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BREAD VARIETY PRODUCTION VERSUS BREAD VARIETY DEMAND

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Presented in partial fulfilment of the requirement for

THE DEGREE OF DOCTOR OF PHILOSOPHY

to the Council for National Academic Awards

Sponsoring establishment - Trent Polytechnic, Nottingham
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DECLARATIONS

1 ADVANCED STUDIES

A programme of guided reading has been followed in pursuit of the minimum schedule submitted to the Council for National Academic Awards as part of the application to register for the Council's degree.

Also pursuant to the Council's requirements, lectures have been attended on courses in Management Studies and in Marketing, where these have been concerned with statistical techniques and marketing research and tutorials in these aspects have taken place with many members of staff of Trent Polytechnic.

A programme of staff development in the form of research seminars has been followed both at the Trent Polytechnic and at the East Midlands Management Centre.

During the five years the study took to complete, every annual series of workshops provided by the Marketing Education Group of the United Kingdom has been conscientiously attended with the exception of one year when a Department of Education course in Distribution Studies was felt to be more appropriate.

At these annual workshops, considerable advantage was taken of the opportunity to discuss facets of the research with eminent Professors, Doctors and Lecturers in Marketing.

In addition to the above, special visits were made to discuss particular aspects of the work with appropriate academics, professional practitioners in marketing research and industrial advisors.

2 MATERIAL PUBLISHED IN ADVANCE OF THE THESIS

A paper entitled "Consumerism as a force for market changes" which used a small proportion of the research findings was presented at the joint conference of the European Academy for Advanced Research in Marketing and the Marketing Education Group of the United Kingdom at the Heriot-Watt University in Edinburgh, 25th to 28th March, 1980.

The paper was published as part of the proceedings of this conference and a copy of the said paper has been bound into the thesis as part of the appendices, in accordance with required procedure.

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ABSTRACT

BREAD VARIETY PRODUCTION VERSUS BREAD VARIETY DEMAND

DAVID J. PEARSON

The original conceptual framework used is embodied in the title and implies mismatch between supply and demand in the case of bread varieties. As the study progressed it became clear that mismatch could exist in other than quantitative terms and a great deal of controversy about British bread was concerned with aspects of a qualitative nature such as taste, freshness and perceived nutritional value. It seemed pre-requisite therefore to categorise the types of controversy which exist about British bread and then to concentrate attention on the most promising category in terms of determining mismatch between supply and demand. Subsequently a body of controversy regarding plant-produced bread (as distinct from bread produced on the premises of small bakers' shops) was identified and a collection made of all references by the media to this form of controversy over a ten year period. These references were then synthesised into a testable hypothesis relating to the original conceptual framework of mismatch between supply and demand.

In setting out to test the hypothesis that the British public were dissatisfied with plant-produced varieties of bread (that is whether a qualitative mismatch between supply and demand did in fact exist), a national survey of the attitudes towards bread and buying behaviour of 1,000 housewives was conducted. Having surmised the media might be unduly influenced by relatively small but active groups of opinion leaders, additional national surveys were conducted amongst members of consumer groups and teachers or wives of teachers.

In analysing results it became clear that significant differences exist between opinion leaders as defined and the average housewife and that the study contributed towards the development of choice behaviour theory. In particular the findings were inconsistent with those of that group of attitude theorists known as the cognitive dissonance school within the field of social psychology.

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KEY TO ABBREVIATIONS

ABF	Associated British Foods Limited
ADD	Activated Dough Development
AID	Automatic Interactions Detector
BBIRA	British Baking Industries Research Association
BFP	Bulk Fermentation Process
BIG THREE	Associated British Foods, Rank-Hovis-McDougall Spillers French Baking
BIG TWO	Associated British Foods, Rank-Hovis-McDougall
BMRB	British Market Research Bureau Ltd
CBP	Chorleywood Bread Process
CNAA	Council for National Academic Awards
CWS	Co-operative Wholesale Society
DOI	Department of Industry
DTI	Department of Trade and Industry
EIU	Economist Intelligence Unit
ESL	Equivalent Standard Loaf
FAB	Flour Advisory Bureau
FMBRA	Flour Milling and Bakers Research Association
MAS	Market Advisory Services Ltd
MDS	Multidimensional Scaling
MINTEL	Market Intelligence (Mintel Publications Ltd)
MIS	Market Investigation Services Ltd
NAMBC	National Association of Master Bakers and Confectioners
NFCC	National Federation of Consumer Groups
NFS	National Food Survey
NIESR	National Institute for Economic and Social Research
NMS	Non-Metric Multidimensional Scaling
NOP	National Opinion Polls
RA	Research Association
RABFM	The Research Association of British Flour Millers
RHM	Rank, Hovis, McDougall Limited
SF	Spillers-French Baking Limited
SPSS	Statistical Package for the Social Sciences
TACC	The Technology Assessment Consumerism Centre
TCA	Television Consumer Audit
TV	Television
Univ	University

INTRODUCTION

Apart from private files maintained by the Flour Advisory Bureau, there appears to be no record of the media criticisms of standard British white wrapped and sliced bread and its plant bakers. This thesis attempts to collate evidence to substantiate the claim that there is a great deal of controversy about British bread which has appeared in various printed forms over a great many years.

The study proceeds to synthesise this evidence, to categorise the controversy into its various forms and to distil a particular category of this controversy, the resolving of which appears to have been strangely neglected by the academic world.

This particular category (named controversy category 4 in the thesis) concerns media allegations to the effect that British standard bread is not the type of bread which housewives would really prefer, with undertones suggesting that plant bakers are deliberately operating against a true supply-demand relationship in the case of bread varieties.

A literature search revealed that there has been very little academic work on the controversies surrounding British bread and that most of this work was concerned with the medical, historical or economic aspects of flour and bread. There appears to have been no previous academic work aimed at the particular category of controversy which forms the major part of this study and which involves empirical research into the attitudes towards bread and bread buying behaviour of British housewives.

There had however been various industry studies involving empirical research, into these matters, the last of which of any note had taken place in 1967, to the writer's knowledge. These are reviewed in the thesis.

Bearing in mind that studies commissioned by plant bakers could be construed as defensive research, that the results of these studies were generally known only within the industry (owing to little or no media publicity on favourable aspects) and the amount of time which had elapsed since the last major study, it was felt that objective empirical research by an academic would constitute a valuable addition to the body of knowledge. It was also hoped to arrive at some objective conclusion regarding the degrees of mismatch (if any) between bread variety supply and bread variety demand and whether plant bakers deserved the opprobrium heaped upon them by journalists and feature editors over the years.

This research differs from the studies commissioned by plant bakers in having conducted separate surveys into attitudes and bread buying behaviour of members of consumer groups and teachers or wives of teachers in addition to a representative sample of housewives, on a national scale.

It does therefore seek to establish whether the observably large volume of media criticism might emanate from a relatively vociferous minority of relatively more aware people rather than the average British housewife much of this criticism purports to represent. In this respect the research finds statistically significant differences between the attitudes towards bread and the bread buying behaviour of members of consumer groups and teachers or wives of teachers compared with those of the average housewife. There is other evidence resulting from the research which supports the view that media criticism of standard bread is generated by non-representative segments of the bread buying market.

Since the original surveys were conducted, other important evidence has become available which indicates that changes in the relatively stable and long-established British bread market

with regard to varieties and distribution outlets are beginning to take place on a scale significant enough to impact upon market shares. For this reason a sequel has been included which reviews all the latest developments with regard to their influences on the findings of the original research.

Severe discrepancies were discovered between the types of bread most housewives appeared to favour, judged by their rankings of attributes and the varieties they actually purchased. Analysis of these discrepancies led to the realisation that they were the manifestation of the phenomena known as cognitive dissonance within the general field of choice behaviour theory. Certain facets of the bread market, particularly the ease and low cost of changing behaviour in terms of buying particular, less dissonant varieties and the length of time over which dissonance had existed, led to the conclusion that the British bread market operated against consonance or balance theory.

The writer's research when added to previous industry research represents evidence which finds against the dissonance school and therefore contributes towards the general field of choice behaviour theory within the social sciences.

PART ONE

BACKGROUND AND CONTROVERSY SURROUNDING BRITISH BREAD

CHAPTER I

BACKGROUND

1.1 A BRIEF EARLY HISTORY OF BREAD

> 'Here I am with the hot rolls, made of the best wheat and as white as milk' (Philyllius, C.350 B.C. A fragment. See Athenaeus C200b)

There is no record of when or indeed where bread originated. However, it is known that it was eaten in various crude forms long before man learned to write. According to Sheppard and Newton (1957), the history of bread is longer than that of any "processed" food. The earliest bread was probably made by squeezing unmilled grain into a coarse mash and leaving it to dry. Ezekiel (C.586 B.C.) claimed that God said: 'Now take some wheat, barley, beans, peas, millet and spelt, mix them all together and make bread'. Next came bread made from crude flour but unleavened and finally fermented bread arrived, discovered (presumably by accident) in Egypt and spreading quickly through the Mediterranean lands.

McCance and Widdowson (1956) state that according to the Talmud, Pharaoh's chief baker was put in prison for supplying bread containing chips of stone and although this reason is disputed by Sheppard and Newton (1957) they do agree that both the butler and the baker had offended their lord, the King of Egypt, presumably for a reason connected with food. This is probably the first recorded instance of many to follow, of a baker being treated badly by the consumer. Jasny (1944) states that probably the Greeks and certainly the Romans learned to detect the different milling and baking properties of "hard" wheat (triticum) and "soft" wheat (siligo) which determine the quality of our present breads and are the subject of continuous debate and research by the technical and commercial interests involved.

From early times different flours of varying quality were extracted and some of the wall pictures at Thebes depict separation of mill products among other operations involving the preparation of bread. The Old Testament refers several times to the use of fine flour for special occasions and Pliny (C.50) recorded the yields of the finest flours, seconds and residuals obtainable from several wheats in Roman times.

The emergence of a multitude of varieties of bread with assigned grades and different prices followed naturally upon the separation of wheat and experimentation by the Roman bakers in their production processes. Naturally controversy arose and claims were made as to the properties of the many varieties but according to McCance and Widdowson (1956) the wealthiest Romans preferred a soft well-baked loaf associated with whiteness. Thus Argyrippus, in a comedy of Plautus (C.200 B.C.) chides 'Before I courted that girl of yours and offered her my loving heart, you used to live on black bread in rags and poverty.' The medical writers of the times and particularly Celsus (C.O.), Galen (C.160) and Hippocrates (430 B.C.) were agreed that bread made from whole wheat increased the bulk of the stools. Hippocrates (430 B.C.) stated clearly that 'Wholemeal bread clears out the gut and passes through as excrement, white bread is more nutritious' and even recommended white bread for someone wasting away from chronic diarrhoea. That bread was available in a variety comparable with the range on sale in an ordinary baker's shop today, is confirmed by Pliny (C.50 B.C.).

> As for bread itself, it is superfluous to give an account of the various types. In some places bread is called after the dishes eaten with it, such as oyster-bread, in others from its special delicacy, as cake-bread, in others from the short time spent in baking it, as hasty bread, and also from the methods of baking, as oven bread or tin loaf or pan bread; while not long ago there was even bread imported from Parthia, called water bread because through the use of water it is drawn out into a thin, spongy consistency full of holes; others just call it Parthian bread....

> Some use eggs of milk in kneading the dough, while even butter has been used by races enjoying peace, when attention can be given to the varieties of pastry-making. Anconia still retains its reputation for inventing bread made from spelt. The flour is steeped for nine days and is kneaded on the tenth, with raison juice, into the shape of a long roll and afterwards baked in earthenware pots until the pots break. This bread is not used for food until it has been soaked, for which milk or honey-water are mainly used.

The terms tin loaf and pan bread are employed by modern bakers and confusion caused by the proliferation of local names persists to this day, although Elizabeth David (1977) has made an excellent attempt to overcome this in her chapter on shapes and names of English loaves.

1.2 THE MILLING OF GRAIN

> Wel coude he stelen corn and tollen thryes....
> Chaucer G. (1388) The Millers Tale

The history of British bread is to a large extent allied to the development of the flour milling process. The following brief outline is taken largely from Elizabeth David (1977).

The Domesday survey of 1086 recorded almost 6000 watermills serving 3000 communities south of the rivers Severn and Trent. It was a century later that windmills began to appear in the records and their invention was seized upon by the lords of the manorial lands and the church. It was only when the feudal and ecclesiastical landlords had lost the manorial rights to mill all the grain grown on their lands that independent mills proliferated. Both watermills and windmills employed grinding stones to crush the grain and this was the prevailing process until the advent of the roller mill. The first of these opened at Glasgow in 1872 and by the end of the

century windmills and watermills had already become an anachronism. Where in Bedfordshire for example, there were once 400 mills operating, there was in 1970 just one.

The roller mill afforded the means of producing uniformly white flour. Break rollers shear open the wheat berry to free the endosperm or starchy part of the grain which is then separated from the remainder, pulverised into flour, graded through fine meshes then bleached, processed "improved" and packed. The bran extracted during milling can be made into animal feed, various patent foodstuffs or re-blended with white flour to make proprietary brands of brown flour which are then used to make wheatmeal breads. Most of these flours do not contain any germ and the coarsest offal has been removed. The wheat germ if extracted separately can be used for patent foods or returned to white flour to make so-called germ meal bread. The bulk, however, of bran and germ goes into the main stream of the offal to be sold as animal food since it is not economical for the roller-milling concerns to separate out the different components of the grain. The degree to which the flour retains the whole of the original grain is termed the extraction rate and flour of eighty five per cent extraction would hold more of the original grain than flour of say eighty per cent extraction. Some housewives who bake their own bread, particularly those relatively concerned with the health and nutritional aspects look for stone milled flour. The words "stone milled" indicate that the flour has been ground much as it was in the days of windmills and watermills and cannot be accused of having been deprived of the natural properties of the grain by high-speed rollers. Because before blending, stone milled grain contains the whole of the wheat berry's constituents, it is properly termed wholemeal. Nevertheless the cleaning of the wheat prior to milling and the varieties of wheat used have changed radically since medieval times.

No standard terms exist to create a taxonomy of the various grades of flours from the different mills, each of which has its own nomenclature. There are usually about six grades of white flour prepared from the roller mill-stream. Unbleached flour has to be specifically requested when buying otherwise bleached flour will automatically be supplied. About ninety per cent of flour is chlorine bleached and contains at least one flour improver. Bran can be purchased in several different grades which vary from coarse to very fine. Germ is also available from roller mills.

1.3 DEVELOPMENT OF THE BRITISH BREAD BAKING INDUSTRY

> Wherefore do ye spend money for that which is not bread? Isaiah (C.770 B.C.)

In mediaeval England most people were obliged to get their wheat ground by a miller and found it difficult to accept that receiving back less flour than wheat handed over, was due to any other process than chicanery. Like the mill, the bakehouse was the property of the lord of the manor to which the serfs were expected to bring their dough or meal to be baked for a fixed charge, a practice which, according to Bennett (1937), they tried to avoid whenever possible, in suspicion of the baker's honesty. There are no figures available to show just what proportions of bread eaten in the country in mediaeval times were in fact purchased from a merchant baker, baked in the manorial oven, baked in a communal oven or indeed baked at home. However, legislation was brought in to prevent speculative buying in periods of poor harvests and excessive trading profits, and the first Assize of Bread dates from 1206. From then until the mid-eighteenth century, the various assizes priced three varieties of bread namely white, wheaten and household. Records for the monastery at Worcester, referred to by Ashley (1928), show four grades in use - monks' bread, stewards' bread, servants' bread and shield bread. A coarse brown bread known as "trencher" and used as consumable

plates also existed at the time according to Murray (1926). Even in these early times, states Garnier (1908), unfavourable comparisons of English bread with French bread were being made and like the Romans, the English wealthy preferred white bread. The servants, labourers and the poor ate brown bread, made from wheat when they could afford it, but mostly from a mixture of wheat, rye or barley. Chaucer contrasts the poor widow in the Nun's Priest's Tale:

> Hir bord was served most with whyt and blak
> Milk and broun breed, in which she fond no lak -

With the rich prioress who gave her lap dogs white bread -

> Of smale houndes had she, that she feede
> With rosted flesh, or milk and wastel-breed

Again as in Roman times we find pronouncements as to the virtues of"good" bread and the dangers of "bad" bread, typified by the following quote dated 1400 by an unknown author, referred to by Bailey (1975):

> God may send a man good meate but the devyll sende an evyll cooke. Wherefore gentyll bakers sophysticate not your breade made of fine wheat. Gentyll bakers make good breade - for good doth comfort a mannes herte. Hote breade is unholesome for any man for it doth lye in the stomache like a sponge - yet the smell of newe breade is confortable to the heade and herte. Sodon breade and breade baked upon a stone or yron is not laudable. Burnt breade and harde crusts and pastry doth engendre melocoly humours. Wherefore dyp the upper crust of your breade and whoso doth use to eate the second cryste after the meate it maketh a man leane. Breade which is nututyne and praysed should have these properties. Fyrst it must not be newe but a daye and nyght olde. Nor is it good past four or five days olde (except the loaves be great.) It must be well muldyd and thorowe bake it must be lyght and not hevye and temporately salted.

It seems that our present mass-produced standard white bread would have been well thought of in the middle ages.

Controversy over accusations of contamination of bread by additives is recorded in 1758. Bailey (1975) refers to the claims of one James Manning, a London doctor that such substances as beanmeal, chalk, slaked lime and bone ash were being added to flour by indiscriminate bakers: 'In consequence of this, Bread, which has well been called the Staff of Life, becomes an Arrow in the Hands of Death....' This and other pamphlets caused a chemist, one Henry Jackson to defend the bakers in his 'Essay on Bread':

> I have carefully examinedthe bread of more than a hundred different bakers, and I have been unable to discover the least Particle of Lime, Whiting etc., and I am pretty certain that if any of their bread had been mixed with only a minute portion of such Substances, it could not have escaped my researches. These malevolent suggestions have occasioned more mischief than could possibly arise from contaminated bread :

Although merchant bakers had appeared in London and other cities in the eleventh century, the country folk still thought the use of a baker's shop to be extravagant as late as the nineteenth century, when William Cobbett (1821) wrote:

> How wasteful, and indeed how shameful for a labourer's wife to go to the baker's shop; and how negligent and how criminally careless of the welfare of his family must the labourer be who permits so scandalous a use of the proceeds of his labour

By the eighteenth century wheat had become the main bread grain, since with greater prosperity most people could now afford it. Barley bread remained for the poor of Cornwall whilst barley and oats continued to be the major constituents of bread flour in Scotland.

In the South and Midlands the numbers of merchant bakers increased but home baking persisted in the North, witness Manchester with no professional bakers but a population of 100,000 in 1804.

Competition amongst bakers increased considerably in the cities, leading to the emergence of hawkers hired by the bakers to deliver bread in the streets and sell it in the markets, thus forming the beginnings of a wholesale - retail system. Sheppard and Newton (1957) point to the fact that the hawkers were often given thirteen loaves instead of twelve to the dozen i.e. the bakers dozen, as a sales incentive. The more ambitious bakers began to branch out and enlarge their bakehouses to serve a number of shops.

