

MASTER OF PHILOSOPHY THESIS

NEW PRODUCT MARKETING  
AND  
CONSUMER INNOVATIVE BEHAVIOUR

A STUDY OF THE GREEK MARKET

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CONTENTS

	<u>Page No.</u>
ACKNOWLEDGMENTS	4
DEDICATION	5
PREFACE	6
INTRODUCTION	8
 <u>CHAPTER I</u>	
NEW PRODUCT IDEAS, THEIR SOURCES & DEVELOPMENT	15
Section 1 - Internal Sources	17
Section 2 - External Sources	21
Section 3 - Market Consumer Research & Competition	24
 <u>CHAPTER II</u>	
Section 1 - Aspects of Existing Theories of Consumer Behaviour	29
Section 2 - Significance of New Product Price to Consumer	37
 <u>CHAPTER III</u>	
A SEARCH OF THE GREEK MARKET	
Section 1 - Consumer Based Invention	40
Section 2 - Some Comments on Consumer- Based Techniques	41
Section 3 - Where do New Product Ideas Actually Come From	46
Section 4 - Questionnaire	53

	<u>Page No.</u>
 <u>CHAPTER IV</u>	
NEW PRODUCT MARKETING, THE CONSUMER IN THE INNOVATION FIELD AND THE INTRA FIRM INNOVATION PROCESS	58
Section 1 - The Necessity of Innovation	58
Section 2 - Definition of Innovation	60
Section 3 - Psychologists and Innovation	61
Section 4 - Economists and Innovation	62
Section 5 - Sociologists and Innovation	62
Section 6 - Research on the Process of Organisational Innovation	63
Section 7 - Conditions for Creativity	64
Section 8 - Classification of Innovation	66
 <u>CHAPTER V</u>	
CONSUMER INNOVATIVENESS	71
Section 1 - The Measurement of Individual Innovativeness	72
Section 2 - The Meaning of Individual Innovativeness	75
Section 3 - Adopter/Innovativeness Categorisation Schemes	79
Section 4 - The Characteristics of Innovators	83
 <u>CHAPTER VI</u>	
INNOVATION AND SOCIETY, CONCLUSIONS	100
BIBLIOGRAPHY	109



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I should like to thank my supervisor, Dr H G Hunt for his help and advice.

I should also like to thank Ms Jane Cosyns for her constant help throughout the thesis.

A.A.Z.



DEDICATION

To my parents for their support throughout my  
academic career.

PREFACE

"Don't keep forever on the public road, going only where others have gone. Leave the beaten track occasionally and dive into the woods. You will be certain to find something you have never seen before. Of course, it will be a little thing, but do not ignore it. Follow it up, explore all around it; one discovery will lead to another, and before you know it you will have something worth thinking about."

Alexander Graham Bell

Business firms are increasingly recognising that the key to their survival and growth lies in the continuous development of new and improved products. Gone is the confidence that established products will maintain strong market positions indefinitely. Assuming all these, and in the first part of my thesis, I will examine the sources from which new product ideas can be produced in a company.

In the second part, an effort has been made to concentrate in a few pages a vast bulk of material covering the existing literature on consumer behaviour theories. Great attention has been paid to that, because of its significance to the whole subject, but particularly because of its importance to understand the role of the consumer in the innovation process.

Half of the third part is theoretical, while the rest of it is practical. In the beginning, and in order to prove that - at least in Greece - the consumer based invention is the most effective one, I found it necessary to comment on the consumer based techniques of generating new product ideas.

Then the field research is presented and its results giving an image of how things work in a limited area of the Greek market.

Under modern conditions of competition, it is becoming increasingly risky not to innovate. Consumers and industrial customers want and expect a stream of new and improved products.

Competition will certainly do its best to meet these desires. Continuous innovation seems to be the only way to avert obsolescence of the company's product line. The innovation process, in combination with the consumers' attitudes in this field, is the subject of the last part of the thesis.



## INTRODUCTION

The fundamental reason for the existence of an enterprise lies in its hope to satisfy the needs of its consumers. An eternal problem exists, however, in that the consumers' needs must by definition remain continuously unsatisfied. Needs change over time and are conditioned by many variables.

In considering the satisfaction of consumer needs, the enterprise is continually searching for new ideas. This search is an essentially creative activity and as such, to a large extent, defies finite definition. Ideas may spring from a wide variety of sources and some sources may be more productive than others (depending upon the nature of the product itself).

This factor is important in determining the direction which may be taken by the search. New ideas must necessarily be encouraged, both to the greater satisfaction of the consumer and to the success, or possibly survival, of the enterprise since the greater the number of ideas generated, the greater the number of new products which may be developed.

But what may be considered to be a 'new product'? According to the American Marketing Association it is possible to identify the following as new products:

1. replacements for existing products
2. extensions to the existing range
3. additional products, outside the existing range, for sale in familiar markets
4. additional products for sale in unfamiliar markets.

Harry Flynn, on the other hand, gives a different meaning to the term 'new product'.

1. For the Producer: something which is produced for the first time by his firm, regardless of whether it has been marketed by any other producer.
2. For the Mediator: something which circulates in his market for the first time, regardless of whether it has been marketed elsewhere.
3. For the Consumer: that which appears in his market area for the first time.

Another definition which has some weight is that of Peter Kramshar. In his opinion, in order for a product to be termed 'new' it must have one of the following characteristics:

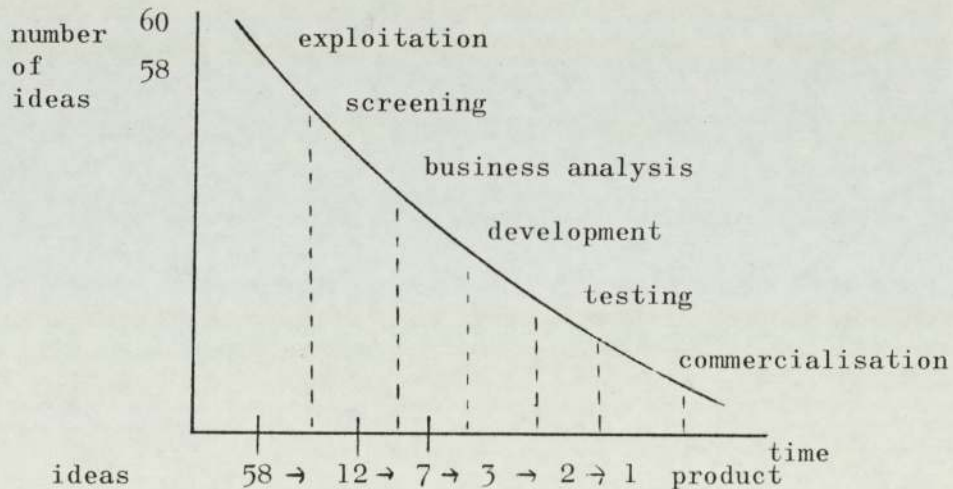
1. Some alternation to existing type, eg, new packaging, new size or a new variety of the existing product.
2. An innovation in an existing market.
3. An innovation into a new market.
4. A similar product to one manufactured by a competitive firm, but manufactured for the first time by the firm introducing it.
5. A product marketed for the first time into the country, which already exists abroad.



6. A product totally different from any other marketed anywhere. (A true innovation.)

There are, of course, many other definitions of the new product which have been devised by notable writers on marketing, such as Chester Watson, Philip Kotler, Ralph Westfall, Samuel Smith, John Wheatley, Edward C Bursk and others too numerous to mention.

A new product, however, is only developed after a lengthy process of considering new ideas. During the course of this process, many ideas are eliminated. Research has shown how few ideas are actually transformed into an end product. The following diagram shows the different stages through which new ideas pass before being considered as commercial realities.



The above curve demonstrates that from 58 original ideas only 12 are successful in passing the screening stage, which



eliminates any ideas which are not in harmony with company objectives. Only 7 ideas are considered to have possible commercial value of which 4 more are eliminated in the development stage. After testing another idea is eliminated, and only one idea survives as a commercially viable proposition which truly meets company needs. Each stage allows the company to make a further judgement as to whether an idea can be further developed, or should be abandoned. The company has to establish decision criteria which minimise the chances of poor ideas being developed or good ideas being rejected. Of course, although an idea may be considered successful, this does not necessarily imply that the new product is bound to succeed. The most common reason for the failure of a new product is ignorance of the market (inadequate market research). Other major causes are:

1. Production expenses exceeding the expected level.
2. Delays in production schedule, resulting in late introduction of the product.
3. Unexpected competition on price.
4. Distribution difficulties.

The first, and in my opinion, one of the most important steps in directing the search for a new product is the formation of logical targets. To achieve this, a thorough analysis of production capabilities, material availability, the market, appropriate labour, distribution facilities and financial constraints, must be undertaken. The information system is the base on which future designs rest. This again will not ensure success but will at least improve the possibility of developing the product most likely to succeed.

An interesting discussion took place between Anthony Harris and Peter Kramshar. The former maintains that the idea is all important and that the only successful innovations are those based on a truly original idea. Kramshar, on the other hand, states that the idea itself is of little value unless there is a logical framework in existence which can develop the idea. There is an element of truth in both hypotheses. Creativity is vitally important, but unless it is channelled in the right direction it can be useless and even, under certain circumstances, dangerous.

It is widely believed nowadays, that to achieve success with a product, its character must act as an extension of the consumer's personality. This, of course, is a direct challenge to views held in the past when the products character was almost inevitably an extension of the manufacturer's personality. The results of this were not always as expected by the manufacturer as the product had often to overcome considerable consumer resistance, which had not been taken into account.

In considering the subject, I shall be reviewing the major works in this field by both English and American writers and associations. My object is to bring the various theories together, to analyse and to arrive at some conclusion regarding the importance the role of the consumer plays in the creation of new ideas. It is becoming increasingly apparent that it is necessary to be essentially guided by the consumers preferences, needs and desires when developing ideas for new products. In addition, there must be real evidence that a need exists and that it can be satisfied without undue sacrifice to the consumer before embarking on a development project. The bulk of recent literature certainly suggests that the consumers' attitudes and preferences should first be researched, followed by trade of economics research.

The sources from which ideas can be obtained will be examined, individually analysed and compared with the consumer hypotheses



as the most reliable source. Methodology is of supreme importance and the thesis will be based around the following structure.

1. Definition of the subject.
2. Collection of data.
3. Analysis and evaluation of data.
4. Preparation of report of research survey.
5. Summary and conclusions.

Information will be obtained from two main types of source. Firstly from field research and the observations derived from this and also from secondary sources, which include articles and information obtained from published theses concerning this subject. The majority of my research is based on consideration of the attitudes of the Greek consumer. However, I intend to examine the behaviour of the consumer in a world context and secondly to concentrate in particular on the Greek consumer. Research on the latter will be based on information obtained from a number of Greek companies.

This plan is intended as a loose framework which is designed to facilitate flexibility. Having such a plan will have the advantage, however, of ensuring a logical process of research and analysis with a clear objective in mind.



CHAPTER I

### NEW PRODUCT IDEAS, THEIR SOURCES AND DEVELOPMENT

It is believed by many that sources of new ideas internal to the company can be most productive. For example, the National Industrial Conference Board which incorporates 1150 of the larger American companies had declared that 88% of their ideas for new products came from internal sources. Of these 66% were based on market research and development departments. The internal flow of ideas within a company is based on its philosophy of innovation. Innovation is encouraged where there is a strong realisation of market potential (particularly in rapidly changing markets) and as profit opportunities become increasingly apparent. Consequently, many firms realise that innovation should be encouraged and in some industries (electronics, for instance) that it is vital. But the risks involved in innovation can be as great as the rewards. A large number of new products fail in the market place and an even greater percentage are dropped before commercialisation. The secrets of successful innovation lie in the development of effective organisation design, professional management, good research, well developed forecasting and sound analytical criteria for decision-making. A management team which must be prepared to face the possible risks of new product development is likely to be far more effective in creating ideas than an equivalent team operating under relatively static market conditions. The greater the emphasis on new product ideas generated, the more innovative the company may be considered to be. (The definitions of new products given in the introduction should be borne in mind here - a new product may evolve from a relatively minor change in design, colour or packaging and does not necessarily involve a totally new technological innovation.

Large companies which have products with a high technological content are more likely to get their most valuable ideas from



their internal structure. Smaller enterprises which cannot afford an elaborate research and development department rely more often on external sources, analysis of competition, advisory organisations and research institutes.

Before considering the various sources of ideas for new products a few techniques of idea creation must be mentioned.

1. Analysis of Product Characteristics

This involves consideration of all the characteristics of a product. From this an analysis can then be made of any characteristics which could either be incorporated or improved which would afford greater satisfaction to the consumer.

2. Morphological Analysis

This technique involves analysis of the main dimensions of a product and the relationship between them, thereby hoping to create new ideas from looking at the product from various points of view.

3. Bombarding

This involves discussion groups of people who exchange ideas about products and in so doing may be able to suggest improvements or variations.

4. Operational Creativity

This aims to stimulate new ideas through considering the role the product plays for the consumer.

We can now analyse the sources of new product ideas bearing in



mind some of the techniques which can be used to create such ideas.

While the purpose of market research is frequently to aid decision making, it is sometimes used to provide information regarding the range of options available within various markets. One specific area in which this is useful is in the generation of new product ideas which may be developed. There is a clear distinction between those ideas which are invented internally by the company and those which come from external sources. In the same way, there is also a distinct difference between ideas which result from a deliberately planned policy of innovation and those which appear to come from nowhere. The most important distinction, however, is between internal and external sources. Internal sources are part of the company's structure which generates ideas and external sources can be defined as the environment surrounding the company whether it be market conditions, consumer preferences, competition or suppliers. Internal and external sources will be examined at this point.

## 1. INTERNAL SOURCES

### 1.1 Top Management

Top management of large size organisations are to some extent likely to be the best qualified people within the company to be able to suggest new product ideas since between them they are likely to have most perfect knowledge of the company's resources and capabilities, financial and otherwise. They are also likely to be in a good position to obtain information about the competition.

