     | 1                      | 2                       | 3                       | 4                      |
| Trying new restaurants                      | 0     | 1                      | 2                       | 3                       | 4                      |
| Listening to the radio,<br>records or tapes | 0     | 1                      | 2                       | 3                       | 4                      |
| Sightseeing and traveling                   | 0     | 1                      | 2                       | 3                       | 4                      |
| Attending religious<br>services             | 0     | 1                      | 2                       | 3                       | 4                      |
| Participating in team<br>sports             | 0     | 1                      | 2                       | 3                       | 4                      |
| Leisure time reading                        | 0     | 1                      | 2                       | 3                       | 4                      |

Number of Social Activities Index

SA = number of activities in which the individual participates at least 1 to 3 times a month

|           | <u>Food</u> | <u>Durables</u> | <u>Services</u> |
|-----------|-------------|-----------------|-----------------|
| Maximum   | 9           | 12              | 10              |
| Minimum   | 0           | 0               | 0               |
| $\bar{X}$ | 2.76        | 2.83            | 2.96            |
| s.d.      | 1.43        | 1.52            | 1.44            |

Table 3

t Test for Differences between Means  
Across Three Samples on Number of Social Activities Index

|          | FOOD | DURABLES | SERVICES |
|----------|------|----------|----------|
| FOOD     |      | 1.065    | 3.222*   |
| DURABLES |      |          | 2.047    |
| SERVICES |      |          |          |

Tabled Value of t for 2 tailed test,  $\infty$  df is 2.576

\*statistically significant at  $p \leq .01$

Table 4

Social Activities Factor Loadings - Food Data

|                       | Factor 1<br>Sports<br>Involvement | Factor 2<br>Cultural<br>Stimulation | Factor 3<br>New<br>Experiences | Factor 4<br>(Lack of) Religious Participation/<br>Traditionalism |
|-----------------------|-----------------------------------|-------------------------------------|--------------------------------|--|
| Tennis                | (.471)                            | .339                                | .070                           | .240   |
| Concerts              | .033                              | [.784]                              | .231                           | .068   |
| Plays                 | .071                              | [.834]                              | .138                           | .011   |
| Spectator sports      | [.620]                            | -.036                               | .355                           | .153   |
| Golfing               | [.636]                            | .099                                | -.019                          | -.054  |
| Movies                | .281                              | .320                                | .329                           | (.499)   |
| Skiing                | (.472)                            | (.477)                              | -.123                          | .007   |
| Restaurants           | .162                              | .282                                | (.427)                         | (.458)   |
| Radio, tapes, records | -.006                             | -.045                               | [.759]                         | -.023  |
| Traveling             | .234                              | .152                                | [.654]                         | .055   |
| Religious services    | .059                              | .114                                | .237                           | [-.839]  |
| Team sports           | [.761]                            | -.015                               | .069                           | .033   |
| Reading               | -.048                             | .283                                | [.537]                         | -.086  |

Note: Factor loadings of .5 or greater are enclosed in brackets; those very closely approaching this cutoff point are enclosed in parentheses.

Total percent of variance explained is 54.4%.



Table 5

## Social Activities Factor Loadings - Durables Data

|                       | Factor 1<br>Cultural and<br>Upscale Activities | Factor 2<br>Sports<br>Involvement | Factor 3<br>New<br>Experiences | Factor 4<br>Religious Participation/<br>Traditionalism |
|-----------------------|--|-----------------------------------|--------------------------------|--|
| Tennis                | [.523]   | .276                              | .034                           | -.235  |
| Concerts              | [.753]   | -.070                             | .274                           | .118   |
| Plays                 | [.770]   | .009                              | .212                           | .114   |
| Spectator sports      | .050   | [.713]                            | .244                           | -.050  |
| Golfing               | .140   | [.680]                            | .015                           | .015   |
| Movies                | (.476)   | .169                              | .284                           | -.405  |
| Skiing                | [.564]   | .276                              | -.203                          | -.003  |
| Restaurants           | .390   | .229                              | (.465)                         | -.204  |
| Radio, tapes, records | -.015  | .009                              | [.744]                         | .056   |
| Traveling             | .168   | .275                              | [.534]                         | -.120  |
| Religious services    | .057   | .091                              | .122                           | [.867]   |
| Team Sports           | .084   | [.769]                            | .039                           | .054   |
| Reading               | .162   | .028                              | [.619]                         | .282   |

Note: Factor loadings of .5 or greater are enclosed in brackets; those very closely approaching this cutoff point are enclosed in parentheses.

Total percent of variance explained is 54.1%.

Table 6

## Social Activities Factor Loadings - Services Data

|                       | Factor 1<br>Cultural and<br>Upscale Activities | Factor 2<br>Sports<br>Involvement | Factor 3<br>New<br>Experiences | Factor 4<br>Religious Participation<br>Traditionalism |
|-----------------------|--|-----------------------------------|--------------------------------|---|
| Tennis                | [.577]   | .367                              | .017                           | -.068   |
| Concerts              | [.755]   | -.061                             | .240                           | .007  |
| Plays                 | [.792]   | -.019                             | .136                           | .139  |
| Spectator Sports      | .048   | [.658]                            | .276                           | -.125   |
| Golfing               | .142   | [.643]                            | -.058                          | .035  |
| Movies                | (.487)   | .208                              | .313                           | -.402   |
| Skiing                | [.522]   | .320                              | -.165                          | .012  |
| Restaurants           | .377   | .188                              | (.491)                         | -.176   |
| Radio, tapes, records | -.063  | .011                              | [.723]                         | .112  |
| Traveling             | .140   | .130                              | [.669]                         | -.017   |
| Religious services    | -.007  | .086                              | .032                           | [.856]  |
| Team sports           | .046   | [.755]                            | .102                           | .074  |
| Reading               | .277   | -.071                             | (.430)                         | (.430)  |

Note: Factor loadings of .5 or greater are enclosed in brackets; those very closely approaching this cutoff point are enclosed in parentheses.