Price-fixing was abolished in 1815 and the new Corn Laws forbade the importing of foreign wheat thus keeping the home corn market prices artificially high. The scrapping of the ancient Assize system gave the bakers carte blanche in determining prices. Price cutting became rife (shades of modern times) so much so that only by adding potatoes and the like could some bakers remain in business. Feelings ran high and anti - Corn Law mobs roamed the English countryside. Whilst a sliding scale of duties was introduced in 1828 as a modification of the 1815 Act, it was not until 1849 after considerable industrial and political agitation that Robert Peel reduced the duty on wheat, rye, barley and oats to a nominal shilling a quarter. The Corn Law situation encouraged several milling companies to take over small baking businesses and said Bailey (1975), gain large profits by the use of adulterated flour. It should perhaps be pointed out here that during the nineteenth century new varieties of wheat had been cultivated in America and Canada, culminating in 1903 with the development by Canada's Sir Charles Saunders of the Maquis strain, considered to be the most remarkable wheat in the world. Also during the second half of the nineteenth century new technology explosion had brought about a variety of vastly improved milling machines and the chemist John Dauglish had

developed his aerated bread process, patented in 1856. However, the obduracy of the average English baker, averse to change, was to delay the introduction of a fine, white, crusty loaf for a further half century or so. According to Bailey (1975), intractable resistance against progress led to the English baking industry being regarded as the most backward in the world by the turn of the century.

Bread that was light, fresh, wholesome and above all white was now the widely accepted ideal of the wheat countries, of Hungary, Austria, England and America. Rye bread remained firmly entrenched elsewhere, particularly in France. Isolated attempts by nutritionists to persuade people to eat wholemeal bread were largely unsuccessful. Continued fierce competition between the bakers led to the organisation of bread exhibitions and competitions e.g. the Baking Trades Exhibitions in London, during the early 1900's.

According to Burnett (1966) there were about 50,000 independent Master Bakers in 1850 working mainly by hand to prepare, bake and sell their bread in situ. Amalgamation by acquisition which had commenced in the first half of the nineteenth century, increased during the second half of the century, encouraged by improved technology. Mathias (1967), records that the four Bilsland brothers had acquired six small bakeries with twenty-six ovens between 1875 and 1879, all operating within an area of Glasgow and together producing weekly some 10,000 dozen loaves during the summer, rising to 17,000 dozen in the winter.

New style gas and steam ovens were on display at the Great Exhibition of 1851 and encouraged businessmen rather than craft bakers to enter the industry. The large firms developed as pace-makers to bring about a change from a trade comprised of a multitude of individual craftsmen, to an industry dominated by giant concerns. Again Bilsland's development serves as a case

history illustrating not only the growth of a large baker but its links with the simultaneous evolution of the multiple retailers, brief details of Bilsland's history being as follows:-

In 1880 the Bilsland brothers centralised production in a purpose-made bakery especially built and designed to house the latest plant and machinery. By 1900, this baker was employing 234 people on production plus fifty men using twenty-four vans on local deliveries and turning out 22,400 dozen standard 28 oz loaves a week. By 1912 additions to plant and a fleet of lorries enabled Bilslands to serve outlying districts. Another company (Gray, Dunn and Company) had been taken over and its bread manufacture absorbed in the Bilsland bakery. By 1917 production was exceeding 1,000,000 dozen standard loaves per year.

Housing growth led to increased population in the suburban areas and ownership or agency of the few shops on these new estates were battled for by the emerging multiples. Within bread production, demand diversified and to the more profitable "fancy" breads, new lines were added, such as "smalls", milk loaves and fruit loaves. In 1919 Bilslands gained the trade of Lipton shops in Glasgow, for bread and a contract for supplying the twenty-six City Bakeries shops. In 1922 Bilslands ordered two automatic bread wrapping machines which added three and a quarter pence per dozen on the cost of loaves but gave them a competitive advantage. Further progress led to a contract with Allied Suppliers to supply bread to their 380 branches in Scotland, covering seven varieties of bread. During this period the development of travelling ovens by Baker Perkins had enabled bakers to save space, increase production, extend their supply areas and deliver on contract to schools, hospitals, canteens etc.

The sequel to the Bilsland story occurred when Allied Suppliers acquired all its outstanding ordinary shares in 1946 and the epilogue when Spillers bought the Bilsland bakery in 1963 coupled with an agreement to supply all Allied Suppliers' Scottish branches with bread and cakes.

In 1935 the Census of Production found that there were approximately 24,000 bakers and confectioners, but according to Leak and Maizels (1945), only forty employed more than 500 persons. However, this was the year when Canadian-born Garfield Weston formed Allied Bakeries Ltd. and began a policy of acquisition culminating in 1937 with a total strength of seventeen modern bakeries, eighty-six bread shops and 494 delivery routes as stated by Evely and Little (1960). This compared with some 800 small Co-operative bakeries operated by 600 Co-operative retail societies and fourteen larger federal society bakeries, recorded by Maunder (1970).

Nationally, between 1900 and 1950, the number of multiple shop bread firms with ten or more branches had increased from eleven firms with a total of 265 branches to sixty-nine firms with 2659 branches, according to Jeffreys (1954).

The two world wars had seen increasing intervention by Government in the bread baking industry, in the national interest. A century after the repeal of the Corn Laws, a Labour Government upset the baking trade by rationing bread in 1946, causing Winston Churchill, Leader of the Opposition to state in the House of Commons:

> I have a word to say to the bakers and the traders who are concerned. They have been ill-treated. They had not been consulted, nor have they been given a chance to aid the Government in solving the problem with all the expert and practical knowledge they alone possess. . . .

This, the first-ever rationing of the "Staff of Life" was strongly opposed by the bakers and the British Housewives League but in practice rationing was only partly observed. Sheppard and Newton (1957) state that only a few bakers refused bread to customers without coupons and the sacks of coupons tended to remain unopened and unchecked at the food offices.

Continuing its policy of acquisiton, Allied Bakeries Ltd. grew to own seventy-two plants and 642 shops in 1954 as indicated by Bellamy (1957). Following a disagreement with two of the largest

millers, Ranks and Spillers (who had themselves been pursuing a policy of acquisition in the milling industry), Garfield Weston of Allied Bakeries Ltd. (a subsidiary of Associated British Foods Ltd. (ABF)) commenced buying flour from abroad. This action frightened Spillers and Ranks into a policy of securing their own outlets for flour and they both expanded vertically downwards by acquiring bakeries as fast as availability of capital would permit. There followed a period of intense competition with regard to acquisition, with Ranks, Spillers and Allied vying for the larger independent and regional bakeries. Allied Bakeries then pursued a counter-policy of acquiring milling businesses. The Co-operative Wholesale Society was already a powerful integrated flour milling and baking concern and the retail societies no longer able to justify individual bakeries formed federal bakeries which served several retail societies and numbered twenty-six accounting for one fifth of Co-operative bread production in 1944 according to Bellamy (1957). In 1955 flour firms Hovis and McDougalls amalgamated and then later merged with Ranks in 1962 to form the present company of Rank, Hovis, McDougall (RHM). In December 1970 the loss-making bread baking interests of J. Lyons and Co. Ltd. and the Co-op merged into one company called J. W. French Ltd. which failed to make profits and ten months later merged again with Spillers to form the Spillers-French Baking Ltd. giant. Three further events occurred to shape the British baking industry as it existed in 1975, at the time this research commenced.

Firstly Spillers in 1975 acquired the important slimming bread brands of Slimcea and Procea from Cavenham Foods.

Secondly the evolution of multiples and their building of ever-larger outlets during the 1970's (from supermarkets to superstores and now hyperstores), resulted in the creation and installation of in-store bakeries owned and operated of course by the multiples themselves.

Thirdly, Lyons having opted out of bread baking entered into the packet bread mix market which grew to support an increasing number of heavily advertised brands.

The following industry structure was elicited from an amalgam of different sources including the Retail Business (June 1976), U.K. Food Industries Review (1975/1976), Sunday Times (8.2.1976) and Mr. Morris Zimmerman, Director of the National Association of Master Bakers as quoted in the Times (20.1.1976).

DIAGRAM 1: SHARE OF TOTAL PRODUCTION 1975 - PERCENTAGES BY VOLUME

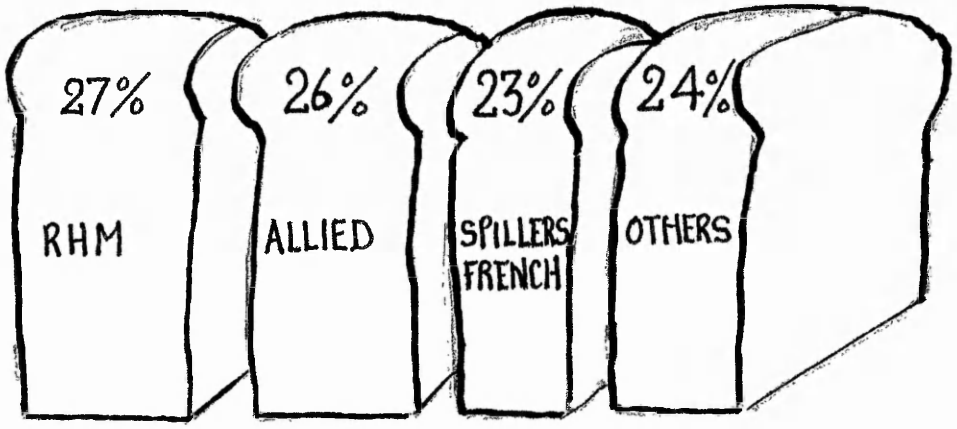


TABLE 1: ORGANISATIONAL SIZE

RHM	60 bakeries
Allied	48 bakeries, 2,000 retail shops
Spillers-French	53 bakeries, 260 retail shops, approx. 4,000 delivery routes
Others	45 small plant bakers, 5,000 Master Bakers

It should be pointed out that details of the number of shops owned by the three big plant bakers and of the number and types of delivery routes operated are not easily available and the companies concerned are understandably reticent in providing information which might be used by competitors or antagonistic media.

The production figures given exclude bread baked in the home either from a traditional flour and yeast recipe or from packaged bread mixes. The sources used also fail to indicate clearly whether in-store bakeries' production is included under "Others".

ABF who own Allied Bakeries also own the Fine Fare multiple grocery chain and these provide Allied with a substantial outlet for their bread in addition to their own small retail shops.

The Master Bakers in the above table are defined as having one shop and baking their bread on the premises. The National Association of Master Bakers and Confectioners was inaugurated on February 23rd, 1887 and whilst it does not disclose its membership, nor does it encompass all Master Bakers, it was said by Maunder (1970) to have had about 9,000 members in 1945, compared to the figure of around 5,000 members in 1975.

CHAPTER 2

CONTROVERSY SURROUNDING BRITISH BREAD

2.1 DEVELOPMENT OF CONTROVERSY AND NEED FOR CATEGORISATION

> Little Tommy Tucker,
> Sings for his supper;
> What shall we give him
> White (or brown) bread and butter?
>
> (Misquote by author)

It is highly probable that controversy about bread will have existed from the time of its inception. Even in the days when there was but one type of bread - that made by squeezing unmilled grain into a coarse mash and leaving it to dry - there is little doubt that opinions will have been passed comparing the offerings of one pair of hands with another, one days "bake" with another and so on. Differences in the basic grain, the amount and type of water added and the length of drying time (varying with the ambient temperature) will have given rise to detectable differences in taste and eating qualities. With the discovery of the fermentation process and the increase in the number of varieties of flour to say nothing of the shapes/sizes of loaves, pronouncements as to quality, disagreements as to health attributes etc would naturally make bread the subject of continuous comment and debate.

Some small mention has already been made in Chapter one of Old Testament references to the use of fine flour for special occasions, to Hippocrates' pronouncements on the attributes of wholemeal bread and to the preferences of wealthy Romans towards white bread.

Evidence exists of continued controversy about bread certainly in this country, dating from the Roman civilisation and there are few books or papers on the subject of British bread which do not refer to some political and scientific areas of disagreement.

In order to further research on this subject it was felt expedient to attempt to clarify the controversy by categorising it in a logical manner and then to concentrate on whichever category held the most promise with regard to the purposes of this particular study.

Having examined the literature, including the library of press cuttings at the Flour Advisory Bureau in London and talked with a great many people both in the baking industry and retail outlets, it seemed that controversy surrounding British bread could usefully be categorised into four basic areas:

1. That concerned with the taste, quality, nutritional and medical merits of brown as opposed to white bread - largely by the general public.

2 That concerned with specific claims as to the harmful effects of certain additives to white bread flour and the beneficial effects of brown bread, supported by scientific research.

3 That concerned with political interference in the British bread industry by various governments.

4 That concerned with charges that the British baking industry and in particular the large plant baker does not make proper or adequate supplies of certain varieties of bread available, in accordance with consumer demand.

In practice none of these four categories are mutually exclusive and it is difficult if not impossible to debate one category without some reference to the other. This is particularly the case with regard to categories 1 and 2.

McCance and Widdowson (1956) saw controversy surrounding British bread as capable of being split into brown bread versus white bread. They then divided each of the two camps into three groups as follows:

In favour of white bread (made from flour of low extraction rates)

i) The English public because 'they must still be regarded as having a strong preference for white bread.'

ii) The millers who when it became possible to produce white flour more cheaply than brown pandered to the public taste and in their own interests have continued to do so.

iii) Animal husbandmen and the representatives of the commercial firms which depend upon the wheat offals for raw materials.

In favour of brown bread (made from flour of high extraction rates)

i) Those nostalgic people who yearn to put the clock back and eulogise the "good old times" but have never pretended to be scientists and on the whole do not wish to press their ideas on others to the extent of making them alter their ways of life.

ii) The second group is characterised by an interest in health and belief in the healing powers of Nature. 'Such beliefs are based upon a lack, not only of knowledge but of the desire for knowledge!

iii) The third group are described as the disciples of science but the authors accuse these scientists of tending to design experiments to bring out the points they wished to make and of frequently generalising unwisely from their results.

Notwithstanding the above it is felt that a categorisation by types of controversy rather than types of people is more appropriate to this particular work, despite the difficulties of maintaining boundaries between the categories.

This study concentrates its main attention on the previously delineated category 4, a category which appears to have received less scientific research than the others and which is of somewhat later origin, due to it dating from the concentration of bread supply from the relatively few manufacturers known as the plant bakers.

Probably for the reason that bread is eaten daily by the majority of the population, it tends to be a somewhat emotive subject, one in which people in all walks of life can claim to be expert and towards which individual attitudes have through experience and habit become somewhat entrenched. For these reasons the term "scientific research" is here defined as that conducted by scientists rather than objective research conducted without bias, since much of the scientific research conducted on bread cannot be seen to be objective.

2.2 CONTROVERSY CATEGORY 1

- that concerned with the taste, quality, nutritional and medical merits of brown as opposed to white bread, largely by the general public.

Mention has already been made of proof that this controversy dates at least from Roman times, but that both the Romans and the medieval English preferred white bread. This is not a claim that white bread was the majority purchase or bake in medieval times since figures are not available. In fact it is more probable that brown bread being the bread of the poor, was consumed by the greater majority of the population. However the literature of the period is so full of references to the superiority of white bread over brown, to white bread being the daily prerogative of the rich and regarded as a treat by the poor etc., that there can be little doubt of it being preferred in the dictionary sense of 'esteemed above another.' The agreement in attitudes towards white bread by the poor and towards brown bread by the wealthy can perhaps be typified by the nursery rhyme taken from the Percy Society (1841):

> Ride a cock horse
> To Coventry Cross
> To see what Tommy can buy;
> A penny white loaf
> A penny white cake,
> And a two penny apple pie.

- and by the offer of philanthropist clothier Will Bennett in 1621 as recorded by Paye (1907) 'to live by brown bread and water, rather than this great number of poore people should want work, if he had means to keep them in work.' However, when in 1836 the restrictions imposed by the Assize of Bread were abolished, the greater freedom allowed the millers and bakers to improve techniques and establish a growing market for milling offals in animal husbandry. By 1865 the brown versus white position had reversed. White bread was cheaper than brown bread and therefore in majority consumption. Moreover the status of brown bread had become completely reversed. Smith (1865) when writing about brown bread stated 'It has become a mark of luxury and not of poverty, and is the rich man's instead of, as formerly the poor man's food.'

Whilst brown bread has remained in minority consumption to the present day and its price has tended to remain marginally higher than white bread it can no longer be claimed to be the rich man's prerogative. Nevertheless as later references and this research will show, the minority of the population who do prefer and consume brown bread can be seen to belong largely to the middle and upper classes.

The laxative properties of brown bread, referred to by Hypocrates, appear to have been widely known and accepted by people throughout the ages and it is natural that this demonstrable property should have led to claims of wider non-demonstrable medical properties.

Protagonists of natural food existed in the early ages but it was the writings of Sylvester Graham (1849), an ardent devotee of wholemeal bread, which influenced large numbers of health-minded people to eat Graham bread or its equivalent and his name became a household word internationally for over a hundred years, according to McCance and Widdowson (1956). Dodd's book written in 1856 refers to reports that the Queen adopted the eating of brown bread in 1847 as an example to her subjects. Towards the end of the nineteenth century a Dr. T. R. Allinson (1885) added weight

to Graham's ideas by touring the country, lecturing meetings on the medical and nutritive merits of brown as opposed to white bread and his speeches were widely reported in the press. He alleged that:

> Persons who eat white bread often suffer from an inward craving or sinking; to cure this, recourse is often had to beer, wine or spirits, which lulls the craving for a time. If they ate brown bread they would not suffer much from this and we should be a soberer nation.

It was however, adulteration of white flour by chemical additives in response to the public demand for a whiter loaf than the bakers could supply at the price dictated by the Assize, which led to a series of more scientific attacks.

2.3 CONTROVERSY CATEGORY 2

- that concerned with specific claims as to the harmful effects of certain additives to white bread flour, and the beneficial effects of brown bread supported by scientific research

This area of controversy can be said to date from the early nineteenth century with the publishing of a book by Accum (1820) an analytical chemist and the consequent arousal of serious public concern. Although various pamphlets, many anonymous, had been published in London from about 1750 onwards, alleging the presence of chemical additives in bread, few had aroused more than temporary local concern. Even Accum had to admit:

> Without alum it is impossible to make bread from the kind of flour usually employed by London bakers, so white as that article which is commonly sold in the metropolis. If alum be omitted the bread has a slight yellowish grew hue . . . .

Bailey (1975) states that in order to achieve whiteness bakers of the times added not only alum but ammonium carbonate, magnesium

carbonate, zinc sulphate, plaster of Paris and pipe-clay. Nonetheless thirty years on in 1850 the practice of adding chemical whiteness was still in vogue when "The Lancet" made another exposure. "The Lancet" exposure was to set in motion medical and chemical controversy which still rages today, the history of which has been well charted by Drummond and Wilbraham (1939).