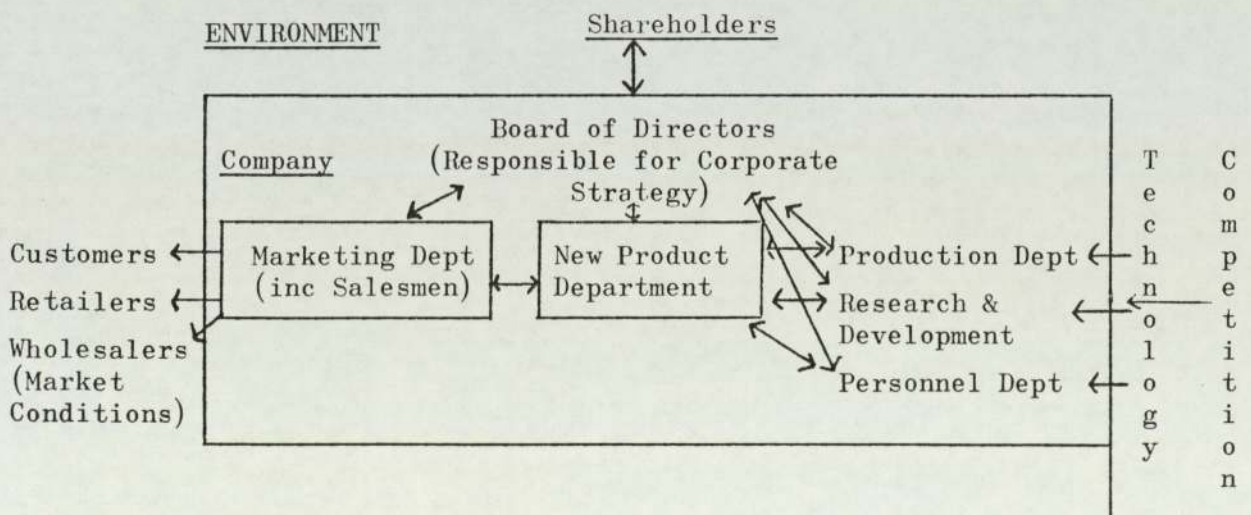
### 1.2 Research and Development Departments

Most large companies have a R & D Department. Indeed, the major multi-nationals such as Du Pont or IBM invest millions every year on vast laboratories and

on employing the best qualified scientists. An advanced R & D Department is vitally important in such industries as plastics and communications equipment, for without this the company would be unable to maintain a competitive edge in the market. Thus, it can be seen that R & D Departments may be an essential part of the innovative structure of the company.

### 1.3 New Product Departments

Many progressive enterprises have a specific department dedicated to the generation of ideas for new products. This department analyses the future possibilities for the company, programs new product development schedules and coordinates ideas and information from all departments of the company. Of necessity, this department must be highly placed within the company, for without the necessary respect it would not be possible to have access to the necessary cooperation. The position of the new product department in relation to the flow of information can be demonstrated by the following diagram.





The American publication 'Gray Matter'\* makes the following suggestions regarding points to be borne in mind:

- a) More research is necessary on new ideas to ensure that products are introduced at the right time, into the right market, under the right conditions.
- b) Where the new product is a true innovation it may be wise to treat it as a luxury good and aim for the top end of the market. As the novelty wears off and competitors move in, it may become more profitable to aim for mass production and low costs. The company must therefore regulate new product strategy to take advantage accordingly.
- c) Time scales for new product introduction must be established which take seasonality and changing elasticities of demand, price and income into account.

#### 1.4 Product Design Committees

Some companies hold regular committee meetings which will consist of highly placed representatives of all departments - the Production Manager, Research & Development Engineers, the Personnel Manager, Marketing Manager and Finance Director. Thus it will be possible to discuss any ideas generated from any department within the constraints of the company's resources and capabilities. For example, an idea may be suggested by the Marketing Manager (based on knowledge of a potential market) but which may not be feasible because production resources are inadequate, or because the Finance Director feels that it would require greater investment than can safely be allocated. This may

\* issued monthly by the GRAY Advertising Inc, New York



work in any direction - R & D personnel may suggest product ideas which the Marketing Director knows will not be acceptable to the market, or the Production Manager may suggest streamlining a product for easier mass-production, or longer production runs - but the Marketing Manager may prefer a greater variety of products. There is inevitably a great deal of conflict, since each department head will tend to have his own department's interests in mind and will regard it as most important. However, any idea can be acceptable in theory to all departments, then further investigations can be made according to the new product development procedure operated by the company.

One danger which exists is that nothing will be agreed at the end of a discussion, but providing department heads have the company's interests as a whole in mind, this can be an effective means for generating new ideas.

#### 1.5 Salesmen

Salesmen are likely to have some of the most up-to-date awareness of customers preferences and market conditions since they are in constant contact with the customer directly or with the retailer/wholesaler who will inform them of the success of the company's range of products. They are also likely to be aware of competitive movements in the market through this contact. Thus they can be a very valuable source of information for new ideas. They are very often under-estimated in this context and many companies could benefit from an innovative strategy which includes consideration of salesmen.

## 2. EXTERNAL SOURCES

### 2.1 Publications

All companies must be aware of research in their particular field and they must keep up-to-date with all current developments. One important means of doing so is to maintain a continuous study of all trade and commercial magazines which may suggest where the gaps in the market lie or give details of products which could be modified or improved to make a profitable new product. It is also important to be aware of the consumers changing attitudes and how they are likely to be affected by price, novelty, safety aspects and economic conditions within the market. Magazines such as 'Which' can therefore be extremely important in gauging customer preferences for the various aspects of the product.

However, it can be dangerous to rely on publications too heavily as a source of new ideas, in that this may prevent true innovation and it may mean that the company becomes a follower rather than a leader.

Nevertheless, if used in the right way, magazines can provide information which could be important for the development of new ideas.

### 2.2 Market Research Agencies

Many major companies use the services of a specialised agency in preference to undertaking their own market research. The agency will probably be much better qualified to suggest various ways in which to approach the problem of developing a new product idea in a particular market. The agency can often



produce new ideas for products through its market research in addition to investigating a new product idea's chances of success, through a variety of techniques. For example, A & F in Los Angeles combined an advertising campaign in the L.A. Times with a questionnaire on consumers' likes and dislikes of the products characteristics. They received about 300 replies of which 50 included suggestions which were worthy of further study. Only a small number of these suggestions were of real value, but A & F found the experiment sufficiently successful to continue the process elsewhere.

### 2.3 Individuals

All companies must be open to suggestions from any source. Many revolutionary ideas for new products come from individuals who are not necessarily directly involved with the company. For example, a doctor from Cleveland, USA, made a number of new product suggestions before designing a sitting bath for home use by the disabled and contacted a large pharmaceutical firm who accepted his ideas and went into commercial production. The results involved increased revenue for the firm of 200 million dollars. There are numerous examples of new ideas suggested by individuals who have a spare time interest in a particular field, particularly amateur radio and computer enthusiasts. Companies cannot afford to ignore ideas from outside sources as if the idea has any validity sooner or later a competitive firm will take advantage of it and gain an edge in the market.

### 2.4 Universities & Other Higher Education Establishments

Universities and other higher education establishments can offer great sources of ideas, which are not always utilised to the full by private industry.



Cooperation between universities and companies can provide a marvellous opportunity for the development of new product ideas for the mutual interest of both. The closer the two work in conjunction the better, since career opportunities are offered in the long term to students, whilst the company will be able to take advantage of research facilities which it may otherwise be unable to afford.

## 2.5 Research Institutes

Most industries will have some sort of research organisation which is designed to further the technology of the industry and in so doing will assist the progress of the individual firms which comprise the industry. Some firms will be able to use the services of more than one institute. In addition there are the various institutes which produce data and statistics of a general nature which will be useful, for example, in assessing market conditions with a view to forecasting for the future. This will provide the company with a wide range of information which can provide a sound basis for the development of new product ideas.

## 2.6 Finally, I am referring to the consumer, which I consider as the best source of new product ideas. From all that I have mentioned before and from the existing literature, one can be driven to the conclusion that every product must satisfy in the best possible way the consumers' needs. Furthermore, a product is considered as successful if it is an extension of the consumers' personalities.

In our days, all enterprises know that there is only one way to do business, and this is to get close to the consumer. So in order to satisfy him they

use questionnaires, statistical searches and complaint boxes, to find what bothers him, as well as what new he needs. They also like to correspond with as many consumers as possible. This last method has been quite useful for the General Foods Corporation in USA which has received about 80,000 letters concerning their product packaging, in one year. After examining these letters the marketing men of the company decided to give a new shape and colour in certain product packages. This was a consumer's request which had to be satisfied for both consumers and company's good.

#### MARKET/CONSUMER RESEARCH & COMPETITION

After analysing all internal and external sources of new product ideas, I would like to refer to another two factors on which the introduction of a new product is very much dependent. These are the market/consumer research and the competition.

It is quite obvious that without market research and without examination of the competition conditions, even a very well designed new product could turn to a failure.

For the above reason, it is worth examining in further detail these two factors.

##### 1. Market Research

Generally it could be said that market research is the methodic and objective analysis of all the data which would fulfil the consumers' satisfaction and the company's economic targets. Furthermore, by referring to the market research in relation to the consumer research, there are four basic techniques:



- a) **Qualitative Market Analysis:** this involves a description of the consumers characteristics, age, sex, social position etc. It also involves group discussions and individual unstructured interviews to explore consumers behaviour, attitudes and needs in a product group or a particular need-area.

Being qualitative and discursive, the research can be fairly comprehensive and exhaustive in such a way that unsatisfied needs and aspirations can be consciously looked for. Once found, these needs can become the new starting point for a deliberate attempt at new concept formulation - and again, the creative gap which will remain to be jumped will often be minimal.

- b) **Quantitative Structured Market Research:** this is really the next logical progression in the use of previous research to look for possible new product ideas. If the company has no previous research, or inadequate research, in a market or need-area in which it is currently interested in finding new product ideas, then it might consider it worth its while to specially commission usership and attitude studies, product tests on existing brands, etc. And then, of course, to use these to search for new product possibilities.

However, I think all the evidence is that such specially commissioned research is something of an exception and a luxury for this basic inventive purpose.



- c) **Gap Analysis of Existing Products:** according to this technique <sup>(1)</sup> a representative sample of consumers in a broadly defined target group is interviewed about existing products in a broadly defined market. The vital information collected at these interviews is consumers evaluation of the existing products along relevant attitudinal dimensions. Their appropriate multi variate techniques are then used to analyse this image data and to look for gaps. These gaps are empty spaces in the multi dimensional space where no existing product satisfies all of the attitudinal requirements of a significant segment of the population covered. Such gaps in the attitude space represent potential areas for the positioning of a new product with significant appeal.
- d) **Market Segmentation:** <sup>(2)</sup> the last, but not of course least, of the market research techniques, as applied to new product invention can, perhaps, be most easily visualised as a gap analysis of consumers rather than a gap analysis of products. Relevant data about the market which is of interest is collected from a large and representative sample of the broadly defined target group, very much as in the previous method.

There tends, however, to be a greater emphasis on descriptive information about the consumers themselves - demographic, personality, behaviour in the relevant need-area, and attitudes to the need-area itself. Appropriate multi variate techniques are then used to cluster consumers into groups which are reasonably homogeneous within themselves,

but as different from each other as possible, in terms of the descriptive and attitudinal data which has been collected.

A simple statement of the characteristics which define each cluster can, in itself, often throw light on new product possibilities but simple tabulation of existing product and brand use for each cluster, and of their attitudes, can be even more productive in identifying significant segments of consumers who appear to have a latent, unsatisfied need.

- (1) J B O'Mulloy - "R & D of New Products", ADMAP, August 1969.
- (2) F Skelly & E H Nelson - "Market Segmentation and New Product Development", Scientific Business Volume 4, No. 13, 1966.

J M Agostini - "A Method of Market Segmentation"  
ESOMAR Congress, 1965.



CHAPTER II

### (ASPECTS OF) EXISTING THEORIES OF CONSUMER BEHAVIOUR

Theories attempt to explain the functions of observed phenomena under defined conditions. Those involved in the marketing process have a plethora of theory on which to base decisions. Theories of consumer behaviour are vitally important in the assessment of product potential, since theories derived from empirical evidence of behaviour can be seen to provide viable structures for investigation in the market.

#### Economic Theory and Consumer Behaviour

All economies are faced with the problem of scarcity, as there are insufficient resources to produce all goods or services which could in theory be consumed. In a market society the allocation of scarce resources is the outcome of independent decisions made by both consumers and producers, acting through the mechanism of the market.

Microeconomic theory attempts to examine the operation of the economy through simplification of all variables as far as possible in order to examine the effect of changes in one or more variables, *ceteris paribus*.

These changes can be summarised as follows:

1. Change in consumers tastes will cause a change in purchases which will cause a shortage or a surplus to appear. This in turn affects prices.
2. Variations in market price affect the profitability of producing goods, as profits vary directly with price. Producers will accordingly shift production to profitable lines.



3. The attempt to change the pattern of production will cause variations in the demand for the factors of production. Factors with increasing demand will tend to have increasing prices.
4. Thus the change of consumers tastes sets off a series of market changes which causes a re-allocation of resources in the required direction.

It can be seen how vital an understanding of the consumers tastes and behaviour is in general economic terms and more especially for the manufacturer gearing his marketing effort in an efficient and effective way. Marketing decision makers must be able to understand and subsequently forecast the possible reaction of the consumer to a product (and to understand the repercussions of this reaction).

Economics is generally concerned with the behaviour of individuals and groups, the three important ones in elementary theory are households, firms and central authorities. A household is defined for these purposes as all people who live under one roof and who make, or are subject to others making for them, joint financial decisions. Intra-family problems of conflict are neglected by economists as they are considered by other disciplines such as sociology, anthropology and psychology. When economists refer to the 'consumer', or the 'individual' they are in fact referring to a group of individuals comprising the household.

There are two important microeconomic theories concerned with household or consumer behaviour. The first and oldest theory is that of utility analysis, particularly marginal utility. The second is that of indifference-preference. There are

three assumptions inherent in these theories:

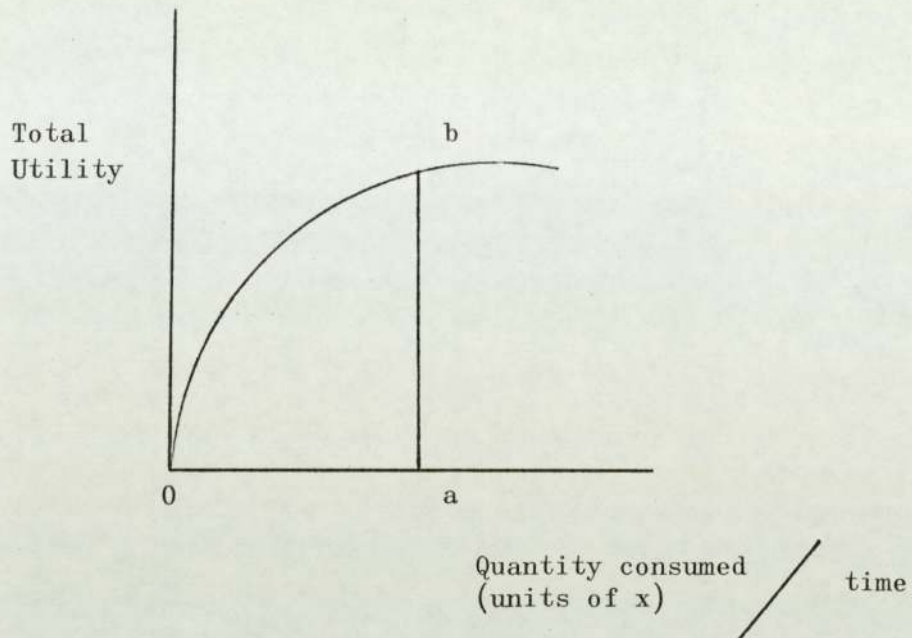
1. consumers have perfect knowledge of the market
  2. preferences are examined independently of specific environmental constraints
- and, 3. (probably most importantly) it is assumed that the consumer behaves rationally. This can be taken to mean in general that the consumer chooses appropriate means to arrive at given ends and does so consistently. Any theory of behaviour necessarily assumes consistency.