Total percent of variance explained is 53.3%.

These are probably not included in the sports factor because they represent a different type of stimulation than that inherent in participation in a bowling league or golf outing. This type of stimulation appears to be more similar to that offered by cultural events than that offered by some other sports activities. For lack of a more concise label, this factor has been termed Cultural Stimulation or Cultural and Upscale Activities.

The remaining two factors appear to contain the same sets of high loadings. One factor, labeled New Experiences, appears to contain a novelty-seeking form of stimulus variation. One way to come into contact with varied stimuli, e.g. groups, is to have a wide set to choose from and to frequently rotate the one in which the person is currently being involved. Another way is to constantly seek to expand the set by finding new elements to experience. This factor appears to represent this novelty-seeking aspect by its representation in high factor loadings on trying new restaurants, radio listening, travelling and reading. All of these involve searching for newness rather than rotation within the set.

The final factor has one direction to the primary high loading in the durables and services data sets and the opposite direction in the food data set. In the durables and services data sets the factor has been labeled Religious Participation/Traditionalism. In the food data set it has been labeled (Lack of) Religious Participation/Traditionalism.

The first three factors appear to be three types of stimulus variation because participation in the activities which have high loadings on these factors do expose the individual to stimuli which provide new and different information or content. The fourth factor, (Presence or Lack of) Religious Participation/Traditionalism, however, does not appear to represent stimulus

variation. Religion, by its nature, has a set of beliefs which are constant and do not change. It therefore serves to preserve or establish the social order rather than to constantly expose it to variety and change. Instead, it represents stability, constancy, and dogma. Therefore, factor scores on the first three factors will be used as measures of stimulus variation.

Again, it is important to determine whether these measures are comparable across the three data sets. The OSIRIS Factor Comparison program was used to determine this. This procedure "first rotates one factor configuration into the space of the other (to a least squares fit), and then compares the two configurations within the same space (both factor-by-factor and overall). This minimizes the effect of exogenous influences which may have affected the independent (prior) rotations of the two studies and would thus confound the comparisons" (OSIRIS, vol. 1, p. 627). This is done by comparing the factor loading structures. In each pair, the data set with the smaller sample size was rotated into the space of the data set with the larger sample size. These correlations are shown in Tables 7, 8, and 9. It is evident that both the factor-by-factor and the overall correlations indicate a high level of consistency and correspondence among the data sets. Therefore, the factor structure appears to be highly stable across the three data sets.

#### Intercorrelations of Measures of Stimulus Variation

The expectation of the existence of positive relationships among the forms of stimulus variation has already been discussed. In addition, it has been explained that the relationships are not expected to be perfect or even near-perfect since it is unlikely that individuals would have the time and/or interest to seek high levels of stimulation in all ways. These

Table 7

## Correlations for Food and Durables Social Activities Factors

|                                |  | Food Sample (n=1041)              |                                     |                                |   |
|--------------------------------|--|-----------------------------------|-------------------------------------|--------------------------------|---|
|                                |  | Factor 1<br>Sports<br>Involvement | Factor 2<br>Cultural<br>Stimulation | Factor 3<br>New<br>Experiences | Factor 4<br>(Lack of) Religious<br>Participation/Traditionalism |
| Durables<br>Sample<br>(n=1030) | Factor 1<br>Cultural and<br>Upscale Activities         |                                   | .97                                 |                                |   |
|                                | Factor 2<br>Sports<br>Involvement                      | .99                               |                                     |                                |   |
|                                | Factor 3<br>New<br>Experiences                         |                                   |                                     | .98                            |   |
|                                | Factor 4<br>Religious Participation/<br>Traditionalism |                                   |                                     |                                | -.98  |

Note: The correlation coefficients in all blank cells were below .25.

Overall correlations: Pattern similarity (product-moment correlation coefficient) = .97  
 Pattern and magnitude similarity (intraclass correlation coefficient) = .97



Table 8

Correlations for Services and Durables Social Activities Factors

Services Sample (n=1052)

|                                 | Factor 1<br>Cultural and<br>Upscale Activities         | Factor 2<br>Sports<br>Involvement | Factor 3<br>New<br>Experiences | Factor 4<br>Religious Participation/<br>Traditionalism |
|---------------------------------|--|-----------------------------------|--------------------------------|--|
| Durables<br>Sample<br>(n= 1030) | Factor 1<br>Cultural and<br>Upscale Activities         | 1.00                              |                                |  |
|                                 | Factor 2<br>Sports<br>Involvement                      |                                   | 1.00                           |  |
|                                 | Factor 3<br>New<br>Experiences                         |                                   | .99                            |  |
|                                 | Factor 4<br>Religious Participation/<br>Traditionalism |                                   |                                | -.99   |

Note: The correlation coefficients in all blank cells were below .25.

Overall correlations: Pattern similarity (product-moment correlation coefficient) = .98.  
Pattern and magnitude similarity (intraclass correlation coefficient) = .98.

Table 9

Correlations for Services and Food Social Activities Factors

Services Sample (n=1052)

|                            | Factor 1<br>Cultural and<br>Upscale Activities                    | Factor 2<br>Sports<br>Involvement | Factor 3<br>New<br>Experiences | Factor 4<br>Religious Participation/<br>Traditionalism |
|----------------------------|---|-----------------------------------|--------------------------------|--|
| Food<br>Sample<br>(n=1041) | Factor 1<br>Sports<br>Involvement                                 |                                   | .99                            |  |
|                            | Factor 2<br>Cultural<br>Stimulation                               | .98                               |                                |  |
|                            | Factor 3<br>New<br>Experiences                                    |                                   | .98                            |  |
|                            | Factor 4<br>(lack of) Religious Par-<br>ticipation/Traditionalism |                                   |                                | -.96   |

Note: The correlation coefficients in all blank cells were below .25.