Considerable analysis into the properties of bran was carried out by a variety of scientists, doctors and nutritionists between 1820 and 1914, the results of which found that although it contained more cellulose than white flour, it also contained more protein, fat and minerals. The indigestible cellulose could not be separated out without removing the proteins, fats and minerals associated with it. The list of English, German and other scientists involved in this research included Millon, Moleschott, Lawes, Gilbert, Von Liebig, Poggiale, Meyer, Rubner, Menicanti, Prausnitz, Blyth, Brunton, Tunnicliffe, Romberg, Plagge, Leggin and Bischoff. They all had to agree that white bread contained more protein and more calories than brown bread. In 1906 Hutchinson appraised the evidence to proclaim:

> It is often concluded that wholemeal bread is preferable to white because it is richer in protein and mineral matter, and so makes a better-balanced diet. But our examination of the chemical composition of wholemeal bread has shown that . . . even were it the case, the lesser absorption of wholemeal bread, which we have seen to occur, would tend to nullify the advantage . . . . There is therefore no justification for recommending the use of wholemeal bread by growing children or nursing women. On the whole, we may fairly regard the vexed question of wholemeal versus white bread as finally settled and settled in favour of the latter and had due regard been paid to the behaviour of bread in the intestine instead of merely to its chemical composition, the Bread Reform League would probably have never come into existence.

In 1909 Ingle pointed out that although a much higher proportion of minerals existed in bran than white flour, the ratio of phosphorus to calcium in bran was unfavourable for bone formation and contrary to popular opinion, bran was not well adapted to promote bone formation and nutrition.

Despite a series of experiments on a variety of animals with conflicting results, short term digestibility experiments on human beings confirmed that proteins and metabolisable materials were less readily absorbed from brown bread than white and therefore that white bread had a greater nutritional value than brown, per unit weight. Extensive research sponsored in the early twentieth century by the American Department of Agriculture, also supported these findings.

However, the controversy does not end here. In the 1920's, nitrogen trichloride, commonly referred to as agene, came into widespread use both here and in America. Its function was not only that of a bleaching agent but more importantly that of a bread improver which speeded up the process of maturing. In 1947 a report by Sir Edward Mellanby demonstrated that dogs fed with high agene bread over a period developed canine hysteria and later some doctors made unsubstantiated claims that agenised flour was responsible for human nervous disorders, stomach ulcers, coronary thrombosis and fertility degeneration, according to records referred to by McCance and Widdowson (1956).

Apparently only one documented case of human allergy to agenised bread exists, but enough doubt on the effects of agene caused the United States to abandon its use as a bread improver and Britain did likewise in 1955.

Since the remainder of this summary is mainly concerned with the extraction rate of white flour and the use of additives, it is perhaps expedient to remind the reader that whereas wholemeal

flour, by definition, contains all the wheat grain, white flour rejects part of the wheat grain in the milling and refining process and is often referred to as say, of eighty per cent extraction rate, meaning that eighty per cent of the original wheat grain has been retained and twenty per cent rejected.

In theory, the lower the extraction rate the smaller the proportion of vitamins and nutrients, since the bulk of the grain (the endosperm) consists of starch granules. However by careful control over the milling processes it is possible to retain parts of the grain with their constituent vitamins that otherwise would be diverted into the bran stream to be used as animal foodstuff. Pre-1939 the majority of British bread employed flour of between seventy and seventy-two per cent extraction rate, which although popular among both bakers and consumers was feared by some nutritionists to be deficient in vitamin B. In 1940 in response to a suggestion by Sir Charles Dodds, a leading food scientist, the Government announced a policy of enrichment and by 1942 synthetic vitamin B_1 was being added to about forty per cent of Britain's white flour.

Following a recommendation of the Medical Research Council, the Government actioned in March 1942, the raising of the extraction rate to eighty-five per cent giving rise to the so-called "national" flour. This increase was claimed to be justified by the need to conserve supplies of imported wheat against shipping losses caused by the war and also by the need to maintain nutrition levels on a restricted war-time diet.

Whilst not brown in the accepted sense, bread made from this "national" flour was several shades less white than the bread to which the public were accustomed and naturally caused many undeserved complaints to be directed at the bakers. A further source of undeserved complaints arose from the knowledge that chalk was being added to bread flour but this was in fact done

by Government order on the advice of the British Medical Council to counteract the possibility of calcium deficiency caused by the increased quantity of phytic acid in high extraction flour.

It was to be 1953 before the new Flour Order allowed production at any extraction rate with the stipulation that where this was below eighty per cent, synthetic nutrients were to be added to restore the content of vitamin B_1, nicotinic acid and iron to the eighty per cent level. However, because pure white bread was unsubsidised and because bread made from subsidised "national" flour apparently gradually got whiter and whiter, by the end of 1955 pure white bread formed only 0.8 per cent of total consumption. Suspicions were confirmed in the "Report of the Panel on Composition and Nutritive Value of Flour" (1956) which found that:

> Subsidised national bread was being made from a flour containing significantly less vitamin B_1, and slightly less nicotinic acid and iron than was contained in the seventy per cent extraction flour used to make unsubsidised bread

In short, with or without Government approval, the public was getting white bread at a subsidised price.

To the delight of the anti-white bread lobby one of the main tasks of this Panel (led by Professor Sir Henry Cohen and constituted by the Government) was to investigate what differences in nutrititive value existed between "national" flour, enriched white flour and unenriched white flour. They were however to be disappointed with the Cohen Panel findings which stated that bread made from either eighty per cent extraction or seventy per cent extraction enriched flour, was an excellent food. Furthermore that the seventy per cent enriched flour gave a more certain cover against possible deficiency of the three token nutrients with well recognised deficiency states. As to the popular appeal of white bread, the Panel stated:

> The Panel is impressed by the evidence for the demand for white flour and white bread . . . . Finally the public prefer bread and cake made with the whiter kinds of flour. The Panel believes that the pressure for a flour whiter than a true 80 per cent is strong and it is this which has led to the acknowledged infringement of the Flour Order 1953. There is a risk, the industry claim, that if people can obtain only bread made from 80 per cent extraction flour they may eat less bread and more of other manufactured foods which may not be so nourishing.

Many attempts were made by the brown bread advocates in Parliament, newspapers and medical journals to discredit the Cohen Panel, without success.

A further setback to the beliefs held by many doctors, nutritionists and some other scientists about relative nutritional value of various types of bread occured in 1954, following a series of tests on children in Germany conducted by the British scientists, Professor R. A. McCance and Dr. E. M. Widdowson. The children aged three to sixteen were fed for one year on diets including large quantities of bread made from flours of extraction rates of 100 per cent whole wheat, seventy per cent unenriched, seventy per cent enriched with aneurin, riboflavin, nicotinic acid and iron to 100 per cent levels and ditto to eighty five per cent levels. Each group of children was restricted to bread made from one of these four flours. Contrary to many widely held beliefs on this issue, the report stated:

> no differences either in growth or health could be detected between the groups of children eating the various kinds of bread; secondly all the children did remarkably well on these diets which by commonly accepted standards would be considered very poor.

These experiments were an in fact remain possibly the most comprehensive tests carried out on human beings. They indicated

that past misconceptions had been due to the use of animals and diets bearing no relation to the human reality. McCance and Widdowson do themselves state what is perhaps the most telling comment on the brown bread protagonists:

> In pressing for a brown loaf these groups have been activated by a desire to benefit mankind based upon their emotional reactions or upon evidence, which has been scientifically unsure . . . . Anything which threatens to make an adult change his beliefs, particularly if he has expressed them openly, is disturbing to him and there is certain to be resistance among the health minded to any evidence that white bread may be as nutritious as brown.

This was not to be the end of the controversy. In fact McCance and Widdowson's statement might well now be considered predictive of one of the more modern published assaults on white bread, namely the T.A.C.C. Report (1974). According to the Flour Advisory Bureau, none of the eight members of the research team were medically qualified but despite this reported on medical matters. Whilst not wishing to take sides, reference must also be made to the Mintel report (August, 1972) which commented on the T.A.C.C. report as follows:

> . . . It is more reasonable to take the results of the public's buying habits as indicating that most people quite like mass-produced white bread than to take any notice of people like the T.A.C.C. whose research into consumer complaints for their recent publication "Bread" ended with just one quote from a consumer, a farmer who lived alone and baked bread for his dog - hardly a typical consumer!

Nevertheless, the T.A.C.C. report cannot be dismissed so lightly. It received extensive coverage in the national and provincial press and was considered a serious enough matter for the Flour Advisory Bureau (F.A.B.) to issue a detailed defence, circulated to editors of all newspapers and magazines, having already

published articles on the T.A.C.C. report or likely to enter the debate. For those readers interested in the details of this controversy, the complete F.A.B. defence is given in the appendices to this study.

The great value of T.A.C.C.'s report as far as this study is concerned is that it loses no opportunity however slight, to add weight to its anti-British standard white bread, anti-British baking industry arguments and therefore constitutes in summary form perhaps the most comprehensive and certainly one of the most modern chronicles of this long-standing controversy. This strength is probably, as so often happens, also its greatest weakness, since by employing all arguments, the T.A.C.C. report renders itself open to counter-criticism. It is not the intention of this work to involve itself in this particular debate in detail. To so do would unfortunately take too much of the restricted space available.

However, a summary of the "Sunday Times" (18.11.73) own summary of the T.A.C.C. report seems appropriate. In the event this article was published some six months before the T.A.C.C. Report reached print in book form and the "Sunday Times" put five of the T.A.C.C.'s key charges to spokesmen for the bakery industry with the following results:

> KEY CHARGE 1 - ADDITIVES The social need for chemical additives to increase the freshness and whiteness of bread and aid fermentation has not been proved. Two chemicals, namely chlorine dioxide and potassium bromate (the latter in one per cent concentration in bread being blamed for 600 cases of poisoning in Johannesburg) have been the subject of British Government calls for proof of safety.
> INDUSTRY REPLY We are going to spend £100,000 on testing the safety of chlorine dioxide but to date have given priority to research into potassium bromate. The white loaf that stays fresh longer is "what the consumer wants".

KEY CHARGE 2 - NUTRIENTS Two of the twenty-five nutrients which are removed in the refining process, namely iron and calcium and which the industry is legally bound to add back, have doubtful nutritional value. We probably get enough calcium from other sources than bread. It seems unlikely that people need the extra supply of iron which in its present form is too coarse to be assimilated in bread. The other two nutrients which by law have to be added back, namely thiamine andniacin are "far too complex for anyone to know the answers about"
INDUSTRY REPLY A British National food survey in 1960 found calcium deficiency in larger families. Whether iron in bread is in fact absorbed by the eater is a medically moot point. There is certainly a need for iron "because a large number of women are anaemic due to iron deficiency". So far as thiamine and niacin are concerned it is the Government and not the bread industry which decides.

KEY CHARGE 3 - BRAN FIBRE Bran is removed during refinment of flour for white bread. Bran is the roughage which helps to overcome constipation and absence of this fibre contributes to diseases of the intestine.
INDUSTRY REPLY The public wants a white loaf and a long-keeping loaf. The wholemeal loaf (it contains the whole of the mill grain - the bran, the wheatgerm and the flour) does not keep well. Why make out a special case for the bran content in bread? There is bran fibre in other foods, such as fruit and vegetables.

KEY CHARGE 4 - WHOLEMEAL The customer has not been sufficiently educated to the differences between a wholemeal loaf, wheatmeal, brown, wheatgerm and Hovis.
INDUSTRY REPLY Under a law which came into force in January 1973 the wrapper must clearly state what kind of bread it is (Wheatmeal or brown contains eighty to ninety per cent of the original grain which means half the bran is included: Hovis and wheatgerm consists of a mixture of white flour and at least ten per cent of processed wheatgerm, with the bran removed).

KEY CHARGE 5 - RESEARCH One third of the baking industry's research into the nutritional aspects of bread is paid for by the taxpayer, through a Government grant - yet the Government has only four representatives on the Flour Milling and Baking Research Association Committee compared with 25 members representing the bakery industry. Reports

issued by the association keep on emphasing the "defensive" nature of its research work so that the association, in effect, isolates itself against criticism.
INDUSTRY REPLY The proportion of Government to industry members is irrelevant. "We do our work without fear or favour. Some of our research may please a particular firm, but sometimes it will do the opposite."

When in fact the T.A.C.C. report finally reached publication on Friday, 10th May 1974, Elinor Goodman of "The Financial Times" articled part of the Flour Advisory Bureau's (F.A.B.) defence. F.A.B. pointed to the fact that T.A.C.C. admitted 'unashamed bias' in interpreting its information from the point of view of the health and economic interests of the consumer. F.A.B. also claimed that the report contained a number of factual errors and that none of the authors appeared to possess any medical qualifications. The Bureau denied that concentration of market power into the hands of the big baking groups had led to higher prices and ascribed these to rising wheat, wage and fuel costs. As to the bland taste of bread, F.A.B. said that the British public preferred white bread and efforts to increase sales of brown bread had not been successful.

It can be seen that the controversy still rages, the ploys of attack and the means of defence seem well rehearsed and presumably only future objective scientific research will break the present deadlock of unproven arguments. In the meantime some ninety per cent of the general public continue to consume white bread. Individuals must come to their own conclusions on this particular category of controversy based upon the available evidence to date.

2.4 CONTROVERSY CATEGORY 3

- that concerned with political interference in the British bread industry by various Governments

There are a limited number of ways in which Government can control an industry. If one examines the make up of any manufacturing enterprise it comprises of four basic activities namely production, distribution, marketing and of course the financing of these three functions. The Government can interfere either directly or indirectly in all four of these basic activities; It can impose advertising, packaging and price controls all of which affect marketing: It can, through the Monopolies Commission, discourage both vertical and horizontal integration so as to constrain both production and distribution; it can impose import/export restrictions to limit both production and marketing; it can use tax and credit changes to affect finance and through finance, all other three basic activities; finally Government can impose the ultimate sanction of nationalisation and thus take complete control. In the case of the bread industry, Government has employed most of the above means plus a few more, in its efforts to control the industry in what it considers to be "the national interest". Sheppard and Newton (1957) even refer to suggestions that bread shortages were the cause of the fall of Rome, the French Revolution and the 1917 Russian Revolution. Certainly in this country, evidence suggests that bread was responsible for the rise and fall of Robert Peel.

Since most of the political interference in the British bread industry has been referred to previously, it is felt necessary only for the sake of completeness here to chronicle the main events:-

1. Governmental price controls on bread have been in almost continuous operation since the first Bread Assize in 1206. Direct price fixing was temporarily abandoned in favour of the Corn Laws, from 1815 until 1849. Until 1970 the industry has had to apply to

the National Board for Prices and Incomes for permission to increase bread prices. In September 1974 Prices Secretary Mrs Shirley Williams sought to protect Government bread price subsidies from benefiting anyone other than the consumer, by bread prices Orders, laying down maximum selling prices for different categories of loaf in different areas; by limiting the maximum resale discount to 22½ per cent; by prohibiting sale or return, "bakers dozens" (thirteen for twelve equals one loaf free) and by taking into the discount calculation a whole periphery of practices, such as the provision of in-store demonstrators by bakers, which could possibly be said to contribute towards a lower trade price.

2 Import restrictions and levies on wheat have been used by Governments to control bread production and prices from the time of the Corn Laws in 1815.

3 Apart from wheat import restrictions, Government interferes with the constitution of British bread by laws enforcing minimum nutrient/vitamin contents, dating from 1940.

4 Bread's weight and sale has been subject to Government regulations for over 700 years. More recently the "Trade Descriptions" Fair Trading Act, 1973 regulates the descriptions stated on the wrappers.

5 Rationing was imposed from 1946 to 1948 when it was replaced by a system of restricting deliveries of flour to bakers.

6 In 1957 the British baking industry or more properly its Federation was referred to the Restrictive Practices Court. The industry was investigated four times in the five years from 1968, by the "Prices and Incomes Board." In 1973-74 the Monopolies Commission investigated the activities of the big three plant bakers (Allied, Rank and Spillers) resulting in the termination in 1976 of more than seventy collusive agreements, operated between 1968 and 1974.

The above is not intended to constitute an exhaustive list of Government interference and associated controversy but rather to be only indicative of the scale and type of intervention. Both

Maunder (1970) and T.A.C.C. (1974), two of the recently published works on bread of any size, exhort increased Government control and interference.

2.5 CONTROVERSY CATEGORY 4

- that concerned with charges that the British baking industry and in particular the large plant baker does not make proper or adequate supplies of certain varieties of bread available, in accordance with consumer demand.

The controversy referred to here is not simply that of white versus brown bread previously dealt with under separate headings of that generated by the general public and that generated by scientific research. Neither is it directly concerned with political interferences. It is however concerned with an increasing number of attacks largely by the media which carry the more subtle inference that the public are not getting the types of bread from the British baking industry that they would really prefer. The attacks centre on mass-produced bread which really means that made by the plant bakers as opposed to the Master Bakers (those baking and selling bread on the premises).

Since this area of controversy has not been chronicled by previous authors, it is felt necessary to establish a case.

There is no entirely satisfactory definition of the much-used term "plant baker" and just how large is a "large plant baker"? An oven of any size is still an oven and any place where bread is baked can be said to constitute a bakery. Many small non-plant bakers produce far more bread than they can sell on their premises and thus resort to van deliveries both to nearby shops and

local housing estates. Sheppard and Newton (1957) attempt to differentiate between a "family" baker and a "plant" baker as follows:

> A typical family baker probably has one shop and two vans and makes anything from fifteen to twenty sacks of bread a week. The production is carried out by the master baker himself with the assistance of two or three employees. If his bakery is a modern one, the bread will be in a peel oven fired by gas or electricity. His machinery will consist of an electric dough machine . . . and possibly a mechanical divider . . . . He may also possess a small machine for slicing and wrapping loaves . . . .
>
> The modern bread factory offers a sharp contrast, although the breadmaking process itself will be basically the same as the one used in the smaller bakery. In the plant bakery . . . there are few workers. Machinery is employed to the maximum . . . the process is almost entirely automatic . . . .

Clearly this explanation is unsatisfactory. Also somewhat confusing is Sheppard and Newton's analysis of the emergence of plant bakers as previously defined:

> The emergence of the plant bakery as a major force in the industry is due to factors quite different from those which have usually benefited the mass-producer in other industries. The multiple tailor simply because they were able to produce and sell suits much more cheaply. It is, of course true that the plant baker can make bread more cheaply than the family baker . . . . Neither did the question of quality come into it; in fact many people contend that the family baker makes a better loaf than his multiple competitors . . . . The plain truth is that the development of plant bread baking was helped more than anything else by the thoroughly unfair system of subsidising bread . . . . Most small and medium-sized bakers . . . were unable to make anything like an adequate profit - but the plant bakers with their lower unit costs were able to make a reasonable profit. As a result many smaller bakers gave up making all but fancy and proprietary loaves and bought the bulk

> of their bread wholesale from multiple firms. Others shut their businesses or sold out to one of the big firms. And in every case this meant more customers for the plant bakers. At the same time the big concerns, with their plentiful capital, conducted intensive sales campaigns as a result of which almost every grocery shop in the land was persuaded to sell their bread . . . .

In concluding that plant baker development would not have been so rapid without bread subsidy and price control it would seem that Sheppard and Newton failed to take proper account of the following factors:

1 Technological progress would naturally have given rise to the emergence of bread baking plant, the capital cost of which would be beyond the means of the small baker and the production capacity of which would lie far beyond both his requirements and ambitions.