#### Marginal Utility Analysis

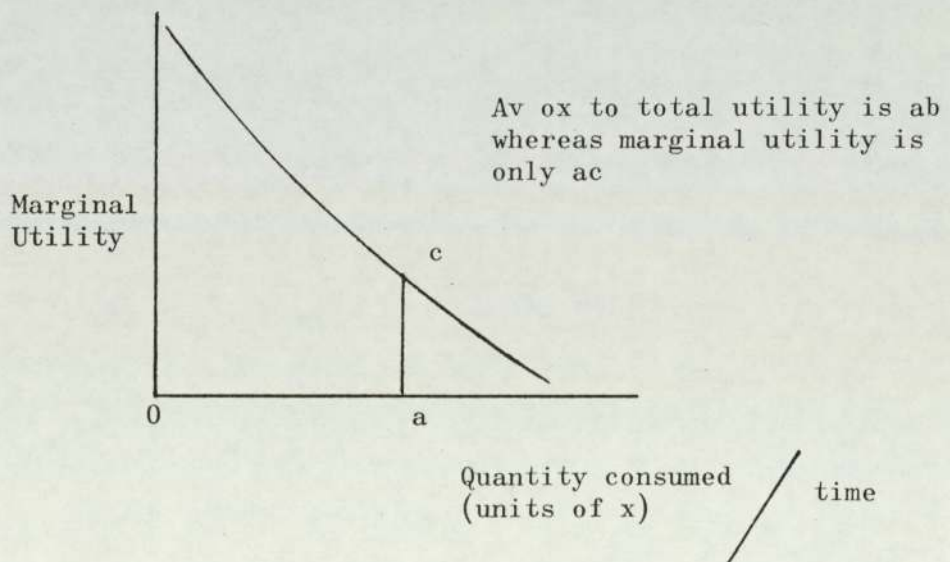
Marginal utility is an abstract concept formulated by nineteenth century economists in attempts to explain the typical shape of demand curves. (This theory was later separately developed by the major economists, Jeavons (GB), Meuger (Austria) and Warlas (France)).

Customers buy products because they fulfil needs and give some satisfaction or 'utility'. Purchase of subsequent units will raise total utility but the marginal utility of each additional unit purchased will tend to fall. Total utility will grow at a slower and slower pace as purchases rise because man's psychological ability to appreciate more and more of the product normally declines. The law of diminishing marginal utility states that as the amount of a product purchased increases, its marginal utility to the individual tends to decrease.





The above figure shows that the total utility derived from consuming the commodity rises as more of it is consumed but the fig. below shows that the utility derived from consuming each additional unit of the commodity gets less and less the more of the commodity that is already consumed



With many commodities there is some maximum consumption after which additional units would confer no additional utility ( $MU = 0$ ) and if the individual was forced to consume more they

would actually reduce his total utility, eg food, cigarettes.

If all goods were free, the total amounts that the population would want to consume would greatly exceed the amounts that could be produced with the available supplies of resources. Therefore marginal utilities must remain positive for at least some goods. The consumer aiming to maximise its utility will so allocate its expenditure between commodities that the utility of the last penny spent on each is equal.

The marginal utility of the last unit of x as  $MU_x$  and its price as  $p_x$ . Let  $MU_y$  and  $p_y$  refer to a second commodity. The condition required for a consumer to maximise its utility for any pair of products is:

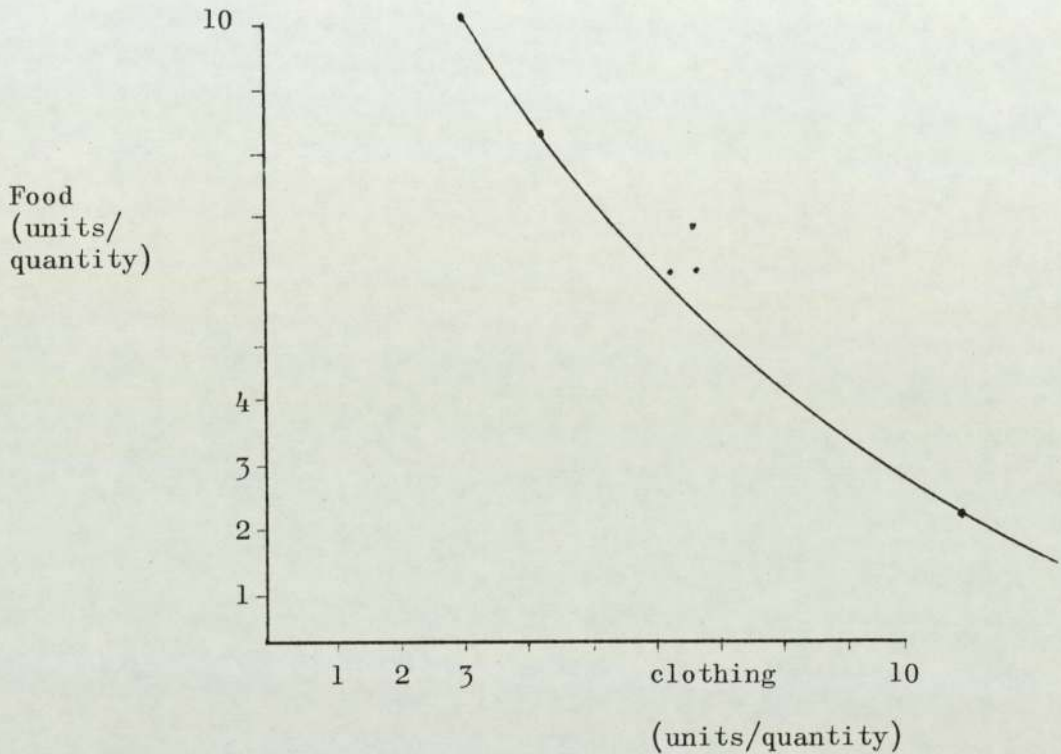
$$\frac{MU_x}{p_x} = \frac{MU_y}{p_y}$$

Utility theory examines what happens to the consumer's satisfaction if he consumes more or less of one commodity. Indifference theory examines a closely related question, that of when a household is consuming two commodities, how much more of one commodity must be consumed to compensate for reduction in the consumption of the other commodity by some small amount. The term compensate can be interpreted to mean leaving total unchanged, although there has been a change in goods and services consumed. Or, in other words, leave the consumer indifferent as to a choice between the two alternative sets of goods and services.

Take a combination of each of two goods, for example 5 units of clothing and 5 of food. If the consumer is then offered some alternative combination, say 2 units, 8 units of food - whether the consumer prefers the first combination to the second depends on the relative valuation placed on each. If the consumer would gain equal satisfaction from the two he can be said to be indifferent between the two choices. There will also be



other combinations to which the consumer will be equally indifferent (or derive equal satisfaction). The curve which can be derived by plotting the various points is described as an indifference curve.



The slope of an indifference curve measures the marginal ratio of the replacement of food by clothing. The further away any indifference curve is from the origin, the higher is the level of satisfaction given by any of the combinations of goods indicated by the points on the curve.

As a general rule, economists are not directly concerned with the buying decisions of individuals but rather focus on the choice patterns of groups over a period of time. Their interest lies in patterns of behaviour pertaining to major trends in, for example, the allocation of income to savings or to expenditure on consumer durables. The economist aims to determine dependable statistical relations between purchase and underlying variables such as income and age. It is not

necessary for the process of household decision making to be understood for the purposes of economics. However, for the Marketing Manager, important insights into buyer behaviour are lost through this process of aggregation. Allowing for these differences in direction and objectives, economic theory and data has contributed much to marketing thought, through providing a scientific starting point for understanding the relevance of marketing.

Considering the wide spectrum of products that consumers seek to purchase, it is not possible to give any simple or outstanding motive that drives them. Whereas industrial markets are primarily buying goods and services for the purpose of earning a profit, the consumer market buys products and services to satisfy a range of needs or wants. Consumers can be seen to purchase in the market to satisfy personal needs and needs stimulated by the environment. Behaviour will be either conditioned or instinctive. Conditioned behaviour is dependent on knowledge or experience whereas instinctive behaviour is by definition innate and becomes less significant with maturity. The orientation of marketing is based on a theory that behaviour in the market place is largely conditioned (and therefore can be conditioned by the marketer). An understanding of this behaviour must be based in a combination of social sciences. A marketer needs to understand what buyers are really seeking in his purchase of goods and services.

#### Consumer Behaviour and the Behavioural Sciences

Classical psychologists interpret needs as being derived from a combination of drives, stimuli, cues, responses and reinforcement (learning theory). The practical importance of this for marketers is that they can build up demand for a product by associating it with strong drives, providing



motivating cues and positive reinforcement. A new company can enter the market by appealing to the same drives as competitors, or may aim a brand to appeal to a different set of strong drives and offer cue inducements to switch brands.

A second model of motivation, the psychoanalytic is based on the Freudian theory that man's needs operate at various levels of consciousness that are not readily observable and can only be identified by special methods of probing. Motivational researchers employ projective techniques in the hope of appealing to particular egos. When carefully administered techniques such as word association, picture interpretation and role playing can provide clues to deeper human motivations. Appeals directed at the consumers hopes, dreams or fears can often be more effective than more rationally directed appeals.

A third theory is the sociological approach. It postulates that man's needs and behaviour are heavily shaped by social groups and forces. Ideas of wants or needs derive from culture, social class and reference groups. The task of the marketer is to determine the relative influence and content of these different social factors.

The majority of enterprises are now beginning to realise that they must adopt a logical approach to market appraisal before making the decision to produce a particular good or services. It is no longer sufficient to have a product which the company is convinced will be successful for internal reasons, if they have not adequately researched the market, defined their market segment and are orientated to consumers needs and wants. As Alderson & Green (1964) have said, the company takes orders from the market, albeit from a profit motive rather than purely altruistic reasons.

However, marketing managers must nevertheless be well informed about the behaviour of the group of consumers at whom the marketing effort is to be directed, in order to minimise the

the possibility of erroneous decision making. This information must be relevant and accurate, channelled into an appropriately designed information system. Without this organisation, the success of a product is dependent to a greater extent on 'educated' guesses and luck, whereas it is possible to minimise risk to a greater extent through an efficiently and effectively directed marketing policy.

#### SIGNIFICANCE OF NEW PRODUCT PRICE TO CONSUMER (1)

The price of a new product is not, like that of a novelty, the first entry on a blank page, because whatever the package or the advertisement says about its unique properties, it is, by definition, the latest arrival in a competitive field, and hence its price will have two related meanings to the potential purchaser, one of which is the cost to him and the other an indication of its actual worth, which can be called quality for short.

That consumers may judge quality by the price is not an entirely new recognition, and several odd instances have been reported where an increase in price had a definite promotional effect on sales. According to Wills, Hayhurst and Midgley a typical example is the case of the fountain pen ink, the price of which was successfully increased from 15 cents to 25 cents per bottle after the results of marketing experiments indicated that the higher price was likely to lead an expansion of the volume of sales, both absolutely and relatively to competitors.

In this case the article concerned was a relatively inexpensive complement bought for use in conjunction with a comparatively expensive device. In such instances, the cost of the complement (or component) has little, if any, effect on the rate of consumption which is determined by other considerations, and intro-



spection suggests that when the consumer cannot himself judge the quality he will often prefer the brand with the higher price. The reasons for such an attitude need not be the same in every case, and any formulation of them elicited by straightforward questioning or motivational research may be merely the 'ex post' rationalisation of an attitude taken without conscious deliberation. But whether the preference for the higher priced brand arose because of a feeling that it would be foolish to risk the performance on condition of the expensive device for a relatively small monetary saving or, perhaps, because of some such thought as 'my fountain pen may not be the best, but I can afford the luxury of the finest ink', there is a common factor which is simply the conviction that higher price means superior quality.

The recorded instances of the promotional effect of a higher price are not all of this type. What we have in mind here is not so much the old anecdote about the man who won his wager because nobody was prepared to buy from him golden sovereigns at half a crown apiece, since the circumstances in which the offer was made were calculated to arouse suspicion, but rather the case of gin which was not considered a gentlemanly drink and even less a ladylike one until successive increases of the excise duty brought its price closer to that of whisky and other, formerly more expensive, alcoholic beverages. Yet it seems that the extent to which price acts as a measure of quality in the eye of the potential purchaser is not sufficiently recognised, probably because the customary methods of consumer research do not produce quantitative estimates of this phenomenon. Suitable methods do, however, exist but it is not the main purpose of this thesis to show their particular relevance to the pricing of new brands.

(1) Page 287 "Creating and Marketing New Products" - Gordon Wills, Roy Hayhurst and David Midgley

CHAPTER III



### CONSUMER BASED INVENTION

Getting consumers themselves to invent new products is certainly far from easy. The attempts which have been made tend to be qualitative, both in nature and in scale.

At their simplest they have involved 'brain storming', in the context of group discussions. But all the evidence is that consumers are not very productive or inventive when being used in this way. On the whole, they find it very difficult to hypothesise and to think and talk about what might be, but only what is. The evidence is that it is more productive to discuss with consumers what they do, what they think and what they feel, and then for trained executives (marketing men, researchers or creative men) to deduce what this might imply in terms of successful new product ideas.

A few researchers have attempted to go further and to apply to ordinary consumers such knowledge as we have about creative processes, even to try the full synectics approach. Sampson (1) in particular has carried out experiments with synectic type groups and claims to have learnt at least some lessons as to how to encourage inventiveness in consumers. The principal lessons are:

- a. Not to expect consumers to spell out potential new products in all their detail, but only to get ideas to the prototype stage where they can be recognised and carried forward by experts.
- b. To allow more time for conventional group discussions.
- c. To have materials and props available where relevant, rather than expecting informants to discuss too much in the abstract.

- d. Not to hope for much technical inventiveness from ordinary consumers. But then, the manufacturer will frequently not be looking for new product ideas which depend on new technology, he probably has very adequate and inventive technical personnel of his own, but on generating and specifying relevant need areas in sufficient detail for his own people to find an effective solution in terms of a product specification.