Overall correlations: Pattern similarity (product-moment correlation coefficient) = .98  
 Pattern and magnitude similarity (intraclass correlation coefficient) = .98

Table 10

Intercorrelations of Measures of Stimulus Variation for Food Sample

|     | RA | MMU              | SA               | SI               | CS               | NE               |
|-----|----|------------------|------------------|------------------|------------------|------------------|
| RA  | -  | .32 <sup>a</sup> | .31 <sup>a</sup> | .27 <sup>a</sup> | .20 <sup>a</sup> | .24 <sup>a</sup> |
| MMU | -  | -                | .26 <sup>a</sup> | .19 <sup>a</sup> | .23 <sup>a</sup> | .31 <sup>a</sup> |
| SA  | -  | -                | -                | .51 <sup>a</sup> | .21 <sup>a</sup> | .60 <sup>a</sup> |

Note: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 11

Intercorrelations of Measures of Stimulus Variation for Durables Sample

|     | RA | MMU              | SA               | SI               | CUA              | NE               |
|-----|----|------------------|------------------|------------------|------------------|------------------|
| RA  | -  | .34 <sup>a</sup> | .36 <sup>a</sup> | .22 <sup>a</sup> | .16 <sup>a</sup> | .23 <sup>a</sup> |
| MMU | -  | -                | .31 <sup>a</sup> | .16 <sup>a</sup> | .15 <sup>a</sup> | .25 <sup>a</sup> |
| SA  | -  | -                | -                | .37 <sup>a</sup> | .19 <sup>a</sup> | .45 <sup>a</sup> |

Note: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 12

Intercorrelations of Measures of Stimulus Variation for Services Data

|     | C | RA               | MMU              | SA               | SI               | CUA              | NE               |
|-----|---|------------------|------------------|------------------|------------------|------------------|------------------|
| C   | - | .29 <sup>a</sup> | .37 <sup>a</sup> | .28 <sup>a</sup> | .17 <sup>a</sup> | .35 <sup>a</sup> | .31 <sup>a</sup> |
| RA  | - | -                | .35 <sup>a</sup> | .29 <sup>a</sup> | .23 <sup>a</sup> | .19 <sup>a</sup> | .18 <sup>a</sup> |
| MMU | - | -                | -                | .25 <sup>a</sup> | .16 <sup>a</sup> | .28 <sup>a</sup> | .28 <sup>a</sup> |
| SA  | - | -                | -                | -                | .43 <sup>a</sup> | .27 <sup>a</sup> | .46 <sup>a</sup> |

Note: C=Cultural Stimulation; RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

expectations are borne out in the Pearson correlation coefficients shown in Tables 10, 11, and 12. The correlations between the measures of stimulus variation range from .15 to .60 with the average around .29. All are statistically significant at  $p \leq .001$ . These are congruent with the intercorrelations of three of the measures (cosmopolitaness, role accumulation, and mass media utilization) in previous research done in the U.S. (Hirschman and Wallendorf, 1979). This confirms the expectation of positive but not near-perfect relationships. This indicates that individuals who seek stimulus variation do so in particular ways which fit their time availability and/or interests. Therefore, in the remaining analyses, all six measures for the food and durables data sets and all seven measures for the services data sets will be used. This will increase the validity, reliability, and generalizability of the results.

#### Background and Stimulus Variation

The first step in exploring the relationship between various aspects of an individual's background and stimulus variation is to examine the intensity and direction of the background characteristics' relation to stimulus variation. This was done first by using Pearson correlation.

Eight background variables which are expected to reflect various sources of stimulation in the individual's background were explored. These are education, occupational stimulation (measured both by presence of work and type of work), urbanicity, father's education, mother's education, father's type of work, mother's type of work, and ethnicity. Three of the variables relating to occupation (i.e., the type of work of the individual, the father, and the mother) were measured using a five point scale which roughly reflects the amount of new and different experiences or information to which the individual is exposed on the job. These categories are shown in Table 13.

Table 13

Occupational Stimulation Categories Based on Type of Work

- \*1. Not employed (unemployed, retired)
2. Not employed outside the home (housewife, farmer)
3. Physical employment involving low mental stimulation (skilled worker, semi-skilled worker)
4. Moderate mental stimulation (salesperson, office worker)
5. High mental stimulation (managerial, student, professional)

\*The category of "retired" was not included in the measure of occupational stimulation of the mother and father. The rationale for this coding scheme is that the attempt is to measure the stimulation that the respondent was exposed to as a child. For most respondents, it seems unlikely that the parents were retired when the respondent was a child. Therefore, these cases are not used in the analysis.

An additional measure of occupational stimulation was used for the respondent. This simple measure consists of classifying respondents as to whether they are employed full-time, part-time, or not at all.

Urbanicity was measured by the population size of the city in which the individual resides. Ethnicity was measured by simply asking the individual if he or she had close ties with any identifiable ethnic group.

The Pearson correlation coefficients are shown in Tables 14, 15, and 16. Clearly, education is the single most important background variable with respect to stimulus variation. The second strongest relationship appears to be with the individual's occupational stimulation as measured by type of work.

The most surprising finding from this set are the relationships between stimulus variation and parents' occupational stimulation. It appears that, when the relationship is statistically significant (in 10 of the 38 tested relationships) it is in a negative rather than a positive direction. In other words, it appears that there is a mild relationship between having parents whose occupations are not highly stimulating and currently seeking stimulus variation. It is easier to understand this relationship for the mother's occupational stimulation than for the father's. No doubt many of the respondents' mothers were housewives, thereby placing them in category 2 of the occupational stimulation scale. The reason for the relationship with the father's occupational stimulation, however, remains unexplained conceptually.