2 The development of high speed slicing and wrapping machines of large capital cost not only added convenience to the consumer but also afforded an hygienic means of grocers entering into bread sales.

3 Drucker (1961) states that the objective of any organisation is to survive. The big millers, reliant upon bakers for a large proportion of their flour sales and threatened by the actions of Allied Bakeries understandably secured flour outlets by acquiring bakeries, the larger the better. The competition between millers in the bakery acquisition race gave rise to extremely attractive offers which any small businessman would find difficult to resist.

4 The growth of multiple or mass manufacture and multiple or mass distribution is, in any industry, coincidental and inter-dependent. On the contrary it would be more surprising had grocers not wished to sell bread, it being a "magnet" line normally sold at least twice weekly to the same customers. With the advent of self-service could anyone conceive multiple grocers not selling wrapped, sliced and branded bread when they have in fact entered into the far more difficult sales of meat and greengrocery?

In order to avoid similar confusion it is proposed to use the term "large plant baker" hereafter as meaning any one concern using one or more plants individually capable of producing a minimum of twelve sacks of bread per hour (about 2640 large loaves). This definition will take in the three largest plant bakers, Rank, Hovis, McDougall (RHM), Allied Bakeries division of Associated British Foods (ABF) and Spillers-French Baking Ltd (SF) plus about fifty smaller independent regional bread baking concerns, which together accounted for over eighty per cent of all bread sales, according to "The Times" (11.12.1974).

There are some difficulties in establishing the existence of controversy relating to the allegation that the bread produced by plant bakers is not of the type that the public would really prefer. Proof of such controversy would normally be found in records of heated debates between the general public or its spokesmen and the plant bakers. Whilst there is ample evidence of attacks upon British bread (other than the white versus brown controversy), the plant bakers, themselves have to date remained somewhat reticent in defence. Also since the allegations have but recently increased in frequency, they have not yet been chronicled in books but instead appear in newspaper and magazine articles or letters and form part of television or radio programmes. Since the matter can hardly be regarded as headline news, the evidence is somewhat diffused and difficult to collate. No one individual researcher can read all press media, watch all television programmes or listen to all radio broadcasts and is therefore reliant upon the research units (where they exist) of the media themselves for data.

An enquiry to the Press Officer of the Flour Advisory Bureau Mr. L. J. Burke, received a helpful reply which included the following remarks:

> As I mentioned to you, the criticism is rarely of a headline nature but is niggling and consistent. The enclosed cutting reprints are just a few

examples of what I mean but I am sure you yourself are aware of the form that criticism of the standard loaf takes. Occasionally bread does receive heavy weight treatment and you will recall that this was the case when the T.A.C.C. report was released to the press (The Sunday Mirror references in the attached list are examples of this and I am enclosing also, copies of relevant Sunday Times cuttings). Apart from the printed word there is also radio and television to consider and we frequently find the standard loaf being criticised in a variety of programmes. Very often the link-man or interviewer starts the ball rolling with unfavourable comments.

Whilst only fourteen cuttings were received from the Bureau an offer of further help was made. However, these fourteen cuttings when added to the writer's own considerable but not exhaustive collection, do, it is felt, comprise sufficient evidence to establish the existence of the field of controversy in question, as far as the press is concerned. In order to ease assimilation, the evidence is presented in chronological order under identifier headings of "Attack" and "Defence". The defensive items have been offset slightly to the right. Attack is used in the sense of being hostile towards plant-produced bread or plant bakers. The same source is quoted under both headings where it can be seen to be objectively presenting both sides of the argument.

It is emphasised that the evidence presented is merely a selection from the press, intended to illustrate the breadth of controversy in this category over the past ten years.

ATTACK - STEVE McQUEEN IN THE SUNDAY EXPRESS - ex BISCUIT MAKER AND PLANT BAKER, FEBRUARY 1966, p. 132:

I watch what I eat. Organic vegetables, brown flour. It's no good eating white bread. They bleach the flour white so the bugs won't touch it and if the bugs won't touch it, why should we?

DEFENCE - THE GROCER FEBRUARY 26 1966, p. 36:

The survey was carried out on behalf of RHM, Spillers, C.W.S. and A.B.F. In England, Scotland and Wales

three out of every four housewives are now buying sliced bread, varying from 94 per cent in Scotland to 61 per cent in Wales. The idea that only housewives who go out to work buy sliced bread is disproved by the survey. The figure for working housewives is 80 per cent as against 70 per cent for non-working housewives. During the interview housewives were asked which qualities matter a lot to them in bread with the following results:

Freshness	88 per cent
Hygiene	84 per cent
Taste	84 per cent
Nourishment	78 per cent
Availability	69 per cent
Consistency	58 per cent

BISCUIT MAKER AND PLANT BAKER, 'THE BREAD HOUSEWIVES CHOOSE', MARCH 1966, p. 178:

The survey was undertaken on behalf of RHM and figures from it are on a new commercial film "Housewives Choice" available to various institutions and organisations, such as the Women's Institute etc. It shows that sliced and wrapped bread is the housewives' favourite today . . . that what housewives mostly demand is not cheapness but firstly freshness, then hygienic wrapping and presentation. Next comes taste, nourishment, availability and consistency.

ATTACK - WHICH? 'BREAD', AUGUST, 1966, pp.264-268

Dear CA . . . That the sliced loaf is in any normal sense of the word "tasty" I would utterly refute . . . . As for texture, it is excessively glutinous, flabby and damp; and when toasted becomes tough and leathery immediately it cools. It must be very indigestible . . . .

However the fact remains that bakers here are allowed to use chemicals which are not allowed in some other countries . . . . The sooner there is evidence that all the things which bakers can put in our bread are safe, the better . . . . And you are probably all right if you live in any large town or city where you have a wide choice of shops . . . . Large supermarkets had, on the whole, the best choice of sliced, wrapped bread; small bakers and bread shops, the best choice of unsliced loaves-in one bread shop, we found 15 different

sorts of "fancy" shaped white loaves. Small grocers usually had a rather limited selection . . . .

But letters from a few of our members suggest that things may not be all that happy if you live in a village. The picture they outline is of the small bakery closing down or being taken over by one of the big bakers. They then find it virtually impossible to get anything but wrapped, sliced bread which they may not always want.

ATTACK - THE TIMES 'MERRY-GO-ROUND', 8.8.1966, p.11:

Flabby and Glutinous Sandwiches - toast that is leathery and tough . . . these frequent descriptions of our daily bread do not tempt the tastebuds to ask for more. Even more alarming and depressing is the formidably long list of "added chemicals" including bleaching agents that can be put in our bread without breaking the law . . . . It is also noted that prices of the main five brands went up at virtually the same time. It seems the companies are not interested in increasing trade by competition . . . .

ATTACK - THE TIMES - 'WEEKEND AT HOME', 27.8.1966, p.11:

COOK'S TOUR OF BREAD COUNTERS. "They can have any colour they like as long as its black" was the promise made by Henry Ford I to potential buyers of motor cars. Today, bakers (with nearly 75 per cent of the market controlled by four big companies) make a similar promise . . . that you can have any loaf you like so long as its white, wrapped and sliced!

In theory, you can get bread in dozens of shapes, shades and sizes. In practice, as more small bakers go out of business, selection grows more difficult, and customers on the breadline take the line of least resistance, which is the sliced, white, wrapped bread found ubiquitously on bread counters everywhere. Bread like most things is what you make it - or bake it. The wheat is milled and the germ and bran extracted . . . but what remains is lacking in some essentials. The Government, in what it fondly believes are the interests of human nutrition, makes the supplier replace these synthetically . . . .

More emotion than realism usually informs attitudes towards bread and it is as well to remember that no one has actually died of eating it . . . .

It is ironical that the more you leave in a loaf, the more it costs; the highly sophisticated wrapped, white sliced bread costs 1s. 4d. to 1s. 5d., for a 28 oz loaf, while natural wholemeal wheat germ or rye bread may cost 1s. for half that amount . . . . Even people who make their own loaves from whole wheat or a high extraction flour like Prewitts' of Horsham or Allinsons' do not find much price advantage, though they say they gain in taste, "keepability" and nutritive value . . . .

Some of the largest millers have been insisting, perhaps for too long now, that the British require only paper-white bread in convenient form. The decline in overall bread sales, however, suggests that some people at least may want more flavour, a longer storage life, and more variety.

As always, it is up to the consumer to decide whether it is worth paying extra for the taste, texture and aroma of fresh bread, or whether to put up with the neatly wrapped plant loaf.

DEFENCE - BISCUIT MAKER AND PLANT BAKER 'ANOTHER LOOK AT BREAD', SEPTEMBER 1966, p. 643:

As mentioned overleaf, bread has been in the news lately and not only from the packaging point of view. A survey conducted for Women magazine has reported regional preferences and expenditure on bakery goods and some of the findings are reviewed in this issue.

During the World Cup series it may be remembered that the Press reporting the flying-in of a special supply of West Germany bread for the players from that country. In this case the happy outcome, however, was that the bread did not finally go to the teams London hotel; instead it was sent to the R.S.P.C.A. animal hostel at London Airport. An official of that Association was pleased to receive the bread and was reported as saying "the West Germans are obviously very satisfied with our English bread"

In its look at bread "The Times" correspondent remarks initially on the present position that "you can have any loaf you like so long as it is white, wrapped and sliced". We appreciate the facetiousness although the facts disprove its implication. Similarly, we certainly accept the first part of the following "Times" comment but for the latter part we may perhaps remind readers that by tradition, the summer months are regarded by the Press as the silly season

> "More emotion than realism usually informs attitudes towards bread, and it is as well to remember that no one has actually died of eating it"

Meanwhile as the surveys show, 73 per cent of housewives continue to eat sliced and wrapped bread, and will confess that they could not live without it.

The report on "Which" is reasonably objective and balanced, although its opening paragraph quotes a letter from a reader who described the texture of today's bread as excessively glutinous, flabby and damp, and remarks that when toasted it becomes tough and leathery immediately it cools. The correspondent adds that it must be very indigestible. To judge from letters like this, remarks "Which?" some people intensely dislike modern mass-produced bread. We are not suprised: in fact we ourselves know a lot of people who intensely dislike Mr. Wilson, cucumbers, modern 20-storey office blocks, scampi, and grilled ham served with pineapple. There is no accounting for personal tastes.... "Which?" refers to a survey carried out some time ago on behalf of RHM.... and which confirmed that 73 per cent of housewives buy sliced and wrapped loaves. And they buy it by choice since there is no compulsion involved. "Which?" concludes that it looks as if many people are prepared to accept modern sliced and wrapped bread: we conclude that 73 per cent do accept it. Indeed London housewives alone spent £1 million every week on it. What of the taste of todays bread? The woman correspondent of a national daily in this country referred emotionally to it as "filthy". "Which?" more objectively tried a taste test between plant bread and small bakers' bread

on 100 people. Many of these, it reports, detected a difference in taste but quite a lot coundn't. And those who did, it adds, used the word taste to mean texture (its chewiness) rather than flavour.

"Which?" publishes photographs of 35 different sorts of bread bought within half a mile of Piccadilly Circus, with loaf names and prices. At a conference arranged some time ago in London, the Flour Advisory Bureau did rather better and succeeded in buying, on the morning of the conference, samples of almost 100 different loaves within one mile of Piccadilly Circus. Bread in our age (probably more than any one other food product) is the target for a great deal of emotional nonsense, and critics become most emotional and nonsensical when they talk of "chemicals", a word which, to the layman, appears to suggest potassium cyanide or strychnine or worse.

If the same layman were told that natural fat and natural flour, and many other natural substances were in fact highly complex organic "chemicals" he might be surprised - if his emotion allowed it.

ATTACK - FOCUS (JOURNAL OF THE CONSUMER COUNCIL) ex THE GROCER, 'FLOUR POWER', 28.10.1967, pp 80-84:

What is it that you eat every day, supplies you with a fifth of all your protein needs, has been around almost unchanged since time began, and yet costs you only 2s. 2d. a week? No prizes for knowing this could only be bread. Nevertheless, it seems to be a statistical fact that, as a country becomes more affluent, the popularity of bread declines....

Things will probably look up for bread makers if people can be seduced away from their favourite type of bread - the standard white loaf. Some bakers make up to 60 different types of bread, all with fascinating shapes, sizes, flavours and names. But how often do you eat bloomers, French sticks, coburgs, Vienna loaves?....

For the bread manufacturers of course our lack of self discipline is a blessing and it is difficult to blame them for exploiting it. Not only is their market declining but the product itself has curious characteristics.

To begin with bread has been around too long. Everyone knows what it is; even a new type is not likely to brighten its image in the eyes of the public. The only thing the housewife really wants is to buy her bread round the corner and to buy it fresh.... Increasing the shelf life of bread must now be the most urgent task in the industry, and the onus to solve it lies on the shoulders of the newly formed Flour Milling and Baking Research Association.... You could also view it in context of the money manufacturers spend on advertising bread now running at £1,500,000 per year.

DEFENCE - FOCUS (JOURNAL OF THE CONSUMER COUNCIL) ex THE GROCER 'FLOUR POWER', 28.10.1967, pp 80-84:

....But the prices of breads other than standard white loaves do not come under the same duress. They are known as "speciality" bread and include all the browns, such as plain brown, wholemeal, Granary and Hovis; milk breads; rolls and protein breads.... Speciality breads are almost always sold at a premium price which means that their profit margin is far more attractive to the baker than the miserable 3% (for the standard white loaf) shown here.

And there is some evidence to show that consumers too, are being persuaded to change to the more expensive breads.... Some research it is true is going on in the attempts to improve bread making in quality and efficiency.

Already, a major problem, that of the long bread making process has been solved....

But their resources are meagre.... A bare £250,000 is not much to play with.... But wouldn't any firm selling a product so similar to competing products be more generous with its marketing men than with its production team? And so long as we treat our bread as a Cinderella food, the situation is not likely to change.

ATTACK - DAILY TELEGRAPH, 'BRITISH BREAD ON THE SPOT', 8.1.1972, p.2:

BRITISH BREAD ON THE SPOT - A survey of British bread is to be made by the Housewife's Trust following members' complaints. One of the most persistent is that in many areas only crustless, sliced and packaged loaves can be bought.... Criticisms of the packaged loaf are that it goes hard "without exactly going stale," that it is doughy and tasteless, and sometimes even that it is sold mouldy.... Housewives' complaints are supported by Mr. Morris Zimmerman, director of the National Association of Master Bakers.... which represents Britain's small bakers. With a slightly increased membership of over 4,000 in 1971 he says "I wouldn't claim a massive swing, but the trade is in process of a revival. The housewife can get a good crusty bread, but she will have to seek out her smaller baker."

ATTACK - THE BRITISH BAKER, 'VIEWPOINT', 13.4.1973, p.11:

There is little comfort for the baking industry in the last report of the national Food Survey Committee. It reveals a continuing downward trend in bread consumption to an all-time low

.... the decline says the report is common to both white and brown bread, with a slight increase in purchases of speciality breads....

It can hardly be due to a lack of advertising particularly of branded breads. The Flour Advisory Bureau too, continues to preach the virtues of bread as an essential health giving part of the diet. Does the fault lie with the product itself? For too long there has been a certain complacency among some bread bakers, an assumption that the bread they produce is what the public wants. But if this is so why is consumption going down?

There is plenty of evidence that the man who makes a good quality crusty loaf can sell all he produces....

So it would appear that the solution to the problem of falling consumption lies in first finding what the public wants. But who is to do this urgent and important job of work? Is it something that could be undertaken by the Flour Milling and Baking Research Association?

ATTACK - DAILY EXPRESS, 11.5.1973:

Although there is a considerable range of different loaves in the shops, the British have a clear

favourite as the table shows.... The table horrifies some people. Christopher Driver Editor of the Good Food Guide comments:

"What I never like is the kind of bread which is eaten, usually without choice, by the vast majority of people - that sliced and plastic wrapped cotton wool stuff which may be just as good for you but which tastes and feels horrible"....

And it is a fact that the number of small independent bakeries, has fallen considerably - although there is still a choice available nearly everywhere in Britain....

.... Miss Barbara Cartland told me: "The trouble with white bread is that they take out 27 natural vitamins and put back seven synthetic chemical vitamins. I don't eat bread at all. I don't need it at my age. But of course, it is essential for children. I only recommend bread made from stone-ground, compost-grown flour"

What about taste? The controversy was summed up by Dr. Greenwood in a striking phase: "The flavour of bread resides in the crust." This means that for the tastiest Bread you must pick the loaf with the crispiest crust. But it won't last so long and won't cut or slice as easily as other less crispy varieties.

DEFENCE - DAILY EXPRESS, 11.5.1973:

Why then is the large white wrapped loaf so popular? For two reasons say the Flour Advisory Bureau experts:-

1 Because it stays fresh for several days. In contrast to the much praised French stick bread (baguettes)

2 Because it is convenient for sandwiches and toast

Nutritionally, it is a sensible choice. For like all bread, its contents are fixed by Government legislation. But Dr. Trevor Greenwood, director of the Flour Milling and Baking Research Association told me:-

"There is no basis for the emotionalism in the white bread/brown bread controversy. I speak as a scientist and the more we look into it, the more we find there is no nutritional difference" What of the belief that the white, wrapped loaf has a damp feeling because it is steam-baked? Another mistake

according to scientists at the Chorleywood research station. "Housewives sometimes get the impression that it is damp because the crust is soft. But this is necessary in order to cut the bread. If it were crisp, it wouldn't cut well. The only steam that goes into the ovens is at the beginning of the process. This is done to get a glazed finish on the crusted bread."

ATTACK - CO-OPERATIVE NEWS, 22.6.1973:

Looking at the newspapers recently one was struck by the amount of space which was devoted to the staff of life - BREAD

.... The blunt truth is that bread - despite what Mr. Christopher Child, the Baker's Union president may say - is too dear in Britain, and frankly, I do not think we should take very much notice of his statements that British bread is the cheapest in Europe.... What is really wrong in the baking industry today is that it is inefficient and it would give me much more confidence if the Bakers' Union was attacking this inefficiency and putting it right and ensuring the continuance of cheap food. Think again Mr. Child. What we want to see is real efficiency in the baking industry with automation and bluntly - less bakers. What we want to see is certainly less wasteful use of transport in the distribution of bread. This where real economies can come. Bread is delivered by plant bakers virtually in retail quantities, to some shops. I know of small corner shops in the town near to my home which have three and four different bakery vans outside their doors, delivery as low as two, four, six loaves from each. This is completely and utterly ridiculous and cannot be tolerated.

ATTACK - SUNDAY MIRROR, JEAN CARR, 'TAKING THE LID OFF BREAD', 15.7.1973, pp 10-11:

If you're reading this over the breakfast table, the odds are that within arms reach is a white, sliced loaf.... "The white, sliced loaf is what the housewife wants" say the big bakery groups. But is it really? Or have the bread bakers and ad. men created a demand for something the industry is geared to baking? Sunday Mirror enquiries show that many housewives are far from happy with crustless, wrapped bread. Come to that, do they really have a choice?