#### SOME COMMENTS ON CONSUMER BASED TECHNIQUES

It is difficult to present a reasonable critique of the above methods for generating new product ideas. There is no question of getting the answer right. Really profitable ideas are sufficiently rare and really original creativity is a sufficiently tender flower, that any source for good new product ideas is to be encouraged if it is productive. For this reason there may be innumerable variants on the techniques described here, and they may legitimately be approved if they appear to work.

However it is probably worthwhile discussing a few of the more obvious possible strengths and weaknesses of the specifically consumer research based techniques, particularly as to their likelihood of producing profitable ideas.

1. It seems it is futile to hope that consumer research, no matter how imaginatively and ingeniously it is used, will ever replace sheer creative genius in achieving the dramatic new product breakthrough which every ambitious manufacturer hopes for. Research will very probably improve his chances of stumbling on the 'pot of gold', and it will almost certainly increase his proportion of successful to unsuccessful new product ideas. Anyhow it is unlikely ever to become a substitute for the imaginative leap, which only a really creative human mind can make.



2. Part of the reason for this may well be the 'safety first' outlook which most market researchers tend either to be born with, or to cultivate, or to be taught, or to be expected to have. A high proportion of our time is spent in trying to avoid 'errors of the second kind' i.e. critically examining and hopefully stopping marketing actions which would have been failures. In doing this it is very easy to tip the balance of safety a shade too far and, at the same time, to perpetrate much more important 'errors of the first kind' i.e. also stopping new development which would have been big successes. The real profit spinning breakthrough, may in fact, often be so far ahead of the market that the true entrepreneur has to force them through against the opposition of more objective views including those of his own market researchers.
  
3. For these reasons new product development may be one area of market research where it is dangerous to lean too heavily on the unsupported interpretation of the researcher if you are going for the jackpot! As with some of the New Product Workshops which are in existence, it may be preferable to team up really creative people with researchers, the one to generate the evidence, to sort, sift and classify it in the sort of research procedures which have been described above, the other to ignore the 'rules of inference from pre existing facts'.
  
4. There is, however, another reason why it seems that new product incentive is unlikely to create real breakthroughs if it leans too heavily on unsupported market research.
  
5. Another result of depending on what consumers say, is that many of the frames of reference which are produced for new product generation will tend to concentrate on products functional attributes.

Indeed the vast majority of the case histories which are quoted in the literature, real and imaginary, result in new products which are specified by their functional differences from existing competition. But one has strong suspicions that many breakthroughs, at least of branded consumer products, depend on 'image' or emotional differentiation for their long term success.

6. This would even seem to be true of the thoroughly qualitative techniques, including synectics, and what seems to be needed are more effective methods of tapping the emotional currents beneath the surface of consumer's minds, within reasonable research budgets and without over-stepping our ethical boundaries into, for instance, hypnosis.
7. A further difficulty which is particular to qualitative research is that it tends inevitably within available budgets to be small scale. It is, therefore, difficult to look, with any degree of certainty, for new products which will appeal to small minorities, which is in the nature of a high proportion of all new product introductions. The obvious way around this difficulty is to concentrate one's qualitative research on the interesting segments in the first place and to filter out the non prospects at the recruiting stage. But this stands in a great danger of becoming tautologous if we really are looking to generate new ideas.

Certain broad limitations can obviously be made (male consumers are rather unlikely to add much to the search for new baby foods), but too much restriction can finish up by defining the ultimate new product ideas at the same time as writing the recruiting questionnaire.

8. One thing which concerns us about the advanced quantitative techniques, particularly gap analysis and market segmentation, is that leaning heavily as they do on multi variate statistical techniques, mainly factor analysis and a variety of clustering methods.



The 'solution' which is produced may be one of many possibilities.

However, the appearance of the print out, the advanced mathematics and logic which go into producing it, give an aura of impregnability to the solution. The user stands in danger of thinking that this is the only solution or in some way, the best solution for his purpose. And, therefore, of pursuing the suggested path to the exclusion of others.

Obviously this danger is reduced if a variety of different solutions are produced as they can be by altering the assumptions, for, in this area of invention, any solution which gives rise to an original idea is 'right'.

9. This leads to a few areas of concern about gap analysis specifically, certainly the simplest forms of gap analysis.
  - a. Using the techniques often described in literature, if a gap exists in  $N$  attitude dimensions, it must exist in  $(N + 1)$  dimensions. (Indeed for every gap in dimensions there must be at least  $2N$  gaps when we add dimension and one at the other extreme.) So is it really likely to be much more productive going to a high number of attitude dimensions when the first three or four attitude dimensions alone are likely to produce more than enough gaps to cope with sensibly?
  - b. As an example, if we map as many as 100 existing products, on as few as 12 attitude dimensions, then there will be at least 4,000 + apparent gaps to be looked at.

Even eliminating all the 'nonsense' gaps is bound to give rise to an immense amount of hard labour and still have a multitude of 'plausible' products to think about or, even, to subject to the subsequent evaluation stage.

- c. This is why the programmes which attempt to rank the gaps as well as to find them in the first place must be of interest, However, each of these additional, mathematically complex, steps, with its assumptions of what 'distance' in attitude space means in terms of consumer behaviour, makes researchers worry that they might be throwing away the really profitable chance they have.
10. These difficulties with 'pure' gap analysis seem to derive from the fact that we are looking at products, in the clinical vacuum of an 'attitude space'. They are dissociated from the real people who hold those attitudes, with their real characteristics, real behaviour and real needs. One is left with a feeling that it has all been dehumanised and we don't know why the space looks like it does, what it is about the people which causes that pattern.

It is interesting to note that the later gap analysis programmes are tending to cluster the informants as part of their procedures, either in terms of their attitudes to existing products or to their 'ideal product'.

In other words they are recognising that it is very limiting to think in terms of the average consumer, that groups of consumers are basically different, (even if only in terms of their attitudes to the product group), in other words that they do naturally 'segment'.

When they move in this direction then it seems to me that they are beginning to design new products according to the requirements of real people and not for the gratification of plugging a lot of mathematical holes.

11. Segmentation, as a procedure, though it also depends on the inherent judgements which are built into the multi variate statistical techniques, does seem to have the advantage that it finishes up by describing groups of people and their characteristics so that the marketing man can see a clearer justification



for why the proposed new product might work. He can develop some sort of 'theory' for its proposed existence. In the final resort some sort of welding of the two approaches, a complete mapping of the attitude space within homogeneous segments, might provide the perfect evocation for new ideas and why they might work.

12. In summary, then, if we keep our eyes open to their limitations, and if we expect them to be aids to invention, no more, then all of the research based techniques described above stand a chance of paying off, and an increasing chance as we learn better through practice, how to use them creatively. But are they used, do they pay off? We have a little case history evidence, not much more: I have tried in a small way, to take my knowledge one step further.

#### WHERE DO NEW PRODUCT IDEAS ACTUALLY COME FROM?

After referring to the sources of new product ideas in the first part of this thesis, I suggest that it might be helpful to have at least an approximate idea of where these ideas ACTUALLY come from. Particularly, of course, the ultimately successful ones.

One might have a 'feeling' about the relative effectiveness of the techniques listed before for generating ideas, and some such general feelings have been previously described. But we do not know whether our feelings are correct or not and, certainly, we have no real idea of the successful new product ideas. A central part of the present thesis is to undertake a survey of the actual sources of orders for new products.

#### METHOD

There are books showing the way to make a very well designed survey, which might elicit such information comprehensively and reliably. But such a survey would obviously be difficult, time consuming and

very expensive to conduct. Instead I compromised to some extent and designed the following survey which stood a chance of throwing interesting, and perhaps novel, light on the subject.

1. It was restricted in GREECE
2. It was not restricted to any kind of new products but it mainly examined, cosmetics, and toiletries, confectionery, cigarettes and tobacco, electric appliances as well as alcoholic drinks.
3. The period of time, I had to complete the survey was quite limited, so the number of products and companies that I could examine was restrained. Hopefully the manufacturing companies of these products were, quite big and well organised, in such a way that my work became easier.
4. I excluded the products which never go on sale at all because they fail at an earlier stage, whether it be product testing, concept testing, or at any other point before warranting a sell into the trade.
5. A questionnaire was presented to the Marketing Director of each of the relevant companies asking them, so far as they could remember or were aware where the initial idea originally came from.
6. The informant was allowed to keep himself and his product anonymous if he wished and just refer to the new product idea.
7. In addition, marketing men were asked, though given the option to decline, to classify each product as a success or failure at the time of the survey. Obviously this could only be based on their own personal judgement at this point in time and judged by their own company's criteria (which may not be those of others).



Again providing the response to this particular question were adequate, it might be possible to draw some conclusions, no matter how tentative, about the relative effectiveness of the different sources. For generating successful and unsuccessful new products.

### TIMING

The questionnaire for the survey was presented in January 1978. The contact with the marketing executives, of the different company's lasted almost one month.

### RESULTS

1. Originally there were 280 new products or new variants on existing products (table 1). 17 of these were excluded as being obvious copies from looking at what was already heavily marketed.

TABLE 1

#### INTRODUCTORY NUMBERS

Original number of products	280
Number eliminated as obviously not new	<u>17</u>
Number included in survey	<u>263</u>
Number grouped for purposes of survey	<u>60</u>
Number separately enquired about	<u>203</u>
Number with no idea of source	<u>16</u>
Number effectively covered by replies	<u>187</u>
Number:	
saying products not really new	46
grouping products together	<u>20</u>
	<u>60</u>

Number of usable answers

121
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After excluding 17 products from the original number, of the remaining 263 many came from a single manufacturer and were obvious items in a range. In this case it seemed to me rather tortuous, and asking to be rebuffed, to ask about eight or ten different items in a range. (Different varieties of spices, herbs etc is a good example). Instead in such cases, I asked only about the product class. This reduced the number of products asked about to 203 (table 1).

2. 187 products remained effectively covered by answers, because manufacturers of 16 products said that they had no idea of the source of the idea for their new introduction (table 1)
3. However there were another 46 products whose manufacturer said they were not really new, because they were marketed in other Greek markets before. Together with the 20 products for grouping purposes, this left a net 121 effective (products) answers which were usable for the analysis (also table 1).
4. To allow to some extent the grouping of items, and for other multiple sources, the tabulations were based on the number of sources mentioned rather than the number of those presented to the companies questionnaires (table 2). On this basis, there were 203 mentions for all products; nearly a half of these (41%) were accounted for by just three sources. These were: A scientific/technical and R and D breakthrough of own company or industry (11%), following competition and anticipated competition offer an organised search of markets (19%), and market segmentation from a consumer survey (11%).
5. Clearly 'consumer research', 'market searching' and 'R and D' are each of some considerable significance as sources for new product ideas. This is highlighted by looking at all the detailed items which could be said to make up these three generic sources. They are as follows:



Consumer research (including past research)	33%
Market research	31%
R and D	14%

6. The details of the remaining sources are given in the following table 2.

TABLE 2

	ALL PRODUCTS	ANTICIPATED SUCCESSES
Number of products reported on	121	75
Number of sources mentioned = 100%	203	115
	%	%
1. A technical journal or periodical	2	4
2. The official journal (of patent applications)		1
3. Commissioning technical R from Univ or scient. org.		
4. Advertising for inventions		
5. An offer for an invention from outside sources	3	5
6. A scient./techn. R & D breakthrough of own company or industry	11	8
7. An organised search for technical gaps	1	2
8. Synectics		
9. Following competition offer search of Greek markets	12	9
10. Following anticipated compet. after happening to notice their movements.	7	10
11. Organised search of foreign markets (including parent comp. or subsidiaries)	2	8
12. Identification of a growth area by an organised study of markets	10	11
13. a by product from previous consumer research	8	14
14. Consumer brain storming	5	7

TABLE 2 (Continued)

15.	Qualitative consumer research	6	5
16.	Usership and attitude survey	2	
17.	Gap analysis from consumer survey	2	1
18.	Market segmentation from consumer survey	11	13
19.	Consumer correspondence	1	2
20.	An employees suggestion scheme	4	8
21.	Branding a commodity	2	
22.	Creative flair/out of the blue	3	2
23.	Other sources	3	3

7. Referring to table 2 and particularly on source No. 20 it is included, the employees brain storming and the accidental by product of another new product.
8. Further more table 2 demonstrates that there was relatively little difference in the sources of ideas for all products and for the 75 which were anticipated, by their marketers, to be successes according to their performance up to this time. The biggest difference between the two was on source No. 11 of table 2.
9. By tabulating the figures of the two columns and then comparing them, we can see that in the second interesting column the percentage of consumer research originated sources has been increased from 33% to 42% while the market research ones has changed from 31% to 38%. This last one is a quite noticable difference but not as spectacular as the first.



Indeed consumer research generally came well out of this comparison, market searching 2% less, while R and D not so well.

10. Finally it can be seen from table 2, that correspondence between consumers and companys is of very low standards. This could be owed on different reasons, but above all I believe it is a result of the rather bad organised (if there is one) correspondence and complaints department of Greek firms.

### CONCLUSION

The results of this survey cannot be said to prove over-whelmingly that one area of research is the best one to concentrate on as a source of new product ideas.

It is apparent that the bulk of literature emphasises more general market research as the most likely source of new ideas.

The distinction made here between consumer research and market research may be a somewhat firm one, but it is essentially a question of the emphasis placed on the specific direction research can, most successfully take.

The survey undertaken suggests that firms searching for new product ideas are as likely to be successful if they look to the consumer himself as by examining the market in a more general way and subsequently aim the company's market effort to persuading the consumer to buy. If the consumer is permitted to suggest something which he would wish to purchase it is obvious that the firm is likely to have to work less hard to achieve sales.

Further and more extensive surveys will be the only way to prove that this hypothesis is correct.

QUESTIONNAIRE

## Source of new product ideas

Q1. (a) This questionnaire refers to.....(Name of product)

or

(b) This questionnaire refers to a new product in  
the.....(product group)

Q2. The idea for this product came, at the very outset, from:  
(it is the original idea we are interested in - not its  
subsequent development, concept testing etc)

1. A technical journal or periodical (not marketing or  
commercial periodical).
2. The official (Register of patent applications).
3. Commissioning technical research from a university  
or scientific organisation (not market research).
4. Your advertising for inventions.
5. An offer of an invention from an outside individual  
or organisation.
6. A scientific R & D breakthrough of your own company's.
7. An organised search for technical gaps in existing  
products (not marketing or "brand" image, gaps)
8. Synectics (brain storming amongst experts in a  
deliberate attempt to stimulate invention)



9. Following competition as a result of an organised search of Greek markets.
10. Following competition as a result of "happening" to notice what somebody else was doing.
11. An organised search of foreign markets (including your own parent company's or subsidiaries markets).
12. Identification of a future growth area by an organised study of markets.
13. Suggested as a by-product from previous consumer research (usership and attitude studies, product tests etc).
14. Brain storming amongst consumers.
15. Specially commissioned qualitative consumer research (group discussions, depth interviews etc).
16. A specially commissioned 'usership' and attitudes consumer survey.
17. Gap analysis from a usership and attitude consumer survey.
18. Market segmentation from a usership and attitude survey.
19. Correspondence from a consumer.
20. An employees suggestion scheme.
21. Branding a 'commodity' suggestion scheme.