The next step in analyzing the relationship between the background variables and the forms of stimulus variation was to do a stepwise regression. This was done in order to assess the cumulative effect which background as a whole has on stimulus variation. The standardized regression coefficients are shown in Tables 17, 18, and 19. None of the values for the standard



Table 14

Correlations between Background Variables and Stimulus Variation for Food Sample

| Measures of Stimulus Variation |                   |                   |                   |                  |                  |                   |
|--------------------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|
| Background Variables:          | RA                | MMU               | SA                | SI               | CS               | NE                |
| Education                      | .30 <sup>a</sup>  | .37 <sup>a</sup>  | .27 <sup>a</sup>  | .14 <sup>a</sup> | .42 <sup>a</sup> | .28 <sup>a</sup>  |
| Occupational Stimulation:      |                   |                   |                   |                  |                  |                   |
| Presence of Work               | .06               | .14 <sup>a</sup>  | .12 <sup>a</sup>  | .14 <sup>a</sup> | .12 <sup>a</sup> | .11 <sup>a</sup>  |
| Type of Work                   | .15 <sup>a</sup>  | .29 <sup>a</sup>  | .16 <sup>a</sup>  | .17 <sup>a</sup> | .32 <sup>a</sup> | .12 <sup>a</sup>  |
| Urbanicity                     | -.11 <sup>a</sup> | .03               | .02               | -.02             | .17 <sup>a</sup> | .004              |
| Father's education             | -.03              | -.02              | .01               | -.01             | -.01             | -.01              |
| Mother's education             | -.04              | -.02              | -.0001            | -.03             | .02              | .003              |
| Father's type of work          | -.09 <sup>b</sup> | -.07              | -.08              | -.003            | -.05             | -.12 <sup>a</sup> |
| Mother's type of work          | -.11 <sup>a</sup> | -.09 <sup>b</sup> | -.12 <sup>a</sup> | -.03             | -.02             | -.15 <sup>a</sup> |
| Ethnicity                      | .13 <sup>a</sup>  | .01               | .03               | .02              | .07              | .06               |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 15

Correlations between Background Variables and Stimulus Variation for Durables Sample

Measures of Stimulus Variation

| Background Variables:     | RA                | MMU              | SA                | SI               | CUA              | NE                |
|---------------------------|-------------------|------------------|-------------------|------------------|------------------|-------------------|
| Education                 | .25 <sup>a</sup>  | .27 <sup>a</sup> | .27 <sup>a</sup>  | .12 <sup>a</sup> | .40 <sup>a</sup> | .23 <sup>a</sup>  |
| Occupational Stimulation: |                   |                  |                   |                  |                  |                   |
| Presence of work          | .08               | .09 <sup>b</sup> | .08 <sup>b</sup>  | .15 <sup>a</sup> | .10 <sup>a</sup> | .05 <sup>b</sup>  |
| Type of work              | .12 <sup>a</sup>  | .21 <sup>a</sup> | .15 <sup>a</sup>  | .05              | .32 <sup>a</sup> | .09 <sup>b</sup>  |
| Urbanicity                | -.12 <sup>a</sup> | .01              | .02               | -.04             | .17 <sup>a</sup> | .04               |
| Father's education        | -.001             | -.05             | .02               | -.06             | -.02             | .001              |
| Mother's education        | .02               | -.06             | .03               | -.02             | -.02             | -.003             |
| Father's type of work     | -.06              | -.07             | -.14 <sup>a</sup> | -.04             | -.05             | -.19 <sup>a</sup> |
| Mother's type of work     | -.08 <sup>b</sup> | -.05             | -.10 <sup>a</sup> | -.05             | -.04             | -.14 <sup>a</sup> |
| Ethnicity                 | .08 <sup>b</sup>  | .05              | .08               | -.05             | .05              | .06               |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 16

Correlations between Background Variables and Stimulus Variation for Services Sample

| Background Variables:     | Measures of Stimulus Variation |                  |                  |                  |                   |                  |                   |
|---------------------------|--------------------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|
|                           | C                              | RA               | MMU              | SA               | SI                | CUA              | NE                |
| Education                 | .41 <sup>a</sup>               | .29 <sup>a</sup> | .34 <sup>a</sup> | .29 <sup>a</sup> | .15 <sup>a</sup>  | .43 <sup>a</sup> | .28 <sup>a</sup>  |
| Occupational Stimulation: |                                |                  |                  |                  |                   |                  |                   |
| Presence of work          | .22 <sup>a</sup>               | .07              | .10 <sup>a</sup> | .13 <sup>a</sup> | .20 <sup>a</sup>  | .11 <sup>a</sup> | .15 <sup>a</sup>  |
| Type of work              | .22 <sup>a</sup>               | .11 <sup>a</sup> | .13 <sup>a</sup> | .08              | .08               | .22 <sup>a</sup> | .04               |
| Urbanicity                | .20 <sup>a</sup>               | .04              | .07              | .08              | -.004             | .24 <sup>a</sup> | .000              |
| Father's education        | -.02                           | -.04             | -.04             | -.06             | -.09 <sup>a</sup> | .05              | -.08 <sup>b</sup> |
| Mother's education        | .02                            | .01              | -.01             | -.01             | -.05              | .01              | -.03              |
| Father's type of work     | -.05                           | -.02             | -.03             | -.04             | -.03              | -.0003           | -.07              |
| Mother's type of work     | -.05                           | -.03             | -.06             | -.05             | -.04              | -.01             | -.05              |
| Ethnicity                 | .05                            | .11 <sup>a</sup> | .01              | .05              | .01               | .05              | .04               |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup> Significant at  $p \leq .001$

<sup>b</sup> Significant at  $p \leq .005$

errors of the beta coefficients were greater than .17. Most were in the range of .02 to .05. As could be seen in the correlational analysis, the education of the individual is the single background variable with the strongest relationship with stimulus variation. In all but two of the nineteen regression analyses, it is the first variable used in the equation. In addition, it is clear that the standardized beta coefficients drop off rapidly once this variable has been used in the equation.