On Friday, the Government referred to the Monopolies Commission the pricing system and supply in the U.K. of wheat flour and wheat flour bread.

Britain's £450 million a year bread industry is largely controlled by three giants: Allied Bakeries, Spillers French and Ranks Hovis McDougall. They also own two thirds of the flour mills and their retail outlets. The numbers of corner-shop bakeries producing crusty, unwrapped bread and varieties like wholemeal, wheatmeal or rye has been reduced to around 6,500.

Today we begin a detailed investigation into the state of British bread....

From Mr. Maurice Frohn, consultant surgeon at London's Bethnal Green Hospital, who eats only wholemeal bread....

"The makers and the advertising men have sold the consumer white bread; I don't think it is fit to be given away"

For a second opinion listen to Professor Denis Burkitt, internationally known as a pioneer in cancer research and now working for the British Medical Research Council.... "we must educate people against the idea that white bread means pure, good bread"

Over to Professor John Yudkin, one of Britain's leading nutritionists;

"Instead of messing about with putting nutrients back in the white loaf, the Government should have subsidised the wholemeal loaf long ago and put a premium price on white bread".

Mrs. Janet Graham, Chairman of the Housewives's Trust -

"A good loaf is worth walking for. Most of the complaints we get are about distribution...."

Mrs. Joyce Mew, Chairman of British Housewives' League -

"A great number of our members have become so dissatisfied with supermarket breads that they now bake their own"

Master Bakers Ken Lawton of Holborn Bakeries Ltd., London

"The supermarket loaf doesn't taste of anything unless you plaster it with butter. It's too much bother for most people to buy freshly baked bread...."

To ensure her bread is as fresh when it reaches you as it is when it leaves her the Mother from Mother's Pride applies the squeeze test' in that well-known T.V. commercial. But does the squeeze really mean the bread is fresh? Master Bakers, the men who bake and sell their own bread will tell you that a fresh loaf should have a hard crust that is very difficult to squeeze....

Bosses of Britain's top bakers believe the customers place their priority on freshness. But unless you buy from a local baker, much of your shop bread is at least seven hours old....

In their efforts to get us to eat more bread and again with freshness in mind, Ranks introduced the Take 'n' Bake loaf - the partly baked bread which you pop into the oven to finish off. After spending £300,000 on launching it, Ranks claimed more than 1,500,000 sales in the first few weeks. But they've fallen so drastically that a spokesman told me "It now accounts for a very small part of our business. The novelty has worn off"

With bread like any other mass-selling product, the power of the ad men is vital. And in these days of convenience foods, the jingles obviously do call the tune.

DEFENCE - SUNDAY MIRROR, JEAN CARR 'TAKING THE LID OFF BREAD', 15.7.1973, pp. 10-11:

So what does the industry say? We took the complaints to the Flour Milling and Baking Research Association at Chorleywood, Herts.,

"We are devoting a lot of time on researching the bran arguments" said the Associations' director, Dr. Trevor Greenwood "The more we consider it, the less I am convinced"

A spokesman for Mother's Pride told me, "The squeeze test is fair. Housewives test wrapped bread this way. A freshly wrapped loaf has more moisture and is elastic, so that if they can squeeze it they know it's fresh"

ATTACK - SUNDAY MIRROR, 'HOUSEWIVES CHOICE - AND IT ISN'T SLICED FIRST', 22.7.1973, pp. 18-19:

Millions of housewives every day picked up a sliced white loaf and say, it may not be crusty or particularly healthy, fresh or cheap but it is convenient....

But the bread-knife is far from being on the scrap heap. The biggest surprise from the Sunday Mirror's special countrywide survey on bread is the indication that more than half of Britain's housewives PREFER anything but sliced, white bread.

We interviewed 1200 housewives of all classes representing a typical cross-section of the bread buying public. Asked the kind of loaf they last bought, 51 per cent said white, sliced. BUT allowing for the fact that many had bought more than one loaf, 58 per cent said they had chosen another kind of bread.

Take these percentages as a guide to the habits of all bread buyers in Britain - reckoned to be around 18,200,000 that indicates say the statisticians, that 9,385,000 families buy white sliced and 10,600,000 buy all the other varieties of bread.

So the Big Three concerns who bake more than two thirds of the nation's bread are wrong if they think their wrapped sliced white is what every housewife really wants.

Our survey sought the answers to these three questions:-

1 WHAT KIND OF LOAF DID YOU LAST BUY?

2 WHY?

3 WERE YOU SATISFIED WITH THE QUALITY?

We discovered that white, sliced bread is most popular with housewives in the 25-34 age group, closely followed by those between 16-24. Most customers come from working class families and since a third of the wives interviewed are themselves wage-earners, it is not surprising that CONVENIENCE tops their list of reasons for buying white sliced bread....

Are the wealthy as satisfied with the quality of today's bread? Give or take two per cent, either way, everyone seems to be happy with what they eat, whether it's sliced white or unwrapped brown. And no one seems to mind whether their particular loaf lasts longer than other varieties. Longevity in bread, it seems, doesn't matter a crust.

DEFENCE - SUNDAY MIRROR, 'BAKERS ANSWER BACK', 22.7.1973, p. 18:

Buying their bread is easier than getting Britain's baker bosses to talk about it. With some delays and some apparent reluctance, executives from the Big Three (Rank Hovis McDougall; Spillers French and

Allied Bakeries) agreed to a joint interview. Answers to my questions cannot be attributed to any group but to the men who bake more than two-thirds of our bread.

Q. - Since we are not eating as much bread as in previous years, do you think you are selling the housewife what she wants?

BAKERS: As in all industries where there is a declining consumption - but not necessarily declining efficiency - there is a daily urge to meet what the customer requires. We have to accept that carbohydrates have been under attack for many years. But there is a wide range of alternative eating available.

There are those who always say that bread is not what it used to be. They will nostalgically cling to the crusty loaf. The range of bread in small bakers' shops, as well as those of the groups, is much greater than ever. In the growing market of convenience foods there are always consumers looking for ready-to-eat products that have a bread content. We use market research to produce what the public want and we think we keep in step pretty well.

Q. - You say increased prices are due to shortages and soaring costs of wheat, but why must consumers always foot the bill? (In 1970 the Prices and Incomes Board, now defunct, criticised the industry for not cut-pricing bread)

BAKERS: We think the public should be told the value it is getting compared with other European countries. As to price-cutting, these may well have been uniform prices in 1970 but there aren't now. The grocer works on a margin. He may pass some of it on to the consumer or he may attract customers by deliberately under-pricing bread. But a woman doesn't go shopping for bread. It is the same as the old loss leader business of sugar.

Q. - If, as some experts say, wholemeal is better for us, why don't you spend as much money on promoting it?

BAKERS: Brown bread consumption in this country from 1939 has never varied below 6 per cent or above 8 per cent. Given the small demand we think we spend proportionately more on advertising brown than on white. As for advertising wholemeal, you don't advertise a generic term, only brands.

When the national loaf was subsidised during the war, there was also a national brown loaf but people did not rush to buy it.

ATTACK - SUNDAY MIRROR, JEAN CARR
'OUR READERS GIVE THEIR VERDICT ON BRITAIN'S BREAD - WE COULD USE A BETTER LOAF', 29.7.1973, p.19:

Sunday Mirror readers passed a resounding rate of no confidence in Britain's bread following our two-week probe into the bakery business. Our enormous postbag included letters from housewives, old age pensioners, bakers and medical men. More than 95 per cent agreed wholeheartedly with our criticisms of the bread industry.

Many readers attacked the quality of loaves supplied by the Big Three concerns which bake two-thirds of Britain's bread

. . . More readers complained that they had to buy mass-produced supermarket bread . . . .

"many of the most popular white loaves are no more than a doughy, soggy mess which makers claim we demand"

Many people complained that wrapped, sliced bread goes mouldy before they finish the loaf . . . .

The batch of letters we received from old age pensioners are the most revealing . . .

"Unless you are old nobody knows how to make a good loaf or what one tastes like"

"I used to bake nice crusty, cottage loaves in an old brick oven fifty-eight years ago. The smell was appetising beyond words. Now I travel two miles to get proper bread, tasty unwrapped and eatable"

. . . Finally . . .

"We got fed up with tasteless sliced bread four years ago so I started making my own wholewheat bread. Not only is my figure better and my health, but what it does for our sex life is fantastic. My husband says he will leave me if I stop baking it"

DEFENCE - SUNDAY MIRROR, JEAN CARR, 'WE COULD USE A BETTER LOAF', 29.7.1973, p.19:

We did get a cry of outrage from a Sunblest bread bakery worker . . . he wrote:

"Our bread is as fresh as can be bought anywhere in the world"

A similar response came from Mr. Stan Gretton, Secretary of the 50,000 strong Bakers' Union:

"The answer to those doctors who cry 'give us this day our daily unadulterated bread' is simple. Nobody would eat it. I eat only white bread and I have managed to survive for over half a century"

A Devon baker . . . told us:

"So called experts . . . are very often wrong. As to the white versus brown - people have a choice and should eat some of each"

In their own defence and arguing with our findings, is this statement from the Flour Advisory Bureau which represents the British flour milling industry:

"You report views from certain surgeons favouring wholemeal bread but they are personal opinions and not fact. Because bran relieves certain illnesses, to assume that it must be a lack of bran to have caused them is, without proof, wishful thinking. British bread is better nutritionally than many Continental breads . . . . Bread additives require Government approval. Research on them is time consuming and as yet, incomplete. Preference for white bread has been established throughout the ages. It is nonsense to suggest that demand has been created by advertising"

DEFENCE - BAKING INDUSTRIES JOURNAL, VOL. 6. No. 2 AUGUST 1973:

In its issue of July 15, 1973, the Sunday Mirror published the first of a number of special reports on bread under the heading 'Taking the lid off Bread' . . . .

Probably the most nutritious any most frequently bought food today contains the following chemicals, or "chemicals":
oleic and linoleic acids, calcium, iron, iodine, ascorbic acid, thiamine, riboflavin, pyriodoxime, biotin, niacon, pantothenic acid, sodium, potassium and a large number of amino acids, each with its own chemical name.

The food concerned is milk straight from the cow. The wheat grain straight from the field contains sodium, potassium, magnesium, iron, copper,

phosphorous flourine, manganese, riboflavin, nicotinic acid, thiamine and a large number of amino acids (each with its own chemical name) which make up wheat protein.

The hen puts into her natural egg chemicals similar to that which the cow puts into her milk.

So what? Would the Sunday Mirror like to take the lid off a churn of milk, or the shell off a hen's egg? . . . .

ATTACK - SUNDAY MAIL, ALEX SCOTLAND, 'THE GREAT BREAD FIDDLE', 23.9.73:

Do your family swear by Mother's Pride against Milanda? Do you prefer buying a Daisy Fresh loaf to a Reid's Sliced Square? Forget it, Mrs. Housewife, you're wasting your time. A Mail investigation this week reveals that these loaves all come out of the same dough . . . and so do many others. Rank Hovis McDougall - profits last year just under £24,000,000 - are putting the same loaf into nearly a dozen different wrappers . . . . When we confronted Rank Hovis McDougall, their spokesman was adamant, "We aren't attempting to deceive the housewife. There are differences in yeast fat and salt content". So we sent samples to Dr. G. R. Jamieson at Paisley College of Technology for analysis. The differences were so subtle his lab team can't detect them. . . . . Mother of four Mrs. Catherine Burke . . . said, "It's a scandal. Think of the money they spend trying to tell us one loaf is better than another." Bakers spent an estimated £2,000,000 last year advertising on T.V.

ATTACK - DAILY MIRROR, PAULA JAMES, 'THE TRUTH ABOUT BRITISH BREAD', 8.11.1973, pp. 14-15:

It is pre-packed, pre-bleached and seasoned with chemicals and preservatives - and the recipe reads like a scientist's shopping list. It is, of course the British loaf. It is made of potassium bromate, ascorbic acid, acetic acid, stearyl tartrate, monocalcium sulphate, propionic acid, ammonium salts, monocalcium phosphate, chlorine dioxide, benzoyl peroxide and glyceryl monostearate, plus flour, yeast, salt, water and fat.

All of which is a far cry from the crisp, mouth-watering loaves cooked by men known as bakers before most of us were born. Today, the old-fashioned baker has almost disappeared - replaced by an army of chemists, technicians and workmen handling vast bread-making machines.

DEFENCE - DAILY MIRROR, PAULA JAMES, 'THE TRUTH ABOUT BRITISH BREAD', 8.11.1973, pp. 14-15:

> And if the bread they make sounds unappetising, it is decidedly nutritious according to an American survey which puts it above Italian, German, Swiss and French loaves. Those who are frightened off by the awesome list of chemicals and additives, and think it better to make their own bread at home, must be prepared to pay more. Experts have worked out that housewives cannot produce bread more cheaply than the baker, though many cooks would disagree.
>
> Now with the large loaf retailing at 11½p. the Flour Advisory Council reckons the cost of a home-baked loaf works out at 12p. - and that does not include the cook's time in shopping and preparation . . . .
>
> FACT:- The British housewife demands a heavy dampish and soft-crusted white loaf which stays fresh. It is unique to this country, bland in taste and mostly sliced and packaged.

ATTACK - SUNDAY TIMES, MICHAEL BATEMAN, 'THE INS AND OUTS OF OUR DAILY BREAD', 18.11.1973:

On the eve of the 12½p. loaf, a group of 10 academics in London and Manchester have launched a strong attack on the nation's bakers and our most popular daily bread, the white loaf . . . .

ATTACK - EVENING NEWS, MICHAEL MILLER, 'OUR DAILY BREAD' 23.11.1973, p.6:

Oh the joy of it, to undo the crisp, crinkly wrapper and take out the first slice. Sink your teeth into all that delicious ascorbic acid, acetic acid, lactic acid . . . what I am talking about is bread . . . stuffed with enough chemicals and additives to keep a chemist happy for years . . . . I'm waiting for the day when the manufacturers come up with their latest product: Chemical Bread, with added wheat.

ATTACK - EVENING NEWS, 'THE ARRAN COLUMN', 25.11.1973, p. 12:

I know nothing about the Common Market . . . . But one thing I know and know for certain that is if we expect foreigners to buy British bread then we're in for a massive disappointment. British bread stinks. British bread is tasteless, stodgy, dull, unimaginative

and the more you cut it into slices, the nastier it becomes. There is, I believe, a bread called "Granny's Shame". Granny has every right to be ashamed. Why do the housewives put up with it as though you like it? Alternative uses are as bath sponges or something to scare dogs away for all times.

ATTACK - SUNDAY TIMES, 25.11.1973:

This week the price of an ordinary loaf went up to half a crown. Yes, 12½p.! So LOOK! has been examining exactly what we get for our money. On the left, the home baked wholewheat loaf, long loved by food reformers, whose campaigns are gaining ground as people realise all the good things in it which get lost in making the commercial loaf. On the right, your every-day common or garden commercial loaf and some of the surprising things which are put into it artificially after the natural nutrients have been knocked out.

DEFENCE - SUNDAY TIMES, 21.12.1973 (LETTER):

You have commented twice recently on bread, citing critical views of Technology and Assessment Consumerism Centre, a group described as academics in London and Manchester. Is anyone with a medical or nutrition degree included, and if so how extensive is their experience? This is relevant since they directly challenge the views of the Government's independent medical and scientific experts who effectively determine by legislation, what goes into and what may be excluded from bread. Why has not the T.A.C.C. report been sent to Government departments, or to the flour milling and baking industries? This is akin to charging someone, without revealing the exact nature of the charge or the evidence on which it is based . . . . C. L. Copeland, Executive Director, Flour Advisory Bureau.

ATTACK - SELECTION OF PRESS ARTICLES AND HEADINGS CONCERNING THE T.A.C.C. REPORT:

The Financial Times, 10.5.74 - 'Bakers angry at report criticising modern loaf'
Dundee Courier and Advertiser, 10.5.74 - 'Cotton wool loaf'
Daily Mail, 10.5.74 - 'Cotton wool loaf takes a pounding'
Eastern Evening News, Norwich 10.5.74 - 'Bland taste'
Hull Daily Mail, 10.5.74 - 'British bread inferior, say experts'
Sheffield Morning Telegraph, 10.5.74 - 'Bakers left no crumbs of comfort'

Daily Express, London, 10.5.74 - 'Bakers rapped over "cotton wool" loaves'
Daily Telegraph, Londin, 10.5.74 -'White loaf "bland and inferior"
Yorkshire Post, Leeds 10.5.74 - 'Cottonwool bread slices sales'
Morning Star, London 10.5.74 - 'Probe urged into bread firms'
The Times, 9.5.74 - 'Bread advertising criticised in report'
Anglian Daily Times, Ipswich 10.5.74 - 'Probe into industry's big three urged'
Daily Mirror, 10.5.74 - '"Cotton wool" bread rapped'
Sunday Telegraph, 12.5.74 - 'Upper crust in a crumbling world'
Evening Standard, London 14.5.74 - 'What a crust! It's best by miles'
Morning Star, 1.6.74 - 'You can't taste the profit in today's technological bread'

ATTACK - NEW SCIENTIST, JOAN MORGAN (LETTER) 'BREAD' 17.10.1974, p. 213:

Sir, - Professor Copock's evasion of the basic issues (Staff of life - another view) 19.9. p. 734 will have done little to reverse the rising tide of open criticism that the bread industry is currently receiving . . . . The fact is that the white sliced variety is going out of fashion with the public. So why bother to save it? . . . .

ATTACK - SUPERMARKETING, 'BARBEQUE KING'S NEW SYSTEM - IN-STORE BAKING TAKES A SHORT CUT', 8.11.74, p. 19:

Even more important Barbeque King claims the overall sales of the store will go up by 8%-15% as a result of the installation of a new bakery of this type . . . . Bob Wright believes the firm's new bakery developments may prove to be one of the most important activities of Barbeque King. He sees it as filling the gap that may well be left by the baker trades' "devolvement" in some districts from its manufacturing commitments. "There is bound to be a shortgage of bread eventually" he says, "Bake-off will help to fill the gap"

ATTACK - NOTTINGHAM EVENING POST, 'PEOPLE MOTOR MILES TO BUY VILLAGE BREAD', 30.6.1975, p. 8:

Horspool's the Ruddington Bakery was launched in the village at the end of the 19th century and is still there - and thriving . . . . Mr. Joe Horspool, son of the founder . . . stresses that while modern techniques

have been introduced they do not affect the quality of the bread. He will have nothing to do with mass production and is proud of the fact that connoisseurs motor many miles to buy his products . . . .

DEFENCE - THE GROCER, 'TIP TOP LOAF TO FILL GAP IN THE MARKET', 30.8.1975, p. 28:

A new loaf is being test marketed by Allied Bakeries . . . described as the "lighter loaf" and is aimed at "a gap in the market" between standard and slimming breads . . . .

. . . Allied believe it will probably take sales from four areas - from the family size Nimble; Danish bread; from standard bread where people have been influenced into thinking it is fattening and as an addition or replacement to standard bread . . . .