22. Completely 'out of the blue', or by creative flair.
23. Name of the above ways - please state how it was first thought of.
- Q3. At this stage of its life I would say this product is likely to be:

A success

A failure

According to this company's criteria of success and failure.



CHAPTER III      BIBLIOGRAPHY

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C H A P T E R   I V



NEW PRODUCT MARKETING, THE CONSUMER IN THE INNOVATION FIELD  
AND THE INTRA FIRM INNOVATION PROCESS

The Necessity of Innovation

That the life of any commercial product is finite is inescapable. The horizons of individual consumers are constantly broadened by new ideas, inventions and experiences, and their buying preferences show a marked progression.

A product which was once 'new' soon becomes 'established' and a brief period of stability is inevitably followed by decline and extinction. Consumers may have become bored with the product, or a subsequent idea may have rendered it obsolete.

This concept of the limited life cycle is well known and has been discussed in previous chapters. What I would like to emphasise in the opening point of this chapter is that with a finite life the sales of any one product eventually become unprofitable, requiring it to be replaced in the company's product range, and thus initiating the cycle again with another, newer product.

The obvious consequence of this situation is the constant search for new products, an activity which most, if not all, companies engage in. However, the very nature of the consumer process which lead to this life cycle also make the development of new products perhaps the most hazardous area of management. It still remains difficult to specify the likely performance of a particular new product ahead of some measurement of consumer response.

Indeed quite often it is not feasible to assess the product until it has been placed in a substantial number of retail outlets, and purchased by a sizeable number of consumers.

Launching a new product therefore involves a great risk to the company and management concerned. While the actual magnitude of the resources and effort committed to the project will vary tremendously from company to company, and industry to industry, when viewed in terms of the possible damage to the organisations profitability, or even its chances of survival, the dangers will be considerable. On the one hand no company, whatever its size or market, can afford not to launch new products reasonably frequently; on the other hand, neither can it afford to have too many of those which fail to meet their set objectives.

The emphasis of this chapter and generally of this thesis is concentrated on how one can reduce the dangers associated with new product management.

For while it is not possible to guarantee success, it is possible to lay down guidelines and procedures which will make success more likely, and which will substantially reduce the risks involved in marketing innovation.

As we have examined in the first part of the thesis, in discussing new product marketing many authors commence by citing studies on the number of new products which 'fail', quoting such statistics as 5 out of 10 new products never reach the launch stage, or 92 out of 100 new products fail to survive for more than one year on the market.

The definition of a 'new product' has been done previously; 'failure' will be the subject of subsequent discussion in some extent. What will be mainly said is that while this overall, and depressing picture may well be true, there can be little doubt that some companies are substantially more successful with their new products than others.



This does not mean that these organisations have any secret recipe for success, or a special fund of good luck. Rather, it can and will be argued that these organisations approach the task with some insight into consumer processes, and with a 'scientific' attitude toward finding solutions to their marketing problems. Whatever may be contended elsewhere, my personal opinion is that, 'inspirations' do not create successful products on a reliable and regular basis; and if they had to some extent, this extent will be diminished in future. A flash of genius may well create the idea for an innovation, but for this idea to be turned into a market success requires critical research, and an objective means of assessment. In other words a scientific approach to the problem.

#### Definition of Innovation

Many problems arise in defining 'innovation' within an organisation because of the value judgements attached to the term. One definition would be that when a firm does something different it innovates. The difficulty here is that most of us expect an economic improvement (cost savings, profit, etc) to be of value to the organisation. We also use 'innovation' to refer to a socially acceptable change. There can be negative innovation, alternatives that do not become economically advantageous or an unsuccessful innovation, modifications that eventually fail because they are not accepted by society. Many problems arise if we try to define innovation as an improvement toward a socially desirable objective or to differentiate between large and small improvements. As a proposition the following definition could be given: An innovation is the adoption of a change which is new to an organisation and to the relevant environment.

Including the term 'adoption' in the definition of innovation implies that the organisation has gone beyond the conception of a new idea and begun to apply it. There is a significant difference between the generation of the idea (creativity) and its introduction into practice. The innovation of a new product occurs when the product

is conceived, produced, and used. The innovation of a production process is complete only after it is in operation. The innovation of an organisational structure is accomplished when the system has been set up and made operational.

When we use the phrase 'new to the organisation and to the relevant environment', we are not limiting an innovation to the first known use by mankind, but to the reference groups of the potential innovator. Introducing simple hand tools into agricultural use in a primitive culture represents an innovation, just as the first use of a complex biochemical technique or elaborate mechanical farming machinery in the United States is an innovation.

#### Psychologists and Innovation

By trying not to enter into details the existing ideas concerning psychology and innovation could be presented as follows:

Psychologists have emphasised two relevant aspects of innovation, creativity and change in individuals behaviour and beliefs.

One major area of research on creativity has been the determination and measurement of different aspects of creativity in individuals.(1) Another major objective of research on creativity has been to understand the thought processes that humans use to produce new and novel ideas. (2,3,) Psychologists have studied the process of change in people in such areas as influence and persuasion. (4) These studies have investigated variables such as message source, appeal of the message, and the personality of the person receiving the message to determine the impact of a given message on an individuals attitudes and behaviour. Research spurred by Lewin (5) has led to the analysis of the forces within a given individual that produce change. From Lewin's work evolved investigations in group dynamics describing the functioning of groups and how they help shape change the attitudes and behaviour of an individual.(6)



Further work in this direction has provided the applied behavioural scientist with a framework which he can use to create change. The object of Bennis, Benne and Chin (7) was 'the application of systematic and appropriate knowledge to human affairs for the purpose of creating intelligent action and change'.

#### Economists and Innovation

Economists have been the social scientists who have carried out the most direct studies of innovation. However, they have focussed on the implications of introducing new developments rather than on the process itself. Economists have presented hypotheses as to the impact of research and development on economic growth. (8) They have investigated the role of government's support of research and development (9) and the spillover into civilian endeavours that result from government research and development expenditures for defence efforts. (10)

Economists with the assistance of psychologists have investigated the sources of innovation by measuring the personality characteristics of the inventor in order to provide descriptions of post innovators. (11) They have also studied and described the timing of inventions. (12) One of the most interesting arguments among economists concerns the percentage of innovations from large as opposed to small firms and the relative advantages of greater versus limited competition in increasing innovative behaviour. A final topic that economists have investigated extensively is the rate of diffusion of new developments.

#### Sociologists and Innovation

Sociologists have emphasised change in their studies of organisations. Much of this work has investigated (a) technological developments and the impact they have upon the social structure and behaviour of our society (13), and (b) the creation of positive approaches and steps that would facilitate change. (14)

In discussing plans for change, sociologists have emphasised the importance of unanticipated consequences. As early as the writings of Marx, it was pointed out that in the free enterprise economy events occur that no one desires. Entrepreneurs who make modifications in their behaviour to increase profit may find that their actions create a situation of over production or economic depression. More recent sociological studies of organisation behaviour discuss (15) a multitude of of unanticipated consequences that result from attempts to change organisations, and the people in them. Many sociological studies on change have also emphasised the development of strong resistance to change. (16)

#### Research on the Process of Organisational Innovation

In summary, we find that the research done by these psychologists, economists, and sociologists has helped us understand how individuals develop ideas, the reaction of social structures to new ideas, and the importance of new ideas to economic development.

One important but relatively neglected aspect of the innovation process has been the analysis of what goes on within the organisation, the medium through which new ideas get introduced into our society (which organisations are more likely to innovate, what type of developments they are likely to introduce, and which people within an organisation enacted to innovative behaviour of the organisations). An analytical approach of what goes on within an innovative organisation is the focus of this chapter.

The process of organisational innovation consists of two major phases: (a) the creation of the idea and its development and (b) the introduction and adoption of the idea. Most of the research that has been done on innovation has been directed toward the first phase. While the creation of the idea is crucial, the available evidence indicates that the innovators often are not the creators.(17)



In this chapter, briefly a review of this literature will be given on conditions for creativity in the next section. We will then concentrate on how innovation occurs in an organisational context. There is little existing research or theory on the second phase.

### Conditions for Creativity

Man has the capacity to combine elements, ideas, observations, and images in manners not previously conceived by himself or other men. Researchers have not been able to enter the minds of creative individuals to study what actually occurs. Instead they have been forced to base their beliefs on investigations of the attributes of a creative individual (the way he spends his time and his personality), the qualities of a creative solution, and factors in the environment that promote creativity.

#### a) Characteristics of creative individuals

Existing research leads us to the following conclusions about the creative problem-solving process. (18)

1. Creative problem-solving appears to be a high risk activity, that is, often erratic and unpredictable.
2. Creative people appear to have a detached devotion to their work, they have a deep commitment to the problem they are trying to solve, yet they are not so deeply immersed that they are unable to see the problem in a broad perspective.
3. Creative people are perceptive to all kinds of ideas. They will consider them and judge them on their merits.
4. Creative people rely on free exploration in that they actively go out and search for new alternatives, advice, ideas, and opinions from a wide variety of sources.

5. Creative individuals appear to commit themselves to a specific solution to their problems later than their less creative counterparts.
6. Creative people tend to be non conformists and question authority and existing problem solutions.

b) Characteristics of organisation that promote creativity

The environment in which the individual participates has an important influence on his creativity. As one illustration of the importance of the organisational environment consider 'Gresham's Law' of planning, routine drives out of planning, which implies routine activity he is not likely to involve himself in creative problem solving. He is not likely to question his existing behaviour and, therefore, is unlikely to be creative. This indicates that an organisation which keeps employees immersed in very routine activities is not likely to be a very creative one.

Social psychologists have pointed out the great influence which groups have in the determination of the goals, beliefs and behaviour of their members. The individual seeks the support of the group. Extrapolating from this we can hypothesize that groups could have a strong norm that either supports or discourages creativity and innovation. We would hypothesize that organisations which reward people for creative ideas, allow freedom to select and pursue problems, provide open communication channels and encourage different and unusual points of view would both attract and develop more creative people. We know that many organisation have tried to foster an atmosphere similar to the one just outlined by setting up special 'think' groups through brainstorming or synectics sessions.



While there has not been extensive research on characteristics or organisations that foster creativity, we can conclude that this is an important area for further research.

### Classification of Innovation

The creative idea and its development represents the seed germinated by the innovator. To develop a clear picture of the process by which new ideas are introduced into an organisation, we must provide a way of classifying the innovations.

Kenneth E. Knight in his Journal of Business article in 1967 and volume 40 (Un. Chicago), presents a scheme based upon four major types of innovations. He emphasises that these four categories of innovations are highly inter-related so that an innovation of one type is very likely to create additional changes in one or more of the other three categories.

1. Product or service innovations: These are the introduction of new products or services which the organisation produces, sells or gives away.
2. Production process innovations: These are the introduction of new elements in the organisations task, decision, and information system or its physical production or service operations, the advances in the technology of the company.
3. Organisational structure innovation: This includes the introduction of altered work assignments, authority relations, communication systems or formal rewards systems into the organisation. This category is in part complementary to category 2 since it includes the formal interactions and authority relations among the participants in the organisation that are established to form the production process. In addition, this third category includes the other aspects of formal interaction among the people in the organisation.

4. People innovation: This is one of two alternatives that produce direct changes in the people within the organisation:
  - (a) altering the personnel by dismissing and/or hiring and
  - (b) modifying the behaviour of beliefs of the people in the organisation via techniques such as education psychoanalysis.

The innovations in each of these four categories could have either positive or negative impact on the goal achievement of an organisation.



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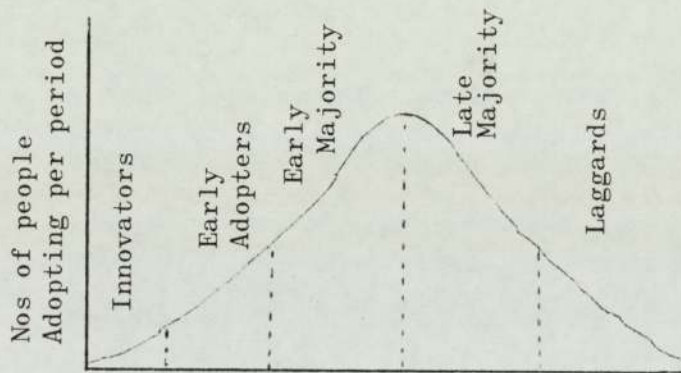
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CHAPTER V

### CONSUMER INNOVATIVENESS

Before attempting to examine consumer innovativeness in more detail I consider necessary to refer to Rogers and Shoemaker, adopters categories, as far as it concerns the new product introduction. They define innovativeness as 'the degree to which an individual is relatively earlier in adopting new ideas than other members of his system'. (1) In essence this is the point on the time dimension at which an individual adopts, and the groups of individuals are segmented by use of the bell shaped form of the adopter distribution. The mean time of adoption is computed, and the groups separated by laying off standard deviations from this mean. This is presented in the following Figure:



SOURCE: Rogers and Shoemaker (1971) p. 182.

It has been shown subsequently that when studied in terms of independent variables such as age, social class, attitudes etc, all these groups do indeed have different characteristics, but this topic will be developed later on. What is relevant to say is that innovators are those more likely to take risks. They are the independent spirits who first try the innovation, and they will transmit their perception of its performance to others.



### The measurement of individual innovativeness

Any attempt to understand consumer innovativeness must take into account its two main facets. The different demographic, socio-economic and psychological characteristics of the various categories of individuals presented in Figure 1, and the ways in which the individual and aggregate behaviour of the more innovative individuals can 'affect the minds' of others.

Before proceeding to examine either of the above topics it is necessary to look at the ways innovativeness can be measured, and arising out of this measurement, how we can gain an understanding of just what is meant by the term 'innovativeness'. From this understanding, it is possible to consider how the adopter categories may be formed, and where from the characteristics mentioned above determined.

All categorisation schemes can be separated into two components. One of these is the measurement of individual innovativeness, and the other is the formation of the various categories of individual categories which represent differing degrees of innovativeness.

All such schemes also associate the term 'innovators' with the highest degree of innovativeness, 'early adopters' or 'early majority' with the next highest, and so on down to the 'laggards'.

But before going any further it is needed to present how innovativeness can be measured. David F. Midgley in his consumers innovation approach says that innovativeness is assumed to be a characteristic possessed, to a greater or lesser degree, by all members of a society, and as such usually becomes a continuous dependent variable in research studies.