It is also clear that although all of the variables contribute to the explanation, they do so diproportionately. Education, occupational stimulation, and urbanicity appear to be the strongest background variables. Those background variables more distant in time from the current level of stimulus variation (e.g. parents' levels of education and occupational stimulation) have a less direct effect. Yet when all of these variables are combined, the resulting regression equations have F values ranging from 3.51 to 33.71, all of which are statistically significant at  $\alpha \leq .001$ .

#### Consumer Dissatisfaction and Stimulus Variation

The proposition that consumers who are high in stimulus variation will also experience high levels of dissatisfaction has already been discussed conceptually. In order to test this proposition, three measures of consumer dissatisfaction were created. The first measures the presence of dissatisfaction by counting the number of product sets (out of four) with which the respondent indicated the existence of at least one experience in the past year with which he or she was highly dissatisfied. The second measures the number of times the individual was dissatisfied by summing the number of times the individual was highly dissatisfied for each of the four product sets. The third measure sums across all product categories (out of a total of approximately 75 for each sample) the amount of satisfaction/dissatisfaction experienced based on a four point scale.

Table 17

Regression of Stimulus Variation on Background Variables For Food Sample

Measures of Stimulus Variation

| Background Variables:     | RA                 | MMU                | SA                | SI                | CS                 | NE                |
|---------------------------|--------------------|--------------------|-------------------|-------------------|--------------------|-------------------|
| Education                 | .27 <sup>a</sup>   | .26 <sup>a</sup>   | .19 <sup>a</sup>  | .04               | .36 <sup>a</sup>   | .23 <sup>a</sup>  |
| Occupational Stimulation: |                    |                    |                   |                   |                    |                   |
| Presence of work          | .02                | .01                | -.03              | -.08 <sup>d</sup> | .03                | -.04              |
| Type of work              | .06                | .17 <sup>a</sup>   | .06               | .14 <sup>a</sup>  | .11 <sup>a</sup>   | .01               |
| Urbanicity                | .18 <sup>a</sup>   | .05                | .03               | .06               | -.09 <sup>c</sup>  | .04               |
| Father's education        | .03                | -.03               | .07               | .04               | -.07               | .03               |
| Mother's education        | -.05               | .01                | -.04              | -.06              | .10 <sup>d</sup>   | -.01              |
| Father's type of work     | -.05               | NE                 | .01               | .01               | NE                 | -.03              |
| Mother's type of work     | -.02               | -.06 <sup>d</sup>  | -.13 <sup>c</sup> | -.03              | NE                 | -.14 <sup>a</sup> |
| Ethnicity                 | -.13 <sup>a</sup>  | NE                 | -.01              | -.03              | -.04               | -.04              |
| Constant                  | .30                | 1.02               | 1.95              | .15               | -.56               | 3.48              |
| Multiple R                | .35                | .38                | .28               | .21               | .46                | .30               |
| F value                   | 13.31 <sup>a</sup> | 20.58 <sup>a</sup> | 7.73 <sup>a</sup> | 4.17 <sup>a</sup> | 31.86 <sup>a</sup> | 9.23 <sup>a</sup> |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; NE=New Experiences

Cell entries are standardized regression coefficients. Cell entries labeled NE are variables not entered into the regression equation due to F levels of less than .01.

<sup>a</sup>Corresponding F value is statistically significant at  $\alpha < .001$

<sup>b</sup>Corresponding F value is statistically significant at  $\alpha < .005$

<sup>c</sup>Corresponding F value is statistically significant at  $\alpha < .01$

<sup>d</sup>Corresponding F value is statistically significant at  $\alpha < .05$

Table 18

Regression of Stimulus Variation on Background Variables for Durables Sample

Measures of Stimulus Variation

| Background Variables:     | RA                 | MMU               | SA                | SI                | CUA                | NE                |
|---------------------------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------|
| Education                 | .27 <sup>a</sup>   | .22 <sup>a</sup>  | .26 <sup>a</sup>  | .12 <sup>a</sup>  | .31 <sup>a</sup>   | .25 <sup>a</sup>  |
| Occupational Stimulation: |                    |                   |                   |                   |                    |                   |
| Presence of work          | -.01               | .02               | .004              | -.10 <sup>b</sup> | .04                | .02               |
| Type of work              | .02                | .11 <sup>c</sup>  | .01               | -.03              | .14 <sup>a</sup>   | -.04              |
| Urbanicity                | .19 <sup>a</sup>   | .09 <sup>c</sup>  | .02               | .05               | -.09 <sup>b</sup>  | -.01              |
| Father's education        | -.01               | .02               | -.01              | -.06              | -.03               | NE                |
| Mother's education        | NE                 | -.08              | .04               | .01               | NE                 | -.004             |
| Father's type of work     | NE                 | -.05              | -.11 <sup>a</sup> | -.02              | -.05               | -.17 <sup>a</sup> |
| Mother's type of work     | -.04               | -.01              | NE                | -.04              | .02                | .02               |
| Ethnicity                 | -.06               | -.02              | -.05              | .06               | -.01               | -.03              |
| Constant                  | .16                | 1.65              | 2.01              | .40               | -.75               | 3.32              |
| Multiple R                | .32                | .29               | .30               | .19               | .42                | .28               |
| F Value                   | 13.83 <sup>a</sup> | 8.72 <sup>a</sup> | 9.92 <sup>a</sup> | 3.1 <sup>a</sup>  | 22.52 <sup>a</sup> | 8.92 <sup>a</sup> |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural and Upscale Activities; NE=New Experiences

Cell entries are standardized regression coefficients. Cell entries labeled NE are variables not entered into the regression equation due to F levels of less than .01.