ATTACK - BRITISH BAKER, 'THE HOT BREAD SHOP', 15.8.1975, pp. 9-10:

In 1973 Mr. Miller, an Australian, began to establish in Britain in co-operation with Whitworth Holdings Ltd., Wellingborough, a chain of hot bread kitchens. He plans to have 200 by 1980 . . . . "Our first shop opened in Hemel Hempstead in April 1973. We now have 14 operational units and a 15th about to open. We are opening 12 new shops this year which will give us a total of 26 by the end of the year . . . . If we are good enough the potential in Britain is probably for a thousand hot bread kitchens . . . ."

ATTACK - THE GROCER, HARVEYWOOD 'IT COULD NOT BE DONE, BUT IT WAS', 15.8.1975:

It is one of those "they said it couldn't be done" stories. What they said could not be done in this particular case was to run an instore bakery using frozen dough supplied from outside and to make a profit from it . . . . Sewell's latest venture, which is within the Normid No. 2 superstore at Burslem, Staffs., he described as being the first truly professional such operation in this country . . . .

At the same time, it is understood that the Co-op's sale of ordinary bread within the body of the store have not suffered adversely . . . . Sewell claims that because of his freshly baked bread operation customers come from up to 20 miles away (including some Co-op executives) although there are plenty of other facilities on the way. He has; he gladly admits, received great encouragement from the Co-op

in the venture and is to install further units in other Normid superstores, including the giant No. 5 which is to open in Talke during October.

ATTACK - DAILY EXPRESS, COLIN LAWSON, 'BREAD? WE'VE BEEN EATING PUTTY . . . ', 9.10.1975, p.4:

On a trip to London I was served at my club with what the waiter swore was bread. It resembled compressed toilet paper. And in a picture book village in Sussex, where I stopped for lunch, the steam-baked loaves came from Brighton, 20 miles away. I was reminded of all this when I went to a pub between Luxembourg and Brussels . . . . A girl brought fresh home-baked loaves of white, brown, grey and full corn Ardenne bread. I discovered that Belgium boasts 300 varieties of bread, that there is hardly a steam bakery in the country . . . .

Germany claims up to 365 varieties. Even Italian coarse loaves are preferable to Britain's anaemic putty.

So, British housewives, if your husbands can fight for C.A.M.R.A. why can't you campaign for real bread?

ATTACK - DAILY MIRROR, KEITH WATERHOUSE, 'BY BREAD ALONE', 2.1.1976:

From a report that the Office of Fair Trading has been investigating Britain's three biggest baking combines and not before time, it seems, for they have been limiting the ability of retailers to pass on lower bread prices to the customer - I learn that between them they sell 70 per cent of the nation's bread.

This surprises me, for if there's one thing to be said for bread . . . it is that it is available in an infinite variety of forms and from an almost limitless number of outlets. As a general rule of thumb, the smaller the bakery, the more delicious the loaf . . . that emerges from its ovens. How come, then, that Associated British Foods, Spillers-French and Ranks Hovis McDougall have managed to carve for themselves such a large slice of the market? It can only be that while we may not be as lackadaisical as we are made out to be at bread-winning we are bone idle when it comes to bread buying . . . .

ATTACK - NOTTINGHAM EVENING POST, 'ON CRUST OF A WAVE,' 19.1.1976, p. 8:

The chances of getting a well-baked, crusty loaf of bread in Nottingham should be better this year. A report from the National Association of Master Bakers says many more bakeries will be making fresh-baked bread.

President of the Nottingham Branch of the Baker's Federation Mr. P. Mason said: "It will definitely be easier to get a crusty loaf as more and more shops are installing their own bakers' ovens, which means customers can see that the bread is fresh baked"

The reports says more people are turning to the crusty, "bakers bread" from the local shop, and away from the "standard loaf" the sliced and wrapped rectangular bread. Association Director Mr. Morris Zimmerman said master baker's bread cost more than the standard loaf because of the greater cost of production. "But the growth in the number of master baker's businesses shows that in terms of value the public think the crusty, fresh-baked loaf is definitely a better buy!"

ATTACK - THE TIMES, 'CRUSTY LOAF IS RISING IN THE PUBLIC'S ESTEEM', 20.1.1976:

"More people than at any time since the last war are turning to the traditional fresh crusty loaf in preference to the sliced and wrapped variety", Mr. Morris Zimmerman.... said yesterday. Speaking at a meeting of the Association in Chester, he said that 63 more local bakers will be baking "real" bread this year than last, increasing the association's membership to nearly four thousand. "This is the first substantial increase in the craftsmen membership....since the end of the war".

The standard wrapped, sliced loaf sold typically in supermarkets still accounted for more than half the nations bread consumption and it was cheaper than the crusty loaf "But the growth shows ...the public think the crusty, fresh-baked loaf is definitely a better buy...."

ATTACK - SUNDAY TIMES, RICHARD MILNER, 'THE HOTTEST THING IN BAKING - THE "SMALL IS BEAUTIFUL" DOCTRINE HAS INVADED THE BREAD BUSINESS', 8.2.1976:

Bloomers are booming, French sticks are flourishing and London tins are taking off. Hot bread is the name of the game and Allied Bakeries.... has decided that it is well worth playing. So far, Allied have spent more than £1.5m installing about 190 mini-bakeries in its retail outlets. Eventually this group alone could have 500

shops from Scotland to the South Coast selling bread made on the premises under the sign of the Baker's Oven. The Crusty loaf has become the hottest thing since sliced bread. For British bread lovers, this is good news. For the 5000 or so small bakers who have managed to survive mass-market competition from the Big Three of Allied Bakeries, Ranks-Hovis and Spillers, the development is a mixed blessing. In the past few years, they have been doing their traditional thing very nicely thank you. For Allied, now kitting out in-store bakeries at the rate of two a week it is nothing short of a revolution. After wrapping up a 25% slice of the U.K. bread market with standard brands such as Sunblest and Vitbe, it is having to cater for something completely different. For "plant" bakers geared to produce uniform 28 oz white loaves (plain or sliced), the growing demand for what the trade calls the "naked loaf" is rather embarrassing. The trouble is that we are not actually eating more bread. Per capita consumption has dropped by about one-third over the past 20 years to some 33.5 oz. per week. The large white wrapped loaf, the staple line of Allied's 48 plant bakeries, still accounts for more than half of U.K sales (56% in fact). But its market share has this year been quietly eroded by the large white unwrapped (17%) and by what the Flour Advisory Bureau dismisses as 'others' (8.5%)....

Backed by the Whitworths flour group, Don Miller Hot Bread Kitchens started in April 1973, and are now established in 23 places from Leeds to the headquarters in St. Albans - midway between two Allied branches. Miller's Hot Bread Kitchens and Allied's Baker's Oven represent quite different approaches to the business. Allied is keenly aware that the average Large Fresh Crusty sells at a premium of around 2p over the Large White Wrapped, but sees hot bread as part of a general plan to make its 2,000 shops more profitable. Probably a quarter of these are big enough for four-in-one operations, incorporating not only standard bread-and-cake operations but also Light Bite take-away sandwiches, pies etc., and a sit-down cafe. The actual in-store bakery equipment costs approximately £8,000.

Miller's shops stick to bread and rolls, refusing to allow the heady aroma of fresh-baked bread to be disturbed by the merest whiff of doughnut. The baking equipment costs about £20,000 per unit, turning out everything from plain "split tins" to fancy "plaiteds" on a continuous basis that on market days and Saturdays can develop into a hectic race between the customers and the baker....

The St. Albans shop has a turnover of around £2,000 a week, which is the equivalent of around 11,000 large loaves and quite a lot of bread.... But nobody is quite sure whether the crusty business will stay golden. One housewife rhapsodised over her new loaf at a Baker's Oven launch in Watford but was horrified to discover that it cost 3p more than a supermarket large white wrapped. "It's because it's hot", the assistant explained. "In that case", she said "I'll come back when it's cold."

DEFENCE - THE GROCER, 'SUNBLEST DANISH LOAF', 28.2.1976, p. 28:

> Sunblest Danish will compete in the lighter bread section of the special bread market which has been showing continuous expansion over the past five years and now accounts for some 10% of total domestic bread sales worth £60 million to £70 million at rsp.

ATTACK - SUPERMARKETING, 'BAKERY SUCCESS', 23.4.1976:

Master Baker Ken Astill and his two sons.... know why the big battalions in the baking industry are concerned about instore baking and its effect on the sliced bread market.

> "People just love to eat crusty new baked bread. They like the smell of baking when they enter a shop and are prepared to pay that extra to have a tasty slice. If Tesco think it is a money spinner it must be what the public wants - and we know from personal experience" said 61 year old Astill.

Since the Astills converted their Worle, Weston-super-Mare baking shop to instore baking a month ago, takings have shot up by more than 60% and are still rising....

ATTACK - DAILY EXPRESS, JEREMY GATES, 'HOUSEWIVES ARE HUNGRY FOR THE HOTTEST THING SINCE SLICED BREAD', 17.7.1976, p. 6:

"This," declared marketing man John Peterson "is only the beginning. We know the demand is there, and we're way ahead of the competition. Some weeks we'll open five new shops. We'll average two new places a week without any problem. Turnover? They've got to take £2,000 a week to be profitable. But the best will take plenty more"

Peterson, marketing director of Allied Bakeries knows he's stumbled on a winner. It's called hot bread. The "hot

bread shop" where you can actually see the baker at work was born just 18 months ago.... "And there's no greater demonstration of freshness than for customers to see the bread leaving the oven" says John Peterson "Although the factory produced loaf is never older than 24 hours when it's sold". By the end of March, 1976, there were more than 200 hot bread shops - and many more planned from Associated British Foods' 2,000 retail outlets. It's a success story for Peterson - and for the "shoppers power" wielded by Britain's housewives. For Allied are splashing out £15,000 plus on each new hot bread shop only because the British, especially in the southern region, were refusing to buy more of the packaged, factory-produced bread which gobbled up a lion's share of the annual £750 million bread market. In 1968 we averaged 38 ounces of bread a week each. Last year the figure was down to 33½. "Our sales of white bread were static" says Peterson. "But we knew the demand for unsliced, crusty bread was increasing, particularly in the South. So we are changing our retail outlets to meet the change in demand." Who are the housewives happy to pay 2p more for hot, crusty bread?

"They're the selective shoppers" says Peterson "The ones who get their canned food at the supermarket and their perishables elsewhere" ...."As a general rule," says Peterson "The housewife who buys bread from the supermarket will have a smaller income, will have more children and will be living further north than the woman who buys from the hot bread shop. Those who buy crusty bread, will therefore have more money, be more discriminating, have fewer kids and be living south of Watford. In London the preference for crusty bread is really strong - we have 50 shops there".

Ironically, once the discerning housewife has bought her crusty loaf, she enjoys only a few slices while the warmth makes the loaf particularly inviting. For Peterson's team have found out that the hot loaf is kept in the bread bin for anything between two and four days after purchase.

ATTACK - THE GROCER, 'TESCO PLAN ANOTHER 15 IN-STORE BAKERIES', 14.8.1976, p. 27:

Tesco are developing in-store bakeries in almost every new store they open. With 25 already in operation the group forecast another 15 will be opened within the next 12 months.... "There are already too many tasteless cotton wool loaves being produced." Mr. Shaw admits there are drawbacks. First traditionally baked bread does not retain its softness for the same length of time as loaves produced by the factory or "hot" shop methods....

Prepacked sliced bread from national suppliers is 18½p and 19p. Sliced in-store bakery bread is 19p while the crusty loaf sells at 20½p. Over £500,000 has been invested in the instore bakery programme to date, and they can claim a production of half a million loaves a week.

Tesco say that sales from the in-store bakeries has not had any affect on sales of manufacturer's packaged goods. "In the case of bread it would seem as if the housewife is buying ours as well as the prepacked, which they can keep or put in the freezer...."

DEFENCE - LIVERPOOL DAILY POST, DR. RICHARD GORDON, 'FOOD FACTS AND OLD WIVES' TALES', 18.8.1976:

> We are all old wives over our health and how passionately we believe in our tales.... And that the staff of life is much inferior if it comes ready sliced and plastic wrapped rather than stoneground and compost grown...."I can assure you it really does not matter to your health whether....or whether your bread is white or brown" says nutritionist Professor John Yudkin.... The volume of old wives' tales is never-ending. The only difference of today's is their being more scientifically complicated.

ATTACK - CONSETT GUARDIAN CHRONICLE, JOSIE COLLINS, 'MODERN BREAD CONDEMMED', 26.8.1976:

In his latest book on cookery, entitled 'Beard on Bread'(1976) .... he echoes the feelings of many people that "good bread can be one of the greatest feasts" and condemns the spongy, plasticised, tasteless breads of today, doctored with nutrients and preservatives with as much gastronomic importance as cotton wool.

ATTACK - EVENING ARGUS BRIGHTON, 'YOU CAN'T BEAT THE TASTE OF REAL BREAD', 4.9.1976:

Taste is a very personal and individual thing, but there's one thing most people agree on, that things don't taste like they used to years ago. Interesting news then, from an unlikely source, a modern massive supermarket. It's Tesco, who have just announced they are developing "in-store bakeries" in every new store they open.

The first one was introduced five years ago. The store in Churchill Square, Brighton, has one. About 40 different varieties of bread are baked and what is even more important, by traditional methods. And the success is demonstrated by the fact that customers who usually brought one loaf a week are buying three or four.

Keith Shaw, Tesco's bakery executive told Femscene, "To take short cuts in order to produce more would ruin the taste and flavour, and, let's face it, there are already too may tasteless 'cotton wool' loaves being produced."

FOOTNOTE: for Women's Circle members: We are planning a visit to a bakery in our autumn programme (not Tesco's) to see how the vast variety of modern bread now on demand are produced.

ATTACK - NORTHAMPTONSHIRE EVENING TELEGRAPH, EDITORIAL COMMENT, 8.9.1976:

Cost of the soggy cotton wool called a standard loaf is likely to go up by a penny next month, bringing in the era of the four-bob large white....

Sign of the times can be seen on Sunday at Cottingham and Middleton's first-ever flower festival - a chance to buy real fresh country bread. At the bakery in Corby Road, a demonstration is being staged of baking. Just imagine the splendid, mouth drooling smell which will waft from the building.... Sale of the cotton wool product could drop and the corner baker come into his own - selling superb luxury to go with the one-a-week joint and vegetables.

ATTACK - NOTTINGHAM EVENING POST, PETER SKINNER, 'BROWN'S BREAD IS A FAMILY AFFAIR', 16.9.1976, p. 8:

Managing Director Mr. Arnold Brown explains that unlike many small bakeries, his company survived the first big knock in 1948 when the big companies put sliced loaves on the market. "Many small bakeries," he says "just could not compete". The Brown's do make some unsliced bread.... and now they are seeing a return in demand for old-fashioned hand-made crusty loaves....

ATTACK - THE SUNDAY POST, 'THE BIG HEEL', 24.10.1976, p. 13:

Five years ago, when sliced bread cost 9½p a loaf, a Glasgow reader asked why the heels were always so thick. No one in her house would eat them. She felt it was a waste. Now bread has almost doubled in price, money's tighter and machinery has had five years to improve. What's the position now? Last week we bought five plain and one pan loaf. Each was weighed, then the heels separately. From this we worked out the percentage the heels made up of the whole loaf. The table shows the results. Things haven't changed much in five years.

In 1971 heels took up from 13.39 to 25 per cent of the loaves. This time the percentages varied from 16 to 22.8 per cent.... Three of the loaves we tested - Sunblest, Dairy Fresh and Balmore - had one thick and one thin heel. The others all had thick heels....

ATTACK - NOTTINGHAM EVENING POST, CHRIS ARNOT, 'THOSE TV "BREAKS" .... UGH! THEY GLUE ME TO THE SCREEN', 27.10.1976, p. 6:

And if any second-rate actor again tries to insult my intelligence by extolling the virtues of stodgy, cellophane - wrapped, cotton-wool sliced bread - I just might put my foot through the screen. The people who run our large-scale food and drink industries must think we're balmy. Their idea seems to be to make their products as tasteless, boring and convenient as possible - then to spend a fortune on pretty packaging and advertising to tell us that the goods are just the same as they've always been. And guess who pays for the advertising?

DEFENCE - WHICH? 'BREAD', NOVEMBER, 1976, pp. 246-247:

Generally, you shouldn't have much difficulty buying the bread you want, unless you live in the country and have to buy from a local grocer. When we asked over 800 members about their bread buying habits only four per cent said that they wanted a kind of bread which they couldn't get. French or continental breads were most often mentioned by these members.

CONCLUSIONS: Bread is still one of the most useful foods we can buy, and it's still relatively cheap. Wholemeal bread may be worth eating for its extra roughage. Apart from this, its extra food value is probably unimportant for most people.

Bread prices vary widely from shop to shop. Large white sliced loaves from supermarkets tend to be cheapest - but the saving that a family can make by eating only this type of bread is unlikely to be dramatic. Many people may prefer to concentrate on shopping around for a bread they like. Home-made bread is only a few pence cheaper than bought bread but easy to make and worth trying.

DEFENCE - WOMEN'S MARKET, 'VITBE'S BIGGEST SLICE', No. 43, 1976, pp. 4-5:

.... At this time (April 1974) wrapped brown bread accounted for about a 7% share of the wrapped bread market in volume terms. In 1975 it rose to about 8% and it's still rising. Vitbe's own share of the total wrapped brown bread market has risen more spectacularly than that of any of its competitors.... Consumer research indicates that the housewife not only likes the look of the new-style transparent Vitbe wrapper (formerly wax paper) but she has also acquired a distinct taste for the new-formulation Vitbe loaf, whose unvarying quality and flavour is maintained nationwide by Allied Bakeries' insistence on the strict test quality control.

DEFENCE - FINANCIAL TIMES, ELINOR GOODMAN, 'TOO LITTLE DOUGH FOR THE LOAF', 18.11.1976:

The industry, though in a healthier state than when Mrs. Williams first looked at it, has for years laboured under the cloud of over-capacity, too much old machinery and, at best, static demand, as well as the problem created by bread having been a political football since the war. Fundamentally, the bakers are all fighting to sell what is essentially the same product to retailers who tend to call the terms. As a result of all these factors, profits are low. On average, the industry makes ½p for every loaf it sells.... Whatever happens, life looks like being tougher for the bakers next year....

It will be noted that of the above fifty examples, less than one third (sixteen) are defence items, many of these being by courtesy of a particularly fair-minded feature writer. An explanation of attacks outnumbering defensive items by a ratio of two to one, might well lie in the difference between newsworthiness of the two forms of article.