Innovativeness relates to when an individual adopts the innovation as compared with when the society as a whole adopts it. If an individual adopts soon after the innovation appeals, and before the bulk of the population adopts the innovation, then it will be readily appreciated that this individual is more innovative than one who only adopts after two-thirds of his fellows have already done so. Measurement of innovativeness is therefore accomplished by observing when individuals adopt, aggregating these individual adoptions into a distribution, and comparing any one individual's adoption date with the distribution.

King (1963) used the recall survey technique on the purchase of any style out of those available for the season under study. Since this method was based on time of adoption it was potentially more reliable than the later used by Baumgarten (1974), who measured innovativeness by ownership of new styles.

However, as Midgley and Mills (1974) have shown, the styles on sale for any one season are composed of both 'old' and 'new' innovations, and King's 'early adopters' may therefore have been a mixture of innovators and later adopters (buying the previous seasons styles). Despite using an inherently weaker method, by focussing on newer styles Baumgarten may well have arrived at more valid conclusions.

Midgley (1974) advanced another technique based on the implicit hypothesis that what consumers perceive as a fashionable style is in reality dependent on how long the style has been on the market. Therefore by asking respondents to rank pictures of the various available styles, according to how fashionable they thought they were, it was possible to form an overall scale measuring the perceived ages of the style images. By then placing an individual's expressed preference for, or last purchase of, one particular style



onto this scale an indication of this individual's innovativeness could be obtained. The advantages of this technique, when applied to fashion innovations, are both that it obtains consumer perceptions, rather than those imposed by the outside observer, and that it measures time of adoption more directly than the 'list' method. The disadvantages are that for the technique to be practical (applicable to large samples) it is necessary to assume that fashion rankings can be transformed into an overall interval scale of fashion. (2).

It can be seen that the different measurement techniques outlined above may be more appropriate to different types of product, and the choice of any one method for a particular situation will depend on the type of product and the availability of data. It will obviously also depend on practical and financial constraints. However it must be stressed that the majority of the problems discussed above relate solely to the accuracy with which innovativeness is measured, and do not need any doubt on what is being measured. The researcher should attempt to measure time of adoption by the most direct route feasible, and the closer this route to the 'exact date of purchase' technique the more accurate his measurement will be.

Once such a scale of innovativeness has been established then it is possible to proceed to the next phase of the process, the formation of categories.

However, at this point it will be noted that by measuring innovativeness in the previous manner, researchers in no way defined exactly what innovativeness means.

Therefore before looking at the adopter (consumer) categories, the concept of innovativeness will be explored in a little more depth, and to do this it is necessary to look at the aggregate processes, that is to examine the adopter and innovativeness distributions.

### The meaning of Individual innovativeness

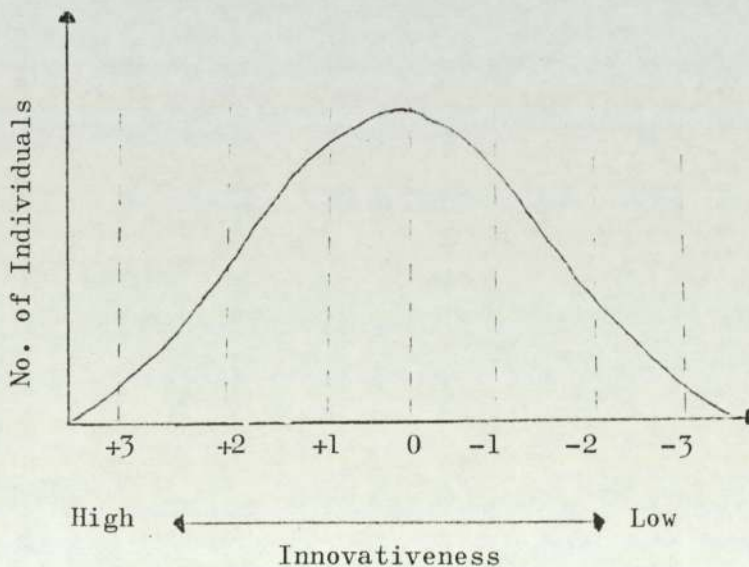
To define precisely what the concept of innovativeness means, as opposed to what is measured, the phenomenon represented in Figure 1 is expressed in terms of the innovativeness measure or score developed in the preceding section. That is, instead of examining the number of adopters over time we look at the distribution of individuals with differing scores. The distribution is presented in Figure 2.

It will easily be seen that all that has been done is to replace the time dimension by the standardised score.

As can be seen, a temporal distribution of adopters has been transformed into the distribution of a characteristic amongst members of society, and one which can be thought of as essentially similar to any other, such as intelligence or extroversion.

This is a key concept, as it implies that innovativeness is an innate expression of a person's psychological or sociological characteristic, and might therefore be expected to show a strong relation to measurements of these other characteristics.

Figure 2: The Characteristic of Innovativeness



Source: Midgley (1976) P.48



A further implication, following directly from the above, is that a person's innovativeness is not confined merely to one specific innovation, but to a wide field, perhaps the product category, or several product categories. In other words the distribution in Figure 2 would be observed to be similar for several innovations, that is, would be similar with respect to the position particular individuals would hold in the process. It will subsequently become apparent that reality is a little more complex than this, and that it is not possible to state precisely which particular individuals will be innovators for a specific new product, but only to suggest which group of innovators may emerge from. The reasons for this are partly because of the situational nature of innovativeness, and partly because innovations differ in their degree of 'newness'. These aspects will be examined in the chapter which analyses the characteristics of innovators. However, what can be said here is that it is certainly not tenable to argue that the distribution is a mere manifestation of a random process, with the obvious corollary that the distribution of individuals would be unique to each innovation. The evidence suggests the opposite. A distinct type of person is more likely to be an innovator than any other.

The above also highlights the dual nature of the term 'innovativeness'. Is it a measurement of when all individuals adopt, or is it an expression of individual's cognitive structure? In fact it is better viewed as the latter, and it would be as well to make a very clear distinction between the concept and the way we measure it. By defining innovativeness as 'the degree to which an individual is relatively earlier in adopting an innovation than other members of his system', Rogers and Shoemaker have defined the concept in terms of the measurement.(3). That is, innovativeness is what we measure, and what we measure is innovativeness.

To avoid such tautologies it is suggested here that innovativeness is the degree to which an individual is willing to adopt without receiving favourable interpersonal information on the innovations performance from his/her social contacts.

Innovativeness therefore relates to the amount of such favourable information than an individual requires before accepting the risk of adoption. An 'innovator' therefore is the type of person who requires little or none of this social support, and is prepared to make his/her own independent decision on whether to adopt or not.

The less innovative members of society feel the need for more support from people who have experience with the innovation, and such information comes from conversations with their friends. We measure innovativeness by when the individual adopt in comparison to others, but this is only because such measurements provide an indication of how independent the individual is.

Therefore we could define innovativeness as following:

"Innovativeness is the degree to which an individual makes innovation decisions independently of the communicated experience of others".

An important conclusion is that, as less innovative individuals rely more on interpersonal communication, then there is a relationship between the receipt of this information and the time at which they adopt the innovation. Since a particular individuals receipt of the necessary information may be a chance or random event, then so might be their actual time of adoption. In other words while the 'innovators' (as a type) might be expected to be the first to adopt, the exact time at which another type of individual would adopt is less easy to predict.

In a sense the above definition has been arrived at by a circuitous route, as it would perhaps have been more logical to define the concept before defining its measurements. However it was necessary to proceed in, so to speak, the 'reverse' direction in order to develop an understanding of exactly what is meant by



innovativeness. As such an understanding depends on the relationships between individuals it cannot be developed solely at the individual level, but only on the more aggregate level of adopter/innovativeness distributions. It is also obvious that it was necessary to develop the standardised innovativeness measure in order to effect the transformation between these two distributions.

The definition has distinct advantage in that:

- I. it is not defined in terms of its measurement.
- II. it emphasises the relation of innovativeness to individual cognitive structures, and therefore to other measurable variables, and
- III. it emphasises the relation between innovativeness and a particular type of interpersonal communication, particularly that the more innovative members of society need less information on how others have fared with the product in order to make their decision.

There are different types of information that penetrate through the adopters levels. Certain categories of adopters are affected by certain types of information more than other categories do. It will be shown subsequently that the innovators are probably more exposed to the mass media, and general interpersonal information, than later adopters.

In the sense that they are different, (require less production information), the innovators are obviously of crucial importance to the whole process. They will try the innovation, and their experience of it will trigger the innovativeness of others or not, as the case may be. To progress any further with this exposition it is necessary to move from the individual to a more general level, and to do so requires that a method be found by which the innovators may be grouped into a discrete category.

Before attempting this, however, it is opportune to add a few less specific comments at this point. Firstly, and according to the existing literature, some writers move more rapidly into a discussion of the adopter categories and their characteristics, while here the concept of innovativeness has been dwelt on at considerable length. This is because I consider it vital to develop a clear understanding of innovativeness at the individual level, before any discussion of more general concepts. Without such an understanding it is not really possible to discuss the adopter categories, or more importantly to link these categories to various characteristics.

It will also be noted that innovativeness has been discussed in the historical sense, that is looking at past innovations and their associated adopter distributions. This is because the main research findings have been established in this manner, and also because the phenomenon is clearer when viewed in this way.

#### Adopter/Innovativeness categorisation schemes

The importance of the innovators to the overall process has already been outlined, and the suggestion made they they form a distinct group in that they are self reliant, or willing to take risks without receiving extensive social confirmation. It has also been argued that this is because their high degree of innovativeness is an innate expression of their personality, and therefore would be expected to relate to variables such as age, intelligence, cosmopolitanism, and so on. In order to determine whether this is supported by the evidence or not it is impractical to continue conceptualising the topic at the individual level, insofar that it is necessary to generalise beyond any one individual. This generalisation can only be achieved by forming categories. The focus will be on the innovators, as the observed innovativeness of their individuals is more dependent on the interaction of communication and personality factors than the above personal characteristics alone. Also as innovativeness has been conceptualised as a trait then this representation will be used rather than the over time representation of Figure 1.



To discuss the formation of the adopter or innovativeness categories it is necessary at this point to re-examine the assumption of the bell shaped normal distribution of adopters. According to D. Midgley this assumption is usually made because the adopter distributions found in practice are quite often good approximations to the normal curve.

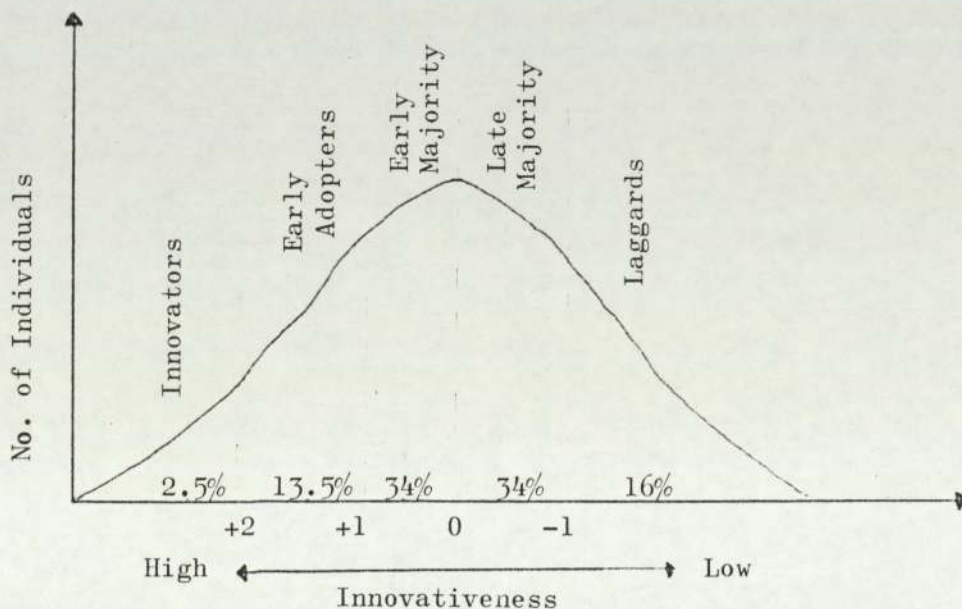
Another reason is that this particular distribution has some desirable statistical properties. For instance it is symmetrical, and therefore the mode, medium and mean are identical. Therefore the highest rate of adoption occurs at the mean time of adoption, and this mean time divides the distribution into equal areas.

Perhaps more relevantly, with a normal distribution the mean time of adoption represents the time by which 50 per cent of the population have adopted.

Using the normal distribution and the format developed here, then Figure 1, which represents Rogers (1962) categorisation scheme, becomes Figure 3.

The percentages denote the proportion of individuals in each category.

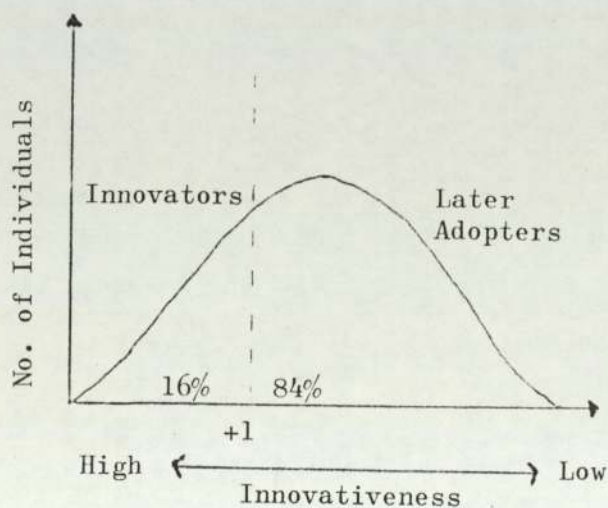
Figure 3. Rogers Adopter Categorisation Scheme



It should be stressed that these figures only hold for the normal distribution or a good approximation to it. This is the most commonly used categorisation scheme in rural sociology, but has found little favour in the marketing area. The prime reason for this is that most studies quite naturally focus on the innovators, and if these are defined as 2.5 per cent of the adopting population it is necessary to contact a very large number of respondents in order to locate a statistically significant number of innovators.

Robertson (1971) points out that the 10 per cent definition has gained prevalence in marketing simply because it makes sample survey methods feasible. (4). Indeed in the later text Rogers and Shoemaker (1971), while discussing the five categories in depth, present a high proportion of their generalisations in terms of the 'earlier adopters', a category which might be thought of as a combination of the 'innovators' and 'early adopters'. Furthermore in the recent marketing literature Summers (1971 and 1972) has explicitly used such a combination. Therefore the categorisation scheme proposed here, and the one I consider to be the best currently available, is shown in Figure 4.

Figure 4: A Simple Categorisation Scheme.





The scheme has the advantage of being compatible with the previous research, is more practical than the earlier one, and is simpler to use. The scheme also explicitly states that we are more interested in the innovators because of their independent nature, and less interested in the remainder because their innovativeness is communication dependent.