<sup>a</sup>Corresponding F value is statistically significant at  $\alpha \leq .001$

<sup>b</sup>Corresponding F value is statistically significant at  $\alpha \leq .005$

<sup>c</sup>Corresponding F value is statistically significant at  $\alpha \leq .01$

<sup>d</sup>Corresponding F value is statistically significant at  $\alpha \leq .05$

Table 19

Regression of Stimulus Variation on Background Variables for Services Sample

| Measures of Stimulus Variation |                    |                    |                    |                    |                   |                    |                    |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|
| Background Variables:          | C                  | RA                 | MMU                | SA                 | SI                | CUA                | NE                 |
| Education                      | .32 <sup>a</sup>   | .29 <sup>a</sup>   | .30 <sup>a</sup>   | .25 <sup>a</sup>   | .10 <sup>c</sup>  | .34 <sup>a</sup>   | .25 <sup>a</sup>   |
| Occupational Stimulation:      |                    |                    |                    |                    |                   |                    |                    |
| Presence of work               | -.10 <sup>a</sup>  | NE                 | -.003              | -.08 <sup>d</sup>  | -.16 <sup>a</sup> | .03                | -.09 <sup>c</sup>  |
| Type of work                   | .19 <sup>d</sup>   | NE                 | .06                | NE                 | .04               | .14 <sup>a</sup>   | NE                 |
| Urbanicity                     | -.14 <sup>a</sup>  | .09 <sup>a</sup>   | -.02               | -.04               | .01               | -.17 <sup>a</sup>  | .03                |
| Father's education             | -.05               | -.08               | -.06               | -.08               | -.04              | .04                | -.08               |
| Mother's education             | .09                | .06                | .06                | .04                | -.01              | -.03               | .05                |
| Father's type of work          | -.02               | .01                | .01                | NE                 | .03               | NE                 | -.04               |
| Mother's type of work          | -.01               | -.01               | -.03               | -.03               | -.04              | .04                | NE                 |
| Ethnicity                      | .01                | -.08 <sup>d</sup>  | .06                | .003               | .03               | .01                | -.01               |
| Constant                       | 1.09               | .60                | 1.18               | 2.50               | .58               | -.58               | 3.26               |
| Multiple R                     | .46                | .31                | .34                | .30                | .24               | .48                | .30                |
| F Value                        | 26.50 <sup>a</sup> | 13.72 <sup>a</sup> | 13.25 <sup>a</sup> | 12.74 <sup>a</sup> | 6.09 <sup>a</sup> | 33.71 <sup>a</sup> | 12.32 <sup>a</sup> |

NOTE: C=Cosmopoliteness; RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural and Upscale Activities; NE=New Experiences

Cell entries are standardized regression coefficients. Cell entries labeled NE are variable not entered into the regression equation due to F levels of less than .01.

<sup>a</sup>Corresponding F value is statistically significant at  $\alpha \leq .001$

<sup>b</sup>Corresponding F value is statistically significant at  $\alpha \leq .005$

<sup>c</sup>Corresponding F value is statistically significant at  $\alpha \leq .01$

<sup>d</sup>Corresponding F value is statistically significant at  $\alpha \leq .05$

The correlations between these three measures and the measures of stimulus variation are shown in Tables 20, 21, and 22. All of the correlations support the proposition indicating the existence of the "gourmet syndrome." In particular, it appears that the higher the level of stimulus variation, the greater the total amount of dissatisfaction experienced in a particular time period.

Next to be examined are the reasons why this dissatisfaction is felt and how this relates to stimulus variation. Two possible reasons are explored: product malfunction and product inferiority. The a priori expectation is that consumers who are high in stimulus variation will be more likely than others to experience dissatisfaction as a result of product inferiority, and no different than others in their experience of dissatisfaction resulting from product malfunction.

The Pearson correlation coefficients for the relationship between the seven measures of stimulus variation and the two indexes constructed from stated reasons for dissatisfaction are shown in Table 23. Clearly, there is a consistent positive relationship between stimulus variation and attributing dissatisfaction to product inferiority. Yet there is also a less intense but still positive relationship between stimulus variation and attributing dissatisfaction to product malfunction.

Therefore, it appears that not only do individuals who are high in stimulus variation experience dissatisfaction from product inferiority, but also to a lesser extent from product malfunction. This may be due to the individual's greater ability to understand and notice product inferiority as well as product malfunction. In other words, product malfunction may have an equal probability of occurring to particular individuals, but individuals may have different propensities for being able to identify and understand that



Table 20

Correlations between Consumer Dissatisfaction and Stimulus Variation For Food Sample

|                             | Measures of Stimulus Variation |                  |                  |                  |                  |                  |
|-----------------------------|--------------------------------|------------------|------------------|------------------|------------------|------------------|
|                             | RA                             | MMU              | SA               | SI               | CS               | NE               |
| Presence of dissatisfaction | .12 <sup>a</sup>               | .18 <sup>a</sup> | .11 <sup>a</sup> | .07              | .14 <sup>a</sup> | .12 <sup>a</sup> |
| Times dissatisfied          | .11 <sup>a</sup>               | .14 <sup>a</sup> | .10 <sup>a</sup> | .04              | .11 <sup>a</sup> | .10 <sup>a</sup> |
| Amount of dissatisfaction   | .08 <sup>b</sup>               | .26 <sup>a</sup> | .12 <sup>a</sup> | .13 <sup>a</sup> | .10 <sup>a</sup> | .17 <sup>a</sup> |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; NE=New Experiences