In addition to this evidence of controversy from the press, there have of course been numerous and diverse criticisms made in the media of television and radio. FAB have ample evidence in their files and in fact make use of a service called the TELLEX BROADCASTING REPORT SERVICE, (LONDON), who monitor all television and radio broadcasts and make transcripts available to interested parties at a commercial price. The quantity of programmes either devoted to or including criticisms of British bread or plant bakers is such that FAB are unable to justify accepting all offers of transcripts of such programmes. However, a small sample of some of the more recent programmes, obtained from this source, is given in list form below:

LIST 1 : TELEVISION AND RADIO PROGRAMMES FEATURING BREAD

DATE	MEDIA	PROGRAMME	INTERVIEW DETAILS
1.11.73	BBC 1 TV	PEBBLE MILL	Bread quality. David Seymour and audience. Alex Buchan
8.11.73	BBC 1 TV	PEBBLE MILL	Additives in white bread. Maurice Frome, David Seymour, Alex Buchan
11.11.73	BBC Radio 4	YOU AND YOURS	White bread as a causative factor in abdominal disorders. Derek Cooper, Maurice Frome, Dr. Bill Amos
19.11.73	LBC Comm. Radio	THE MORNING SHOW	Bread is getting more expensive. David Jessel, Michael Schwab
20.11.73	BBC Radio Newcastle	FIRST THING	Is bread pure and simple? Richard Dunn, Dr. Simnet
22.11.73	BBC 1 TV	NATIONWIDE	Bread additives. Mary Marquis, David Radford
11.1.74	ITV	GOOD AFTERNOON	Do we really know what we're eating when we eat white bread? Tony Bastable, Joan Shenton

DATE	MEDIA	PROGRAMME	INTERVIEW DETAILS
10.5.74	BBC Radio 4	P.M. REPORT	British Bread. William Hardcastle, David Radford
10.5.74	BBC TV Northern	LOOK NORTH	The British Loaf. Gerald Harrison, David Radford.
10.5.74	BBC Radio 1	NEWSBEAT	Nutritional value of bread. Richard Skinner, David Radford
13.5.74	BBC TV Northern	LOOK NORTH	The British Loaf. Gerald Harrison, David Radford
3.3.75	BBC Radio 4	WOMANS HOUR	Sue MacGregor, Barbara Beck
29.3.75	BBC 1 TV	THAT'S LIFE	Esther Rantzen, Mr. G. Ort
16.9.75	LBC Comm Radio	GEORGE GALE	George Gale, Terry Sterling
12.1.76	BBC Radio 4	P.M. REPORT	Robert Williams, Dr. Richard McInnes
19.1.76	BBC Radio 4	THE WORLD AT ONE	Robert Williams, Morris Zimmerman
24.2.76	BBC 1 TV	NATIONWIDE	A Green plan for Britain. Dr. Long
19.3.76	ITV West	REPORT WEST	Jan Leeming, Ken Rees
14.6.76	ITV	LUNCHTIME TODAY	Sandra Harris, Robert Scruton
12.8.76	BBC Radio 2	JIMMY YOUNG	Jimmy Young, Tony De Angeli
22.9.76	BBC TV	NATIONWIDE	Dilys Morgan, Delia Smith
27.9.76	BBC Radio Nottingham	ROUNDABOUT	Dr. Long, J. Holmes
5.10.76	BBC Radio 4	-	Judith Chalmers, Janet Ryan, Delia Smith
24.10.76	BBC Radio 4	TODAY	John Timpson, Ivan Massey
4.11.76	Radio Trent	TALKBACK	Graham Knight and telephone calls re the Which? report

It should be noted that David Radford whose name is associated with five of the above twenty-five examples was in fact a prominent member of the highly critical and much publicised T.A.C.C. Report on bread referred to previously.

FAB claim that both they and spokesmen from the big three plant bakers have in fact found it difficult to participate in television

and radio programmes and on some occasions have been refused permission for time to air the defensive viewpoint.

Not content with the television and radio evidence of controversy given above, the Research Unit of the BBC was also contacted and it was found that a total of some five television programmes plus sixty-five radio programmes had been specifically devoted to British bread during the seven years 1970 to 1976.

The majority of these seventy programmes were critical either of the plant loaf or of British plant bakers. To these seventy programmes should be added an unknown quantity of other programmes which whilst not specifically devoted to bread, have included criticisms of bread in their material.

The complete list giving details received from this source will be found in the appendices. It is however, trusted that a prima facie case proving the existence of this category of controversy has now been established.

PART TWO

THE RESEARCH

CHAPTER THREE

RATIONALE, PROBLEMS, HYPOTHESIS

3.1 RATIONALE FOR THIS RESEARCH

Evidence exists (chapter two) to prove that a considerable amount of press space, television and radio air time has been devoted to criticisms of British bread and of the big plant bakers, and it seems that with a few possible exceptions (including the surveys by "Which?" and "The Sunday Times") most of this criticism has not been founded on truly objective research. Moreover, a relatively small amount of defensive research has in fact reached the general public by way of the media, reports or books.

Samples of the general public used by the media to support attacks of the type described in the previous section have generally been too small to be statistically representative and at worst consist of openly biased individuals.

There is no sign that the controversy will abate but there are signs that consumer demand is moving slightly away from the white wrapped and sliced loaf which is the major offering of the big plant bakers. Three of these indications, at the time the research started which will be examined in greater detail later in this study were:-

1. A recent increase in the proportion of brown bread and "other" bread consumed, in the figures published by, the National Food Survey (1970-1976).
2. A recent increase in the number of small Master Bakers producing and selling crusty plain bread on their premises, according to the Director of their National Association, Mr Zimmerman (1976).
3. An increase in the number of instore bakeries operating within superstores and

hypermarkets which are themselves accounting for a steadily increasing share of consumer food expenditure, evidenced by statements in "The Sunday Times" (1976) and "The Grocer" (1976).

Whether this movement is temporary and/or led by the cumulative effect of media criticism is open to debate but the movement although apparently gathering momentum is certainly currently too small to affect the dominance of plant-produced standard bread.

The questions remain - DOES A MAJORITY OF GENERAL PUBLIC REALLY PREFER WHITE WRAPPED AND SLICED BREAD? and also - ARE CRITICISMS THAT THE BIG PLANT BAKERS OPERATE AGAINST THE SATISFACTION OF GENUINE CONSUMER DEMAND, REALLY VALID?

It would seem that some objective research is called for, research that is not in fact conducted by the media to generate news and research which equally is not generated by FAB or the big plant bakers to defend themselves against criticisms orchestrated by the media and/or openly biased minority groups.

3.1.1 Previous media surveys

There have been two seemingly genuine attempts by the media to objectively examine/collect evidence similar to that upon which this research is based, namely those conducted by "Which?" (1966) and the "Sunday Mirror" (1973).

The "Which?" report of August 1966 was not in fact based upon an extensive consumer survey carried out by the magazine. It simply referred to criticisms of British bread in letters received and then to the survey by Rank Hovis McDougall carried out in September-November 1965, which showed that three out of every four housewives were buying wrapped, sliced bread. "Which?" did ask 'about a hundred people' on a taste test to try to

distinguish a difference between bread made by a factory and that made by a small baker, to find that whilst 'many' could, 'quite a lot' could not detect a taste difference. After stating that there were some 9,500 'factory' and 'family' bakers and 250,000 shops selling bread, this report then refers to the surveys carried out by 'a good number' of local consumer groups before concluding that apart from village locations the majority of the population could find a wide choice of bread available to them providing they were prepared to shop around. The more recent "Which?" report of November 1976 does not claim to be based on any consumer survey whatsoever and appears to be culled from desk research. It refers to 'some 160 bakeries' owned by three big firms making three quarters of our bread, to 'about 45' smaller bakery firms and to 'about 5,000' local bakers. The report confines itself to a reasonably fair and objective appraisal of bread which criticises neither standard British bread nor the then big three plant bakers. Neither of these two "Which?" reports could be said to examine consumer preferences or to attack/defend the big three plant bakers on the basis of any large-scale research.

The "Sunday Mirror" survey quoted in a series of articles printed 22.7.1973 was however a specially conducted country-wide research covering 1,200 women with the objective of finding out 'What kind of bread they buy for their families, and why?' The survey sought the answers to these three questions:

1. WHAT KIND OF LOAF DID YOU LAST BUY?
2. WHY?
3. WERE YOU SATISFIED WITH THE QUALITY?

Quantified answers were not however quoted in the articles:

> We discovered that white, sliced bread is <u>most popular</u> with housewives in the 25-34 age group, closely followed by those between 16 and 24. And more is bought in the North and Midlands than the South.

This information was undoubtedly already known to the big plant bakers who conducted continuous research in this area of bread demand at that time.

With reference to question two the articles merely state 'that it is not surprising that CONVENIENCE tops their list of reasons for buying white sliced bread.'

In answer to question three the "Sunday Mirror" had to admit that 'Give or take two per cent, either way, everyone seems to be happy with what they eat whether it's sliced white or unwrapped brown'

The answers to the three questions asked were not therefore revealed to the readers on a quantified basis and what answers were quoted were, to say the least, vague and potentially misleading. Suspicion is therefore raised that perhaps the survey's actual quantified results were not conducive to the continuance of the criticisms. The following week (29.7.1973) the "Sunday Mirror" carried a full page article under banner headlines of 'OUR READERS GIVE THEIR VERDICT ON BRITAIN'S BREAD - WE COULD USE A BETTER LOAF'. This article was <u>not</u> however based upon the extensive consumer survey quoted the previous week but rather upon <u>letters</u> received from readers of the earlier article again raising the question of whether the survey results were not in keeping with the articles' allegations. It commences:

> Sunday Mirror readers passed a resounding vote of no confidence in Britain's bread following our <u>two-week</u> probe into the bakery business. Our <u>enormous postbag</u> includes letters from housewives, old age pensioners, bakers and medical men. More than 95 per cent agreed <u>wholeheartedly</u> with our criticisms of the bread industry.

The article then goes on to quote from 14 letters which whilst being highly critical, could not be said to individually 'agree wholeheartedly' with all the "Sunday Mirror" criticisms. This was only observably true when all 14 letters were viewed as an entity. Clearly, whilst the "Sunday Mirror" survey was a large scale research and perhaps the first and only serious attempt so far (outside the baking industry) to resolve the basic questions raised by this study's chosen area of controversy - it cannot be seen to have satisfactorily silenced the arguments. Further evidence that the controversy has not been settled is contained in the chronicle of its continuance in the media. One last comment on this survey that when first asking the question what bread is bought and then why and then whether the buyer is satisfied with the quality, a biased answer can be expected to the third question. Several pilot studies by the writer clearly showed that respondents will, in the main, endeavour to justify their purchase. Having told the questioner what they have bought and the reasons why, respondents are hardly likely to tacitly admit that they have made the wrong choice by then criticising the quality of their purchase. The question has to be asked obliquely if any degree of import is to be attached to the answers.

It is therefore claimed that the previous media surveys strengthen rather than destroy the rationale for further research. Moreover since the controversy still rages and since the matter concerns a vital part of our daily diet it is important enough to warrant further study, particularly more objective research by persons whose allegiances cannot be so readily observed.

3.1.2 Scale of this study

In setting out to study what are effectively national variety demand preferences against national bread variety productions, it was felt to be somewhat futile to research on a micro-scale. The

case against in-depth research on a local basis with relatively small number of consumers, is further strengthened by the existence of regional bread preferences, well established in data collated by retail audits whose figures are available on a shared-cost basis to the big plant bakers and also by separate consumer research carried out individually by these big three bakers.

It was therefore concluded that whilst the rationale for this research could be established, the research itself would have to be on a macro-scale surveying large numbers of consumers if it was to be accepted as a worthwhile attempt to settle this particular nationwide controversy.

3.2 PROBLEMS ASSOCIATED WITH THIS RESEARCH

3.2.1 Synthesis of controversy, category 4

The initial and basic problem inherent in attempting to conduct objective research aimed at resolving area of controversy category 4 (that concerned with charges that the British baking industry and in particular the large plant baker does not make proper or adequate supplies of certain varieties of bread available in accordance with consumer demand) - is that of distilling the demonstrably large and varied volume of criticism into its underlying implications, so as to emerge with one or more testable hypotheses.

An obvious temptation for any researcher faced with this problem would be to pre-select the hypothesis and then choose from the body of criticism, those charges that most readily demonstrate the validity of the pre-selection. Already it has been found necessary to categorise this area of controversy and in so doing, to describe it in words which the reader, having studied the chronicle of evidence, may not feel to be particularly apt. An

objective appraisal of the underlying meaning of the criticisms chronicled does therefore appear to be pre-requisite to the development of subsequent objective research. A further disincentive to honest appraisal of the evidence derives from the natural fear of a researcher that the process may distil hypotheses which whilst transparently objective, are not in fact testable within his/her time and money constraints.

That this dishonesty does in fact occur was evidenced in an interview given by Dr. Bernard Dixon, Editor of the New Scientist in 1976. The November issue of this journal had referred to an open survey amongst its readers and of the 200 respondents, 144 had provided written evidence of data manipulation by their colleagues, only three of whom had in fact been reprimanded by their peers, or superiors.

At a first reading the criticisms chronicled under the heading of "Controversy Category 4" condense into the explicit or implied statement that -

> THE BRITISH BAKING INDUSTRY IS NOT PRODUCING THE TYPE OF BREAD THAT THE GENERAL PUBLIC REALLY WANTS

However, this statement is unsatisfactory because in practice a large variety of types of bread are baked, distributed and sold nationally. It seems apparent from a deeper analysis of the published, screened or aired attacks made, that the real allegation is that a majority of the British public is obliged by the plant bakers to accept the standard twenty eight ounce or fourteen ounce white, wrapped and sliced loaf which has formed between fifty-six and sixty per cent of total production since 1964 and that this majority find the standard product unsatisfactory from a number of standpoints (stodgy, tasteless, doughy etc. etc.).

The implication is therefore that insufficient quantities of all the other types of bread (less unsatisfactory and therefore more desirable) are being produced and distributed, and that this situation is in some way due to the plant bakers who in fact dominate the market.

It should be noted here that whilst all the critics are anti-plant produced white wrapped and sliced bread, the white unsliced and unwrapped bread produced by the Master Bakers is not only exonerated from criticism but generally found most praiseworthy. Hygienic and convenience considerations are ignored together with taste differences tests like the one attempted by "Which?" in 1966. The major consideration advanced in praise of bread baked upon shop premises appears to be a nostalgia for the smell of hot freshly baked bread when actually purchasing it, not eating or using it.

Also intriguingly exonerated from blame are the white wrapped and sliced slimming breads despite the fact that, the majority of these are produced by the plant bakers. The few criticisms levelled at slimming breads are not at the products themselves but at the advertising claims which can be said to be somewhat dishonest (along with some thousands of other advertising claims for other products). At this point the main body of criticism segments into the brown bread advocates which itself sub-divides into wholemeal/wholewheat enthusiasts and others, AND crusty/ fancy bread advocates who also sub-divide into those who buy at Master Bakers and those who prefer to bake bread themselves.

Neither plant produced HOVIS nor the crusty breads produced by plant bakers are criticised in any of the articles chronicled.

No-one seems to have alleged that the type of bread really wanted by the public is in fact not baked anywhere in the country or indeed that the ideal type of bread does not

exist. Presumably the absence of this latter allegation is in part due to there then being an obligation on the accuser to state precisely what the ideal but non-existent type of bread should be! This requirement may be a formidable one since it would demand of the person making the allegation, some detailed knowledge of the technicalities of baking as well as the legal ramifications arising out of cost and nutritive considerations. This test is not likely to be met by the average single journalist researching for a story. There would of course be an equal requirement upon the attacker to scientifically research what the majority of people regard as the ideal loaf since if the critic's view of the ideal specification differed radically from the majority view, he or she would in turn be berated by the very readers, listeners or viewers whose support was being sought. Small wonder therefore that the myriad critics of the British standard loaf have refrained from stating what the ideal bread should be! In practice most critics have referred loosely to wholemeal, "French" bread or local bakers' bread as being more desirable for a variety of nutritional, taste and freshness reasons.

In view of the foregoing, the wording involved in the definition of controversy category 4 had to be carefully chosen to reflect the somewhat vague and somewhat biased views it was attempting to portray.

Having gone through this process, it became clear that consumer dissatisfaction with plant-produced standard bread was the basic implication and a further implication was that the big plant bakers were to a large extent ignoring this alleged dissatisfaction.

3.2.2 Modus operandi and measurement

At first thinking, the task of resolving the controversy isolated under category 4, appeared to simplify itself into three relatively easy stages:-

1 To find out exactly which types of bread are being produced in what quantities.
2 To determine the proportion of total consumer demand for each of these bread types.
3 To then compare the proportions of each type produced with the proportionate demand to determine the degrees of misfit if any.

It would then seem possible to pronounce on the severities of misfit, if any, for each bread type and finally to explore whether the blame for these imbalances of production with demand could fairly be laid at the feet of the then big three plant bakers.

This attractively simple solution to the basic problem of methodology does however raise a number of rather more difficult sub-problems which can be summarised under the above three main stage areas as follows:-

1a) Whilst the total tonnage of all bread "produced" is in fact calculated by the Government in Business Monitor Ref. P.Q.212 Table 1, it is broken down into only two types white and other.
1b) Furthermore this table is in practice based upon sales rather than production.
1c) Response to the enquiry upon which the table is based varies but tends to average a figure which lies in the seventy per cent level. Estimates have to be included for non-response establishments.

1d) The enquiry only covers establishments employing twenty five or more persons, which are thought to account for ninety-six per cent of employment. The enquiry does therefore omit for example some 5,000 Master Bakers who certainly employ less than twenty five persons.

In concluding that even the Government statisticians do not know the exact production of all bread, let alone by type, alternative data sources were considered, namely the flour millers and then the bread bakers themselves with the following results:-

1e) All flour millers would be unlikely to separate out sales of flour to bread baking establishments. Of those that do there would be no guarantee that all the flour delivered for this purpose was indeed used for bread as most bread bakers produce rolls, cobs, etc., which do not form part of this research. Finally it would be extremely unlikely that those millers with separated figures would in fact be prepared to supply them to the researcher.

1f) Whilst there were only three main plant bakers, there were about fifty smaller bakers who came under the writer's definition of plant bakers and at least 5,000 Master Bakers, plus retail companies with in-store bakeries, plus hundreds of thousands of housewives who bake all or a proportion of their bread at home. Clearly it would be a daunting if not impossible task to endeavour to collect bread production figures by type from the bakers themselves.

1g) The less difficult method of approaching the National Federation of Bakers, the National Association of Master Bakers, the Flour Advisory Bureau etc., in the hope that they collected production figures of bread by type, was in fact tried without success.

Whilst there are a number of other possibilities e.g. sample observations in a variety of retail shops on a national scale, these were found to be well outside the scope of the lone researcher operating with limited time and money resources.

The second stage of the methodology under consideration, namely that of proportioning out total consumer bread demand by type was found to be a little less difficult, but again there were a number of sub-problem areas as follows:-

2a) Even if it were possible to establish national bread production by individual type it would be impractical to undertake consumer research by individual type. This is because there are several hundred types of bread produced if one takes slice thickness, loaf weight and different wrappers into account. An attempt to involve consumers in identifying preference selection from several hundred types would assuredly be doomed to failure. Aggregation into identifiable groups of types is therefore required and this itself raises some problems.

2b) Consumer terminology for a given loaf varies from region to region, rendering descriptions more than usually prone to misinterpretation.

2c) The matter of establishing what is meant by preferences is one upon which the experts themselves disagree. How does one treat the circumstances where stated preference is at variance with actual buying behaviour i.e. effective demand, or where preferences are equal or indistinct or perhaps even non-existent?

The remainder of the problems concerning stage two are the rather more mundane ones applying to any consumer survey such as bias, which are well documented in most textbooks on Marketing Research and need not therefore be specifically covered here.