However it should be pointed out that while this scheme is slightly less arbitrary than those previously mentioned, it still has two arbitrary features. These are the assumption of normality, and the boundary between innovators and later adopters.

It can be stated that this assumption is not necessary in order to arrive at a categorisation scheme, and in the future it will become less desirable to make such a restrictive assumption. The measurement of innovativeness has been shown to be distribution free, and therefore the categorisation scheme should not force the innovators to be 16 per cent of the adopting population whatever the shape of the empirical distribution. It is of course possible to place the boundary at one standard deviation before the mean of any distribution, and therefore from a group whose size would depend on the shape of the distribution.

However even this would be an arbitrary 'break point' and Robertson has suggested that the boundaries should be placed where there is a distinct change in the characteristics of the individuals so categorised. (5).

In the light of what has been said previously about the characteristics of innovators as opposed to the later adopters, this would appear to be a viable suggestion. Also it is possible that it may not be necessary to go to these lengths to achieve the same result. Peterson (1973) has indicated a method whereby categories which actually exist in the empirical distribution, and should not force this data into a preconceived number of categories, or a preconceived distribution form. The aim of his technique is therefore to form categories by maximising the between group differences and minimising the within groups differences. (6).

As the technique is relatively new little is known about the characteristics of individuals in 'optimal' adopter categories, as opposed to the more traditional kind. Much more research needs to be done in these areas before the technique can be applied with any confidence. Obviously another problem area is that the method produces categories specifically for each innovation, which makes comparisons with previous work difficult, and may therefore necessitate the development of new comparison procedures. For this reason the scheme portrayed in Figure 4 must be used for the present, pending the development of a less arbitrary way of defining the boundary between innovators and later adopters.

#### The Characteristics of Innovators

In examining how the innovators differ from the rest of the population a convenient starting point is one of the earliest studies in the marketing area, that of Bell (1963). Bell surveyed some 5000 households with a view to determining the demographic and socio-economic characteristics of the innovators, and contrasting these with the characteristics of the rest of the population. Innovators were defined as the first 10 per cent to purchase one or more of several consumer durable innovations. In turn these innovations were divided into two types, strategic and functional innovations. Strategic innovations were basically modifications to existing products (colour television, stereo equipment, etc) while functional innovations were new solutions to old problems (dishwashers, food disposal units, etc).

It was discovered that the innovators did differ significantly from other groups, in that they tended to be younger, more educated and they had higher incomes. They were also more likely to belong to the professional and managerial classes, and to have greater exposure to the mass media. Perhaps more interestingly they were also of an independent frame of mind, in that 75% of them did not consult any one outside their family regarding their decision to purchase. This last result provides some confirmation for the previous argument, the innovators are more self reliant and less likely to seek out the advice and experience of others.



However if the innovators for strategic and functional innovations were contrasted with each other then it was found that they too differed significantly. The more radical the innovation ( that is, functional as opposed to strategic), the more educated the innovators were, and the greater their income. This is the first intimation we have that the situation is more complex than might be thought at first glance. In some ways the innovation picks the innovators as well as the innovators selecting the innovation. Here the results that shed new light on the characteristics of the innovators, will be presented in a rather rapid way.

Robertson and Kennedy (1968) (7) studied the adoption of a small home appliance, and concluded that four variables were significant in determining whether an individual was an innovator or not. In order of importance these variables were, 'venturesomeness' or willingness to take risks, 'social mobility' or the degree of upward movement on the social scale, 'social integration' or degree of participation in the community, and 'privilegedness' or financial standing relative to the community. Once again these findings are consistent with the view of the innovator proposed earlier.

For clothing innovations Baumgarten (1974) (8) found that the innovators were more willing to take risks, and had more favourable attitude to change. In his study the innovators were also found to be more socially integrated, and to have greater exposure to the mass media than other individuals.

On psychological characteristics Robertson (1967) (9) found that the innovators of consumer appliance were significantly more impulsive, active and dominant than other individuals. However Pizam (1972) (10) in an extensive review of the literature on the psychological characteristics of innovators argues that the results in this area are at the best inconclusive, and that further research is necessary before such relationships can be advanced with any certainty.

Haines (1966)(11) reported that 15% of his sample of purchasers of new supermarket products bought just because the products were 'new'. Midgley (1974)(12) also noted the impulsive nature of the innovators of fashion items, finding that their purchase decision periods were much shorter than those of the later adopters.

Donnelly (1970)(13) suggests that of the many personality characteristics which could be studied, Riesman's concept of social character has the most potential. Riesman (1950)(14) advanced the idea that individuals could be classed as either inner directed or other directed. Quoting from Donnelly:

"The inner directed person relies on his own internal standards and values to guide his behaviour. The other directed individual tends to rely on the values of his contemporaries. Thus we can expect an individual's social character to fall somewhere between the two extremes of complete inner or other direction" (15).

By administering a scale designed to measure social character to purchasers and non purchasers of new grocery products, Donnelly was able to show that the innovators were more inner directed, that is were more able to make their own decision. In a later and perhaps more convincing study Donnelly and Ivancevich (1974) (16) conducted a longitudinal investigation of the adoption of a new automobile. They were able to show a significant change in the proportions of inner and other directed individuals over the time period studied. Specifically the earlier purchasers (innovators) were predominantly inner directed when compared with later purchasers. Interestingly the earlier purchasers of the new automobile were different to the purchasers of established makes, while the later purchasers of both were indistinguishable. That is, four years after its introduction the automobile was no longer perceived as an innovation.



This concept of social character correlates closely with the concept of innovativeness which was presented before. The innovator sets his/her own standards and makes his/her own decision with regard to the innovation. Later adopters rely on the values of others, values which reflect both attitudes toward and experience with the innovation in society as a whole.

It is also important to note that this relationship between inner and other directedness and innovativeness has been established for two quite different types of innovation. That is for automobiles and grocery products. As the analysis progresses we'll see that this is not true of all such relationships, as it is normal to find quite large differences between the characteristics of innovators of differing types of innovation.

Marketing as such represents only a small and relatively new contribution to diffusion studies, therefore it must be expected that a wider range of results are available in other areas. Indeed most of the postulated relationships originate from other areas such as rural sociology, and have often been applied to the new product situation with insufficient thought. It is crucial to realise that the concern of the rural sociologist or communication researchers is major innovations and not the kind of trivial product modification which is often found in supermarket products. It would therefore be surprising if all the relationships listed in Rogers and Shoemaker were applicable to products such as lemon flavoured detergent. But this will not be discussed presently. Let us address to the characteristics of innovators of major innovations.

By 'major' is almost certainly meant products such as consumer durables (for the most part home appliances). These are products which entail a high financial or social risk to the innovator. Rogers and Shoemaker have given numerous generalisations regarding the relationship between innovativeness and other factors, and there is only space here to list a few of the ones more relevant to the marketing of major product innovations (17). Despite the fact that these generalisations were formed from a tremendous variety range of empirical studies there is a remarkable consonance between the results found in the marketing area (for consumer durables) and those found in other areas.

When stated in terms of the adopter categorisation scheme used here in the work of Rogers and Shoemaker suggests that in comparison with later adopters, the innovators have the following characteristics. They are more educated, intelligent, rational, cosmopolitan, socially integrated and able to deal with abstractions. They are less dogmatic, they are not fate believers but possess greater social mobility and empathy. Further they have higher social status (and by implication higher incomes), achievement motivation, aspiration levels, and exposure to both mass media and interpersonal communication.

They hold more favourable attitudes toward credit, education, risk, change and science, collect more information on the innovation and have shorter decision making periods. In addition to these, they are more inner than other directed.

In a similar exercise, but one confined to the less extensive marketing literature, Robertson (1971) (18) found support for most of the above, but only in the context of appliance innovations.



It can be concluded that the majority of the findings, and particularly those relating to consumer durables, are consistent with the concept of the innovator developed earlier. The innovator is a competent and self assured person, intelligent and educated enough to set his/her own standards, and to evaluate innovations against these criteria. They can comprehend the abstract implications of adopting major innovations, and furthermore have the financial resources to experiment. Above all else the innovators favour change and are willing to take risks. By this way they are inner directed and do not need the experience, attitudes and values of others to formulate their decisions for them.

The fact that they receive more interpersonal and media information in no way contradicts this point of view, for the innovators assess this information against their own standards rather than let the information from others set the standards. In other words the innovators do not need the reassurance of knowing that members of their social circle have adopted the innovation and found it satisfactory.

Therefore it can be seen that a considerable degree of confidence exists, in the research findings relating to the characteristics of the innovators of major innovations. If however we turn to minor innovations then the degree of confidence is much lower, and the picture less clear. One reason for this situation is that it is necessary to rely on the relatively few studies conducted in the marketing area, for this is the only area in which such low risk, low cost innovations are encountered.

Robertson (1971) was only able to find nine studies on grocery products. The other reason is that the phenomenon would appear to be somewhat different, and it is not too difficult to suggest why this should be.

The adoption of a major innovation such as a consumer durable requires adequate finance, and involves considerable perceived and actual risk, whilst the adoption of a new grocery product raises no such problems. Not only the expenditure involved is minimal, but if the product proves unsatisfactory then it needs not to be purchased again the next week, or whatever the purchase cycle is.

On the other hand once a durable has been purchased the adopter may not be in the position to replace it for some considerable time. It can also be observed that durable products are often relatively very expensive in the early stages of their life cycle, until competition and increased demand lower unit costs.

The effect of these factors is to restrict the innovators to those who can view such risks without getting into trouble, that is, those individuals with higher disposable incomes. Therefore we could expect that when studying low cost innovations most of the demographic and socioeconomic variables would be of little relevance to the situation, and this is precisely what is found.

Out of the relationships discussed previously Robertson only found support for four in the context of grocery product innovations, these being that the innovators were more socially mobile, had more favourable attitudes to risk and change, and had higher product category usage rates (19). Robertson also advances some support for a relationship which has not been discussed previously, but which is of quite an importance. This is the relationship between innovativeness and perceived risk, in other words that innovators perceive less risk in adopting than later adopters.



Two more studies provide support for the relationship between innovativeness and inner directedness (Donnelly, 1970) and between innovativeness and exposure to the mass media (Summers 1972) (20). Both were conducted on grocery products, as well as other types of innovation in the case of Summers.

Therefore while the essential elements of the innovator (willingness to take risks, inner directedness) are found in all situations, it can be seen that the other characteristics differ substantially between major and minor innovations. In particular the innovators for consumer durables appear to be distinct from the innovators for supermarket products. However it must be stressed that this does not mean that the same individuals are always the innovators for all new appliances, for all new fashions or for all new grocery products (21). Obviously the truth is more complex than this, and the research done so far would suggest that it is better to view these three sets of characteristics as defining three groups of potential innovators, from which the actual innovators of any specific new product will emerge. Furthermore the factors which result in members of these groups of potential innovators actually innovating are connected more with the nature of new product, and to each individuals personal situation, than their personal characteristics.

This point may be partially illustrated by looking at the research connected with the problem of whether individuals innovate across a wide field of products or not.

Robertson and Myers (1969) (22) and Summers (1971) (23) are among the few research workers who have attempted to investigate this problem. Robertson and Myers concluded that although there was a slight tendency for individuals to innovate in closely related product categories, the evidence did not suggest the existence of

generalised innovators. Using a larger sample and a greater number of product categories, Summers employed the 'list' technique to measure innovativeness with respect to 123 new products. These were divided into six categories: packaged food products, household cleansers and detergents, clothing, cosmetics, small appliances and large appliances. By comparing the observed overlap of an individual's innovativeness between various categories with that which would be expected to occur by chance alone Summers produced some very interesting conclusions. Firstly, while approximately half the respondents only innovated with respect to one category there was a significant tendency for the remainder to innovate in several categories. Moreover this overlap was greatest between product categories involving similar consumer interests. That is, and in perfect agreement with previous arguments, between large and small appliances (consumer durables), between clothing and cosmetics (fashion goods), and between packaged food products and household cleansers (supermarket products). Concluding Summers states that:

"The pattern of overlap (greater overlap between areas of similar interest and relatively low overlaps between small and large appliances and the other four areas) suggests that innovativeness may be a function of both situational variables, such as income and product involvement, and behavioural considerations. It may be that situational factors are unique to specific products and product categories and serve to constrain the individual's innovativeness to particular areas, while his behavioural (sociological, psychological, etc) make up influences basic tendency to innovate". (24)

It can be inferred from Summers results that many of these innovators, (whether for one or more than one product category), had only adopted a proportion of the available new products in each category. (25)



Therefore not only individuals restrict their innovativeness to certain areas, but within these areas only certain innovations are adopted by these individuals. It can be concluded that within each product category the particular new product that any innovator (as defined by a set of personal characteristics) adopts may also be dependent on situational effects.

Therefore while we have profiles for the personality characteristics of the three main innovator types, in a predictive sense these profiles only inform us of which types of individuals are more likely to be the innovators of any particular new product. This is perhaps a not unexpected conclusion as it should be remembered that these profiles are generalisations from a wide collection of already existing studies. It would be quite remarkable if such generalisations could be used to predict the actual behaviour of individuals toward future new products. They can, of course, be used to indicate target audiences or respondents for surveys. However, to achieve more accurate predictions of actual innovative behaviour for specific products it is necessary to take into account the situational effects \* associated with each individual and each new product. It may seem obvious that the characteristics of the innovation should be investigated as well as those of the adopters, particularly in the light of the way the three innovator profiles were deduced, but it is only recently that attention has been focussed on such aspects.

Every new product is unique in some way, and every individual will have a unique perception of its characteristics or attributes. Therefore in investigating consumer innovativeness it is necessary to look at how individuals perceive different innovations, as well as studying the characteristics of these individuals. There are after all two sides to the procedure: an innovation implies innovators just as an innovator presupposes an innovation.

\* three kinds of sit. effects: individual, communication and characteristic (attribute)

Furthermore it has already been suggested that different types of innovations product innovators with widely differing characteristics, and it might be imagined that this was in some way related to the innovators perception of the innovations. The first question which arises is that of the nature of these perceptions, that is, what are the perceived attributes of an innovation. Donnelly and Etzel (1973) (26) consider that individuals primarily perceive a risk in adopting new products, and that the differences between 'genuinely' new and 'artificially' new products would be reflected in the degree of risk perceived. They also hypothesised that the perceived risk is related to the individuals category width. This category width is not a product category width, but it is in fact a psychological concept. Basically, a broad categoriser is an individual who 'tends to judge extreme instances of a category more distant from a central tendency value relative to the judgements of someone labelled as a narrow categoriser' (27)

In the context of new products the 'central tendency value' would be the existing products, and therefore a broad categoriser entertains wider deviations from this way than a narrow categoriser.