<sup>a</sup> Significant at  $p \leq .001$

<sup>b</sup> Significant at  $p \leq .005$

Table 21

Correlations between Consumer Dissatisfaction and Stimulus Variation for Durables Sample  
Measures of Stimulus Variation

|                             | RA               | MMU              | SA               | SI               | CUA              | NE               |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Presence of dissatisfaction | .08 <sup>b</sup> | .14 <sup>a</sup> | .10 <sup>a</sup> | .08              | .05              | .08 <sup>b</sup> |
| Times dissatisfied          | .09 <sup>b</sup> | .15 <sup>a</sup> | .10 <sup>a</sup> | .09 <sup>b</sup> | .05              | .07              |
| Amount of dissatisfaction   | .18 <sup>a</sup> | .37 <sup>a</sup> | .24 <sup>a</sup> | .16 <sup>a</sup> | .17 <sup>a</sup> | .21 <sup>a</sup> |

NOTE: RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 22

Correlations between Consumer Dissatisfaction and Stimulus Variation for Services Sample

|                             | Measures of Stimulus Variation |                  |                  |                  |                  |                  |                  |
|-----------------------------|--------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                             | C                              | RA               | MMU              | SA               | SI               | CUA              | NE               |
| Presence of dissatisfaction | .25 <sup>a</sup>               | .08 <sup>b</sup> | .15 <sup>a</sup> | .05              | .05              | .13 <sup>a</sup> | .10 <sup>a</sup> |
| Times dissatisfied          | .24 <sup>a</sup>               | .08 <sup>b</sup> | .13 <sup>a</sup> | .06              | .04              | .12 <sup>a</sup> | .12 <sup>a</sup> |
| Amount of dissatisfaction   | .58 <sup>a</sup>               | .24 <sup>a</sup> | .31 <sup>a</sup> | .19 <sup>a</sup> | .16 <sup>a</sup> | .26 <sup>a</sup> | .25 <sup>a</sup> |

NOTE: C=Cosmopoliteness; RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 23

Correlations between Stimulus Variation and Reasons for Dissatisfaction

|             | Measures of Stimulus Variation |                  |                  |                  |                  | CS or<br>CUA     | NE               |
|-------------|--------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|             | C                              | RA               | MMU              | SA               | SI               |                  |                  |
| Malfunction |                                |                  |                  |                  |                  |                  |                  |
| Food        | -                              | .11 <sup>a</sup> | .17 <sup>a</sup> | .12 <sup>a</sup> | .08 <sup>b</sup> | .12 <sup>a</sup> | .11 <sup>a</sup> |
| Durables    | -                              | .02              | .05              | .04              | .02              | .01              | .03              |
| Services    | .22 <sup>a</sup>               | .09 <sup>b</sup> | .17 <sup>a</sup> | .05              | .04              | .13 <sup>a</sup> | .10 <sup>a</sup> |
| Inferiority |                                |                  |                  |                  |                  |                  |                  |
| Food        | -                              | .11 <sup>a</sup> | .18 <sup>a</sup> | .12 <sup>a</sup> | .08              | .12 <sup>a</sup> | .12 <sup>a</sup> |
| Durables    | -                              | .10 <sup>a</sup> | .15 <sup>a</sup> | .13 <sup>a</sup> | .10 <sup>a</sup> | .07              | .09 <sup>a</sup> |
| Services    | .24 <sup>a</sup>               | .15 <sup>a</sup> | .14 <sup>a</sup> | .08 <sup>b</sup> | .06              | .10 <sup>a</sup> | .14 <sup>a</sup> |

NOTE: C=Cosmopolitaness; RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

product malfunction has occurred. The discovery, then, is that the ability to understand and seek diverse experiences is translated into the ability to understand product inferiority as well as product malfunction.

#### Consumer Action-Taking and Stimulus Variation

Given that the individual has experienced dissatisfaction, the question as to whether the individual will take action and what type of action remains to be explored. The first question of propensity to take action has been analyzed with respect to demographic variables (e.g. Andreasen, 1975; Bourgeois and Barnes, 1976; Hermann, 1974), but has not been well explained in terms of its generating mechanism. Of course, the experience of dissatisfaction is the most obvious generating mechanism. But this does not explain individual differences in action-taking propensity once the dissatisfaction has occurred.

This was done using Pearson correlation coefficients which are shown in Table 24. Clearly, there is a relationship, although its intensity appears to be greatest for the cosmopolitaness and mass media utilization measures of stimulus variation. Of course the amount of stimulus variation in the individual's life does not completely explain the presence of action-taking in response to dissatisfaction, but the relationship is sufficiently strong to warrant further investigation, perhaps in conjunction with measures of locus of control as well as time and resource availability.

The second question to address concerns the type of action chosen by the individual if action is taken in response to dissatisfaction. The two types of action which may be taken are personal actions and direct actions, which of course, are not mutually exclusive. Pearson correlation coefficients to analyze the extent of the relationship between these two types of action and stimulus variation are shown in Table 25. As expected, there is a

Table 24

Correlations between Stimulus Variation and Action Taking

|   | Measures of Stimulus Variation |                  |                  |                  |     |                  | NE               |
|---|--------------------------------|------------------|------------------|------------------|-----|------------------|------------------|
|   | C                              | RA               | MMU              | SA               | SI  | CS or<br>CUA     |                  |
| Presence of action<br>taking (food)     | -                              | .13 <sup>a</sup> | .21 <sup>a</sup> | .11 <sup>a</sup> | .05 | .17 <sup>a</sup> | .12 <sup>a</sup> |
| Presence of action<br>taking (durables) | -                              | .11 <sup>a</sup> | .15 <sup>a</sup> | .11 <sup>a</sup> | .05 | .02              | .09 <sup>b</sup> |
| Presence of action<br>taking (services) | .23 <sup>a</sup>               | .09 <sup>b</sup> | .17 <sup>a</sup> | .02              | .04 | .10 <sup>a</sup> | .11 <sup>a</sup> |