Essentially broad categorisers attempt to maximise their satisfaction (at the risk of adopting unsatisfactory products), while narrow categorisers attempt to minimise their dissatisfaction (at the risk of not adopting satisfactory products). Category width can be measured by any questionnaire.

Donnelly and Etzel proved that (I) individuals with broad category widths could be more likely to adopt genuinely new products, (II) individuals with narrow category widths could be more likely to purchase artificially new products and (III) individuals with medium category widths could show no particular preferences for either.



Twenty new supermarket products were taken and classified into artificially (trivially) new, marginally and genuinely new. As examples one of the artificially new products was 'lime dish-washing detergent' while one of the genuinely new products was 'frozen breakfast'. The classification was performed by independent experts. The hypotheses were substantially confirmed by the results of questioning purchasers of these products, and the authors concluded:

"The results of the study seem to indicate that different groups of individuals may be innovators for different products depending on the products attributes, specifically, how similar or dissimilar the product is relative to previous offerings". (28)

This study demonstrates that individuals do perceive differences in the risks involved in adopting various new products, and that these risks are in some way related both to the newness of the product, and to the personal characteristics of the person perceiving this product. Unfortunately this is all it does demonstrate, as Donnelly and Etzel do not present any findings for the personal characteristics of these individuals (other than category width) nor, more importantly, do they indicate what stage the adoption curve of each product had reached when the questionnaire was administered.

All that has been established this far is that newness and risk are two possible attributes of an innovation, and it seems inevitable to question whether newness is the only product dimension, or whether in fact there are any other such dimensions.

Rogers and Shoemaker (1971) (29) advance five attributes as uniquely describing how an individual perceived an innovation. These are (I) relative advantage (the degree to which the new idea is perceived as better than the old) (II) compatibility (the degree to which an innovation is perceived as being consistent with the

values and needs of the consumer), (III) complexity (the degree to which the innovation is perceived to be difficult to use), (IV) trialability (the degree to which an innovation may be experimented with on a limited basis), and (V) observability (the degree to which an innovation is visible to others). (30)

It can readily be appreciated that observability relates more to later adopters, who need information on the performance of the innovation, than to innovators. It can also be seen that trialability provides one dimension with which to distinguish between major or minor innovations, in that items like consumer durables cannot always be tried on a limited basis.

'Relative advantage' appears closest to Donnelly and Etzel's 'newness' as it too measures dissimilarity to the existing products. Therefore an artificially new product would have a lower relative advantage, while a genuinely new product would have a higher relative advantage. After referring to the above approaches the following conclusions could be raised: First, that, attempts should be made to link perceptions of innovations to personal characteristics, and preferably over as wide a range of products as possible. Not only would this provide clearer knowledge into the whole process of adoption, but it would also provide support for the preceding arguments. If this was the case, and it seems likely, then more accurate predictions could be obtained from questioning potential adopters alone rather than a representative sample of the population as a whole, these potential adopters being identified on the basis of their personal characteristics. It does after all seem rather pointless to ask potential laggards for their perception of a product which is about to be launched, as the answers will neither be favourable nor meaningful. Furthermore if sufficient innovations can be studied in this manner then it may eventually be possible to link perceptions to levels of success or failure, and therefore provide more rigorous product development procedures.



Second, it would be of great interest if the perceptions of individuals could be monitored over time, and the observed shifts in perception associated with communication and influence. It is to be expected that once a person adopts then the knowledge is replaced by product experience and his/her perception alters (favourably or unfavourably). This perception will be communicated to others, and persuade them for or against the innovation. By simultaneously observing the perceptions or attitudes of adopters and non adopters at any point in time, a greater understanding of how individuals are persuaded to adopt could be gained.

In conclusion it should also be pointed out that not all of the problems discussed above will be of major concern to the practicing manager. It must be argued that such a person should built on the basic framework described here by developing his own set of criteria for predicting innovativeness. It is unfortunate that the innovators for different categories of products have different characteristics, but this is a fact which must be accepted. Nor does this throw any doubt on the validity or usefulness of diffusion theory. The evidence of the matter is that the innovators of any new product are different from the rest of the adopting population, and must be treated as such.

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CHAPTER VI



### INNOVATION & SOCIETY

It could be that at some point in the near future, the decreasing supply of energy and raw materials will lead to a reduction in the number of products on the market and a decay of new product activity. The importance of this is that new product management will be less vital and relevant to the company of the future.

Suppose that this would not happen, take the contrary view and speculate that at least in the short and medium term there will be an increase in new product activity, and an explosion in the number of innovations introduced onto the markets of the world. The nature and direction of all this activity will undoubtedly be different, the emphasis being of the efficient and non polluting use of energy and on recyclable materials.

There are signs that such innovations are already emerging. Apart from obvious trends such as that to more efficient automobiles there are the recent commercial introductions of solar batteries and devices for turning refuse into methane gas. In the non durable product categories there is, for example, a noticeable trend to greater food value (efficiency) in convenience foods.

All of which has a certain historical progression to it. In the nineteenth century and the early part of the twentieth century manufacturers produced what they thought people should have. With lack of competition, unfulfilled and unsophisticated demand, these strategies were successful. However the very growth of the mass production and mass consumption society led to more efficient and sophisticated consumers, and consequently to increased competition in the market place. An emphasis became necessary to be given, to producing what these consumers needed, or in other words to a marketing orientation.

Now its very likely that we see another orientation brought about by the steady growth of the consumer society.

The new orientation will still stress the production of goods which satisfy consumer needs, but will also emphasise the optimal use of resources.

As it were, a concept of resource constrained marketing, but one which is at once different from the current marketing concept and from the economists concept of the efficient allocation of rare resources. Certainly the emphasis on the efficient allocation of these resources is there, but allocation according to consumer needs and not according to the will of some distant decision maker.

This new change of orientation is likely to demand a higher level of technology than currently available, rather than a retreat to simplex forms of existence.

As the years pass by it is interesting to notice that the trend has always been to greater efficiency. The television sets of 1946 consume less electricity and last longer than those of 1950, automobile engines last for thousands of miles under stresses which those of the 1930's could not sustain for a fraction of this distance, and so on.

The resource crisis is because these innovations have diffused to so many individuals, not because they are inherently wasteful of resources themselves. What is necessary is to discover ways and means of solving such consumer problems at a new level of efficiency, and with due regard to the numerous constraints. Therefore rather than facing redundancy the new product manager faces an immense challenge, the challenge of making a radical change to his perspective of the world, and of introducing the required innovations. And the scheduled time for this change is relatively short.



One way by which the new product manager may make an immediate impact on these problems is by becoming more efficient himself, that is less wasteful of corporate resources. By raising the 'success rate' for new products then society's resources will be allocated more effectively.

From the study of the existing literature, and the research done, I arrive at the conclusion that a new product failure represents a total waste of resources since it is obviously something which the consumers did not need, or which did not perform to their satisfaction. No such satisfactory products should ever reach the market place, and indeed a higher proportion should be abandoned much earlier in the development process than are at present.

It is accepted that the way to raise the success rate, is by giving the consumer a voice in the development process.

Consumers are given a voice not only in a theoretical and empirical recognition of how and why they behave as they do, that is, judge a product by its performance and communicate this experience to others, but also by the explicit and professional use of marketing research to assess these perceptions and opinions. In effect this is the conduct of the testing stage in accordance with the theory of innovative behaviour.

The other side of the equation is the optimal allocation of resources, that is the economics of production, and the projections designed to assess whether the product is viable in general, is the act of striking a balance between consumer needs and production economics.

A viable new product therefore represents something which consumers need and which can be produced with an acceptable return on investment, that is it uses corporate resources efficiently.

As in the western world corporations are entrusted with the utilisation of society's resources, then it follows that the above also represents an efficient use of these rare resources. The partially complete equation is therefore: an efficient allocation of resources equals viable sales levels equals the satisfaction of consumer needs.

If we could then add the constraint or requirement that any future new product itself also utilises resources more efficiently than its predecessors then everybody should be satisfied, consumers, companies, and even governments.

We certainly cannot achieve more than this, and unless the advocated change of emphasis is made then we may well achieve far less. The dimension that has been added to the equation is that each new product uses less energy and material resources than before, or is capable of being recycled, while continuing to satisfy the relevant consumer need by performing as the consumer expects it should.

This constraint may be imposed by governments or self imposed by companies wishing to forestall government action. Equally though it may be imposed by consumer demand, and this has already happened in some product fields, notably automobiles, home heating etc. With increasing awareness of these problems in society as a whole this is a trend which can be expected to continue, and to affect wider areas of consumption.

The consumers of the future will demand more resource efficient solutions to their problems, and the successful new product managers will be the ones who develop innovations to match these rising expectations. The complete equation is therefore that the efficient allocation of resources is brought about by viable sales levels, which are dependent on the satisfaction of consumer needs by products which are as resource efficient themselves as the current level of technology allows.



The implication being that whether led by consumer demand or pushed by government decree, technology will evolve in a resource efficient direction.

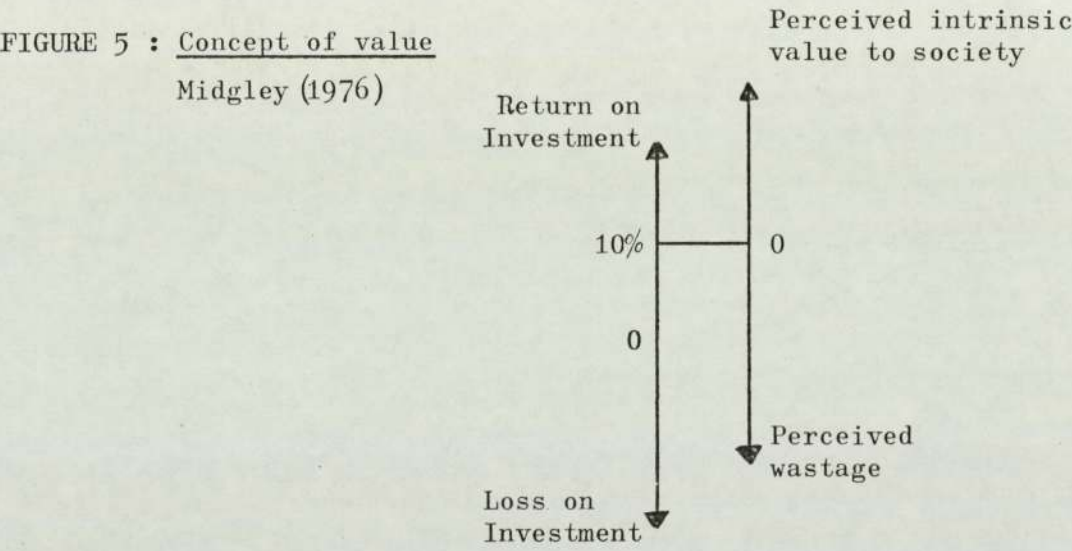
Given then that the consumers have the ultimate right to purchase the product or not, and that the company remains the means by which resources are allocated, then a successful new product has some essential (real) worth or value to society. By being successful it represents an efficient use of resources, and its sales level or rather its return on investment (as both sides of the equation to be balanced), is a measure of this real value.

A product which attains a major market share and therefore a high return on investment in some ways consequently has a greater value to society than one with a minor share. Effectively it is satisfying a larger proportion of society and utilising a greater amount of resources in a more efficient way than the minor brand. However this can not be taken to the extremes of a monopoly. Indeed it requires the competitive stimulus of a market structure whereby several flows are trying to make the next innovative breakthrough in order to maintain society's desired level of corporate efficiency. Nor does it imply that the minor brand has zero value and should be withdrawn. There obviously are minority consumer need segments and therefore minor as well as major brands. Some consumers view the minor brand as perfectly satisfactory and provided that the associated sales level is a viable one then these consumers are entitled to their belief. Only products which fail to make an acceptable return on investment or return losses, have a zero or negative value to society. These products represent waste.

By representing such losses as negative returns on investment (losses on investment probably) we can establish some concept of perceived intrinsic value to society. Perceived because success or failure, and therefore value, primarily rests on the perceptions of consumers.

One additional point is necessary here. Society requires companies to make a certain level of positive return of investment in order to sustain share prices, satisfy creditors, maintain levels of capital investment etc. Therefore zero real value equates to a positive return of investment. We therefore take an arbitrary point of 10%.

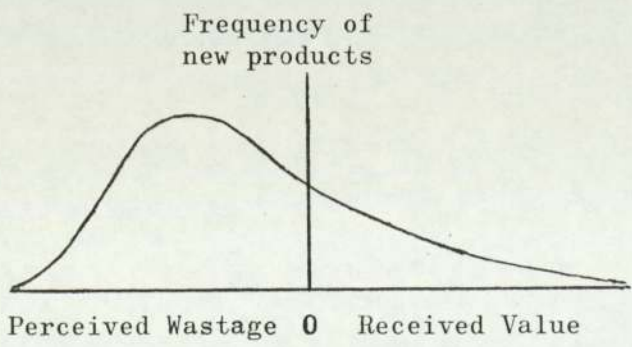
Diagrammatically this concept of value can be represented as in figure 5.



The above could be made more relevant to the subject and more meaningful by considering the following.

Let us suppose we may obtain a suitably representative sample of recent new product launches, know the returns on investment and find the distribution of intrinsic value. This distribution could very likely look like the one in figure 6.

FIGURE 6 : Speculative distribution of value to society





The only grounds for displaying this particular shape for the distribution is that most new products are unsuccessful, and as a consequence some 70% of new product expenditure is wasted (1,2).

Therefore most current new product introductions are also wasteful in the terms defined above.

The task for the new product managers of the future is to alter this picture, in effect to turn the distribution to the right. In this future most new products must represent positive value to society. Certainly the area to the left of the zero must be reduced and that to the right increased. While risk and uncertainty may not be eliminated they certainly can be reduced.

The way in which this may be achieved is clear. More objective and theoretically sound new product development procedures must be applied in order to increase the success rate and consequently value to society.

Since this implies a more accurate reflection of consumer needs, and as social trends are to more resource efficient products, then these procedures will almost automatically result in such products.

In the future the product with a high perceived value will be one which itself represents an efficient use of resources.

What has been said here is speculation based entirely on what I have read of the interpretation of trends and on the existing literature of the subject. However, it must surely be admitted that the alternatives to the above are less socially desirable, representing either a retreat to lower standards of living and all that entails, or the authoritarian allocation of resources.

Either way the consumer is the loser, and every member of society is a consumer. Therefore the penalties of failure in this task are great.

Equally the rewards of success will be immense when measured in terms of the more affluent and rational society which would result.

The question is that : will the western free enterprise system meet these challenges, and make the transition to a more enduring form of economic organisation? To a great extent success or failure rests on the skill and expertise which the present and next generation of managers bring to bear on new product development and marketing.



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#### CHAPTER VI

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