NOTE: C=Cosmopoliteness; RA=Role Accumulation; MMU=Mass Media Utilization;  
SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural  
Stimulation; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

Table 25

Correlations between Stimulus Variation and Types of Action Taken

| Type of Action:  | Measures of Stimulus Variation |                  |                  |                  |                  |                  |                  |
|------------------|--------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                  | C                              | RA               | MMU              | SA               | SI               | CS or CUA        | NE               |
| Personal actions |                                |                  |                  |                  |                  |                  |                  |
| Food             | -                              | .10 <sup>a</sup> | .17 <sup>a</sup> | .10 <sup>a</sup> | .05              | .14 <sup>a</sup> | .09 <sup>b</sup> |
| Durables         | -                              | .09 <sup>b</sup> | .14 <sup>a</sup> | .12 <sup>a</sup> | .06              | .03              | .09 <sup>b</sup> |
| Services         | .22 <sup>a</sup>               | .06              | .14 <sup>a</sup> | .03              | .04              | .10 <sup>a</sup> | .09 <sup>a</sup> |
| Direct actions   |                                |                  |                  |                  |                  |                  |                  |
| Food             | -                              | .14 <sup>a</sup> | .19 <sup>a</sup> | .10 <sup>a</sup> | .08 <sup>b</sup> | .17 <sup>a</sup> | .09 <sup>b</sup> |
| Durables         | -                              | .12 <sup>a</sup> | .14 <sup>a</sup> | .09 <sup>b</sup> | .07              | .01              | .08 <sup>b</sup> |
| Services         | .22 <sup>a</sup>               | .10 <sup>a</sup> | .17 <sup>a</sup> | .05              | .05              | .08 <sup>b</sup> | .13 <sup>a</sup> |

NOTE: C=Cosmopoliteness; RA=Role Accumulation; MMU=Mass Media Utilization; SA=Number of Social Activities; SI=Sports Involvement; CS=Cultural Stimulation; CUA=Cultural and Upscale Activities; NE=New Experiences

<sup>a</sup>Significant at  $p \leq .001$

<sup>b</sup>Significant at  $p \leq .005$

consistent positive relationship between stimulus variation and taking direct actions. Surprisingly, however, there is also a less intense but still positive relationship between stimulus variation and taking personal actions. Since the two types of action are not mutually exclusive, this seems to indicate that those who are high in stimulus variation are action-takers with respect to consumer dissatisfaction, and are likely to take more direct actions than personal actions, although they do take both.

#### Managerial and Public Policy Implications

Clearly, stimulus variation is an important concept to consider in explaining consumer satisfaction/dissatisfaction and action-taking. In fact several interesting relationships have been uncovered.

It has been found that consumers who are high in stimulus variation experience more dissatisfaction than do others. The implication therefore is that consumer information or education programs may have unintended consequences. That is, individuals may experience more rather than less dissatisfaction as a result of these programs. This is not to say that people would be making less desirable choices (i.e. sub-optimal given their individual utility functions), but rather that they might be able to more finely evaluate the outcomes of their choices and therefore notice more dissatisfying aspects. This would hold to the extent that the consumer information or education program provided an opportunity for the individual to develop his or her cognitive complexity and level of stimulus variation. However, consumers who are cognitively simple may not experience any change in their levels of satisfaction/dissatisfaction as a result of such a program. They may, however, make less desirable choices. This could occur if the additional information served to confuse these individuals sufficiently that their choice-making abilities were impaired. Given their low levels of cognitive



complexity and stimulus variation, they may not be able to finely evaluate the outcomes of these choices and therefore may not notice dissatisfying aspects.

In summary, it may be very difficult to evaluate and understand the effectiveness of consumer information and education programs unless the concept of stimulus variation is taken into account. Low levels of dissatisfaction among the cognitively simple group may be an indication of a problem rather than a success. Similarly, increased levels of consumer dissatisfaction among the cognitively complex groups in response to such a program may be an indication of success rather than failure. In other words, consumer information and education programs cannot be evaluated by their reduction of consumer dissatisfaction.

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Given that complaint-registering or action-taking in response to dissatisfaction is often used by corporations as a measure of levels of dissatisfaction, the same erroneous conclusions could be reached. In fact a consumer affairs program may increase rather than decrease the number of complaints an organization receives. Lack of dissatisfaction and complaining behavior is not necessarily an indication of effective functioning of consumers in the marketplace.

Of course, many questions remain to be answered before programs to develop consumers' levels of cognitive complexity and stimulus variation can be developed. These are discussed below.

1. Panel research tracking individuals over the course of several years is needed to address the issue of how cognitive complexity and desires for stimulus variation develop. This research could spot the effects of changes in educational level, geographic location, and occupational stimulation.

2. The issue of the time lag between cognitive complexity, stimulus variation seeking, consumer information processing skills, and consumer action-taking could then be explored. This could answer the question concerning how long it takes before the cognitive and life pattern changes are translated into consumer pattern changes.
3. Another issue to be addressed is whether an individual can regress in desires for stimulus variation if it is not found to be rewarding. This would also answer questions relative to the possible emergence of a two-tiered consumption system (Hirschman and Wallendorf, 1979). This type of system could emerge if some individuals find ever-increasing levels of variety and stimulation intrinsically rewarding while another group finds it intrinsically overwhelming and dissatisfying, and therefore retreats to a more closed and traditional lifestyle.
4. Finally, the internal mechanism of cognitive complexity and information processing ability needs to be measured and examined directly. In the present study its postulated behavioral manifestations (e.g. role accumulation, cosmopolitanism, and breadth of mass media utilization) have been examined. However, in order to understand how to effect change in the individual's cognitive structure, it must be explored directly.

As these questions and issues are addressed, the abilities of the manager and/or those in the public policy arena to assist in bringing about more effective functioning of consumers in the marketplace will increase.

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