Assuming for the purposes of this discussion that acceptable solutions to the problems of stages one and two can be found, so that in practice degrees of mismatch between production and demand for given groups of bread types can be ascertained, we are left with the somewhat subjective matter of deciding whether or not these can be pronounced "severe" or "trivial". At just which point of non-coincidence between supply and demand can it justly be stated that the baking industry is guilty of the charge that it is not producing the types of bread which the British public really wants?

Until September 1974 when the Prices Secretary Mrs Shirley Williams sought to protect Government bread subsidies from abuse by prohibiting the practice of "sale or return", the amount of bread over-ordered by retailers or overstocked by bread van salesmen could average between 4 and 5 per cent of total production for a large plant baker. Indeed in the writer's own experience a figure of unsaleable returns as high as 20 per cent of production could be the case when launching a new type of bread onto the market, whilst the correct level of demand was being established on a trial and error basis, as was the case with United Bakeries' new slimming loaf "Wisp". Also (as any bread van salesman will confirm), a system of daily "plussing" or "minussing" orders is the usual practice adopted to overcome production surpluses or shortages for any given type of loaf, resulting from an indeterminate dough yield from a sack of flour, varying within tolerances of up to plus or minus 9 per cent. Add to these points the fact that bread demand can be seen to vary seasonally with the weather and we arrive at a set of acceptable variances of different degrees which operate against the probability of perfect matches between supply and demand. For the purpose of more adequately defining this problem of interpreting degrees of mismatch imagine that:-

Q = total quantity of bread produced

P = total quantity of bread in demand

T = all types of bread produced or preferred

and that we are attempting to establish whether QT = PT that is whether the total quantity of all types of bread produced equates with the total quantity of all types of bread preferred. Knowing that there are many different types of bread (t1, t2, t3 . . .) we might then refine the problem into establishing whether QT (qt1 + qt2 + qt3 . . .) = PT (pt1 + pt2 + pt3 . . .) by using the method $\frac{qt1}{pt1} = X1$, $\frac{qt2}{pt2} = X2$, $\frac{qt3}{pt3} = X3$ . . . where X = the degree of mismatch. Then by adding X1, X2, X3 . . . we can establish the total difference between QT and PT.

There are theoretically an infinite number of possible outcomes for X which when taken as a percentage could vary from n per cent (when no-one actually prefers a given type of bread produced) to nil per cent (when production of a given type of bread exactly equates supply).

Is then a mismatch of five per cent on a given type to be reprimanded or a mismatch of 500 per cent? Supposing that a mismatch of 500 per cent on a given type say t4 represents only one per cent of total national bread production? Or that relative to preferences, over-production on some types is cancelled out by under-production on other types?

Clearly what at first sight seemed to be a relatively easy task has, upon deeper investigation, some singularly difficult inherent problems.

It was for the foregoing reasons, in particular the seemingly impossible task of ascertaining national bread production by type sufficiently accurately, that alternative methodology was sought and used as described in chapter 5. All the foregoing problems impinged on the development of testable hypotheses which are stated in the following section.

3.3 THEORY AND HYPOTHESES

In writing of Kelly's (1955) theory of personal constructs Bannister and Fransella (1971) take the view that:

> a theory is a working tool and not a sancrosanct creed - it is to be used, developed and ultimately replaced. It should provoke us to ask new questions while providing an orderly framework within which we can seek new answers. It should enable us to transcend the obvious.

Kelly himself was particularly fastidious in detailing the precise requirements of good theory when building his own:

> 10 The Function of a theory A theory may be considered as a way of binding together a multitude of facts so that one may comprehend them all at once. When the theory enables us to make reasonably precise predictions, one may call it scientific.... A theory need not be scientific in order to be useful.... But this is not all. A theory provides a basis for an active approach to life, not merely a comfortable armchair from which to contemplate its vicissitudes with detached complacence.... The truths the theories attempt to fix are successive approximations to the larger scheme of things which slowly they help to unfold.... But the theory, being itself an event, can in turn be subsumed by another theory, or by a superordinate part of itself, and that in turn can be subsumed by another....
>
> 13 Fertility in a psychological theory.... One of the criteria of a good scientific theory is its fertility in producing new ideas. It should lead to the formulation of hypotheses; it should provoke experiments; and it should inspire invention.
>
> 14 Testable hypotheses Another criterion of a good psychological theory is its production of hypotheses which are testable. This means that the hypotheses which are deduced from the theory should be brittle enough to be shattered whenever the facts they lead one to anticipate fail to materialise. The theory itself need not be so fragile as its offspring hypotheses.

15 Validity An acceptable scientific theory should also meet another requirement.... it should.... yield a succession of hypotheses which.... turn out to be palpably true. When a theory produces a hypotheses which turns out to be verifiable, it is in a strict sense the hypothesis only which is substantiated and not the theory. As we have already indicated, it is difficult ever to say that one has validated a theory....

16 Generality Sometimes people make the mistake that a theory is the same as the accumulation of a certain body of facts, rather than a set of principles which appertain to the facts....

18 Modifiability There is another feature of good scientific theorizing which is not so much a property of theories themselves as it is of those who use them. A theory should be considered as modifiable and ultimately, expendable.

19 What can be proved.... The relevant point for the purposes of this discussion is that even the precise hypotheses which one derives from a good scientific theory are never substantiated with absolute finality, no matter how many experiments are performed.

20 Where do hypotheses come from? There are roughly three ways of coming up with a testable hypothesis: (1) one may deduce it from explicit theory; (2) one may induce it from observation - for example, from clinical experience; (3) one may eschew logical procedures and go after it with a statistical dragnet. Each of these methods circumvents some of the disadvantages of the other two.

24 Summary of design specifications.... Our next task is to formulate the assumptive structure which would undergird such a theory. The most basic assumption upon which all subsequent statements must stand, is to be called a postulate. The elaboration of this statement into further, related assumptions is pursued by means of corollaries

In defining what is meant by a fundamental postulate in a scientific theory, Kelly goes on to state:

> A postulate is of course, an assumption. But it is an assumption so basic in nature that it antecedes everything which is said in the logical system which it supports. Now, a person may question the truth of a statement which is proposed as a fundamental posulate; indeed, we are always free, as scientists, to question the truth of anything. But we should bear in mind that the moment we do question the truth of a statement proposed as a postulate, that statement is no longer a postulate in our subsequent discourse. A statement therefore, is a postulate only if we accord it that status.
>
> If we bring the statement into dispute, as well we may in some instances, we must recognise that we are then arguing from otherpostulates either explicitly stated or, more likely, implicitly believed. Thus in scientific reasoning nothing antecedes the postulate, as long as it is a postulate, and the truth of a statement is never questioned as long as that statement is in use as a postulate.... In modern scientific thought it is always customary to accept even one's postulates as tentative or ad interim statements of truth and then to see what follows.

Kelly then explains that amplifications of the system relying upon one basic postulate take the form of certain propositions which, in part, follow from the postulate and, in part, elaborate it in greater detail. These propositions Kelly terms corollaries and logically they involve something more than the notion minimally implied by the exact wording of the postulate.

Although Kelly is extremely rigorous in his efforts to define precisely what he means by the terms used in his fundamental postulate and the eleven corollaries which follow, he does fail to record a definition of the term hypothesis in relation to the terms, fundamental postulate and corollary. However, it seems reasonably clear that Kelly saw postulates and corollaries as tools of theory construction and hypotheses as offspring from the theory. On this basis therefore, testable hypotheses can and should develop from both postulates and corollaries.

More recently Elliott and Christopher (1973) categorise research in increasing order of sophistication and methodological rigour as (1) exploratory,(II) descriptive, (III) explanatory, (IV) predictive, stating in addition that at each level it is likely that the need will arise for research aimed at improving and developing measuring instruments. They go on to state that:

> Unwillingness to specify hypotheses may be related to a mistaken idea of the nature of theory held by some practioners. In common with the layman they regard theory as the product of armchair speculation, being completely cut off from practical problems. All practice is based upon some theoretical assumptions, however incompletely formulated or inadequately based. A theory helps to explain and predict by giving a synoptic summary of previously validated hypotheses. Thus "there is nothing more practical than a good theory"

Margaret Stacey (1969) disagrees with Kelly, Elliott and Christopher and other writers on social research as regards the desirability of strict methology for all types of investigation:

> Some people consider that a piece of social research is not scientific unless it has a detailed hypothesis which is sets out to test. This would appear to be too narrow a view. In an unknown field it is not possible to set up sufficiently clear hypotheses for testing to form a basis for research. Hypotheses which are worth testing can only be developed in areas about which a good deal is known, i.e. where a great deal of empirical field data has already been collected. Before this stage most research is of an exploratory nature....

A middle course is steered by Goode and Hatt (1952) who take the view that it is essential to have an hypothesis to guide the research, that is a statement of the object of the research which may be deduced from existing theory and which should lead to an empirical test. They do however admit that researchers may at times be justified in exploring an area without a precise hypothesis.

Selltiz et al (1959) follow similar thinking in accepting the value of research into an area in order to reach a hypothesis. Perhaps John Madge best summed up the general feeling when he said 'virtually all empirical enquiry is based on some theorectical grounds, however naive these may be' and it is felt that some attempt should be made to make underlying assumptions explicit rather than leave them unexpressed and abstract.

Following Kelly's lead, it could be said that the theory upon which this particular study is based is expressed in the fundamental postulate that some industries do not always act in the interests of their final customers or users and a corollary of this postulate is that the British baking industry is a particular case in point.

Evidence that this is so can be seen to be highly controversial. The thinking behind the criticisms levelled at the British bread industry seems to be that it should be required to equate supply with demand and that its apparent failure to do so warrants a media campaign aimed at changing this "unsatisfactory" situation. The corollary can be further refined in that the allegations confine themselves to the plant bakers, it is only they who are guilty of not producing the types of bread in real demand and the local bakers producing bread on their own premises are blameless in this respect.

If this were so then one would expect to find that local bakers were in a demand exceeds supply situation and either rapidly expanding or constrained from expanding by other factors.

An alternative reasoning might be that local bakers meet local demand fairly well but that extra real demand is hidden by distance, that is to say that people would prefer to buy bread baked by local bakers if only there was one nearby.

Yet another explanation of failure to find that local bakers are in a boom situation would be that whilst people really prefer their bread, they find it too expensive.

From these refinements of the discussion some testable hypotheses emerge. Referring back to the original postulate of dissatisfaction felt by the general public with the plant bakers in terms of the products offered, it follows that plant bakers either are not making the desired types of bread or are not making/distributing these types in the desired proportions and/or at the right prices.

Desertion of plant-produced bread, particularly standard white sliced and wrapped bread, for other types of bread given equal price and availability for all types of bread could be taken as indicative of dissatisfaction with standard bread and a measure of such a desertion rate could be taken as an index of dissatisfaction.

MAIN HYPOTHESIS

Public dissatisfaction with plant-produced standard bread will be revealed by a substantial proportion of housewives preferring other types of bread under conditions of equal price and availability.

SUB-HYPOTHESIS 1

Evidence of public dissatisfaction with plant-produced standard bread will be found in a marked increase in demand for bread baked upon the premises.

Dissatisfaction with plant-produced bread could be latent in that a high proportion of housewives might be relatively inexperienced across the range of bread availabile and by virtue of not having tasted certain types of non-standard bread (perhaps because of lack of availability or high price) be unaware of real differences other than price and shape. In this respect any

preferences/dislikes stated could be imagined rather than real (that is based upon actual trial).

SUB-HYPOTHESIS 2

A high proportion of housewives will be found not to have a wide experience of the total range of bread types available for purchase. Particular inexperience will be found concerning non-standard bread.

Alleged public dissatisfaction with plant-produced bread could however be attributable to relatively small numbers of relatively articulate "opinion leaders" who by virtue of greater consultation by or access to the media have succeeded in creating a false impression of the degree of dissatisfaction felt by the average housewife.

SUB-HYPOTHESIS 3

Evidence of dissatisfaction with plant-produced bread will be found to be general and not confined to relatively small numbers of "opinion leaders"

CHAPTER FOUR

RELATED RESEARCH

Following the review of some of the problem areas inherent in this research, it is perhaps not surprising that few academics have attempted to resolve some of the longstanding controversies about bread and the British bread industry.

In point of fact warnings were received from a variety of experts both outside and within the bread industry that the study would prove extremely difficult. The industry itself understandably sensitive about this issue and extremely wary in releasing data. It is nonetheless, remarkable that the industry itself seems to have done very little substantivework on this area bearing in mind the force and frequency of the criticisms documented. The plant bakers appear somewhat introspectively to have concentrated research on consumer attitudes towards their own major brands - Sunblest, Mothers Pride, Wonderloaf etc., which are in fact only wrapper variations of the same basic type of bread. Joint research conducted through the Flour Advisory Bureau on behalf of the plant bakers again concentrates on brand preferences rather than specific bread types. A library search of both British and American research for higher degrees yielded a somewhat disappointing dearth of studies on this traditionally basic food. Some of the studies do however need summary as they are relevant to this research and provide valuable background material which helped considerably in the evolution of the methodology adopted. The more recent and relevant studies are presented in precis form as follows:

4.1 RELATED BRITISH ACADEMIC RESEARCH

Title "Bread: The Research Association, Industry, Government and the Consumer" by P. J. C. Cornwell, Victoria University of Manchester, for M.Sc. in 1973.

Summary

This work is somewhat hard to summarise since it is not based on explicit theory or hypotheses and fails to state a clear objective.

The study was undertaken as part of a comprehensive group project on bread:

> It also serves as a case study of how a Research Association (R.A.) as part of the Co-operative Research Scheme, fits into the gap between Government and the individual company, and in what ways the R.A. plays a useful role in industrial research.

Cornwell's thesis is not only one of the most recent but also in itself constitutes an attack upon the British Baking Industry. It makes compelling and controversial reading and is in parts directly relevant to the author's chosen area in that it supports the rationale of this choice. For this reason it has been thought necessary to refer to and also undertake a critique of the relevant parts, in a separate section.

Title "Attitude psychology and the study of public opinion" by Forest.Patterson. Chisman., University of Oxford, for Ph.D. in 1973.

Summary

This lengthy dissertation was found to confine itself entirely to the political area and sheds little light on market research into attitudes towards products or public opinion towards market research. At the very least it was hoped that some useful definition of "preference" might be discovered. Alas, Chisman avoids the use of the word "preference" and confounds the reader with no less than 19 definitions of the term "Attitude" drawn from the realms of psychology and sociology. The next fifty or so pages are then devoted to a discussion of attitude content and (much more briefly) the measurement of attitude intensity. Perhaps

it is worthwhile drawing upon this work to establish an acceptable working definition of attitude as "a tendency to like or dislike objects" and add the rider that the tendency is subject to differing degrees of intensity.

Title "Problems of middle management in the bakery industry during a period of technical change" by R. J. L. Abbott for Ph.D. 1968 Victoria University of Manchester

Summary

An in-depth of bakery management at first hand, entailing 19 managers being "shadowed" for four full days each, during the day to day operations of the bakery, including attendance at management meetings. The subjects studied split up into 3 categories: time distribution, problems and activities, and background information. The major part of the study was conducted at Wellingtons Ltd, but other bakeries in the North-West of England were visited, serving the belt of high-density population stretching from Liverpool to Leeds.

This study provides some support for the theory that pressures exist in the large centrally controlled bakery networks, which operate upon production management to reduce variety. In reviewing the control systems of the nine bakeries studied, Abbott notes that with increasing scale, bureaucratic administration emerges as distinct from both the original family management and even the next stage of craft based management and goes on to observe:

> Managers were very concerned about their performance against standards since they regarded this as the key to promotion. Bitter arguments took place over allocation of expenses and managers aimed to "beat" the figures produced by their head office accountants.

Further support to the theory of distortion between supply and demand can be found in Abbott's review of the van loading systems viz 'The vanmen were quick to blame the packers for wrong loading if they ran out or had to bring too much bread back to the bakery.' Again when describing the system of checking and controlling the amount of stale bread returned to the bakery Abbott states that this waste cost the bakery £800-£1,000 per week. The study also confirms the vanmens' autonomy with regard to the ordering of bread on behalf of their customers and makes several references to the amount of "fiddling" conducted and occasionally condoned.

4.2 RELATED AMERICAN ACADEMIC RESEARCH

Title "An evaluation of the methods used in designing and analysing consumer preferences studies" by Raymond Albert Marquardt, Michigan State University for Ph.D. in 1964.

Summary

This study was found to be invaluable as an aid to the writer's subsequent choice of research methodology and afforded considerable assistance in the avoiding of errors found by Marquardt in other pieces of research. The greater proportion of this work is devoted to consumer panel design but it does cover other methodologies albeit to a lesser degree. Details of Marquardt's study will be referred to later where relevant but for summary purposes part of Marquardt's own abstract is quoted below as follows:

> One of the objectives of this study was to describe and evaluate consumer preference panel designs and types of data analysis which can be used to evaluate consumer preferences for all types of products, especially food products . . . these empirical observations provided the basis for determining the advantages and disadvantages of each procedure. No one of the 15 statistical designs or methods of data analysis can be recommended for use in all testing situations. Instead it is recognised that the marketing

researcher should use the procedure which best satisfies the project objectives, but which remains within the sponsoring organisation's budget, time and talent constraints . . . . The mass consumer panel was defined as any panel in which the members are reached at their residence or office. The two methods of conducting mass consumer panels are by mail questionnaire and by personal interview. The chief advantage of the mail questionnaire technique is that a large number of respondents can be reached at relatively low cost. Its main disadvantages are that only a few questions can be asked in one mailing and that the conditions under which samples are tested are not known. The chief advantage of the personal interview is that it can provide detailed information on consumers attitudes towards the product being tested. One of its main disadvantages is that, unless telephone interviewing is done, it is more expensive to conduct than is mail questioning. Another limitation is that interviewer attitudes may bias the results.

Title "Co-ordinating Bread Distribution: A simulation of Interfirm Behaviour" by Theodore Franklin Moriak, University of California, for Ph.D. in 1968.

Summary

The broad goal of this study was to develop a systems model of the baking subsector to explore co-ordination of a more efficient bread distribution. It is interesting in revealing a close similarity between British and American bread baking industry structure -

Between 1947 and 1963 the number of bakeries declined from 6,800 to about 5,000. In 1966 the NCFM found that only 261 wholesale bakery plants were in fact needed to supply total demand as in 1963 against the 5,000 actual and that a single bakery could supply all the bread demanded by a city with 530,000 population. Producers of bread are classified as three types - wholesale bakers, grocery chain store bakers and retail bakers representing 80.8%, 11.6% and 7.6% respectively of national 1968

sales. Wholesale bakers comprised of 9 large multi-state corporations, three large co-operatives with a total of 261 members and about 3,000 independent bakers. Retail bakers (those with shops) totalled only 289 in 1963. The study also refers to Standard Industrial Classification No. 20511 used by the U.S. Department of Commerce which includes hearth breads, Italian, French, whole and cracked wheat, hamburger buns, Weiner buns, Kaiser rolls , Parkerhouse, English muffins etc., except any disposed of in frozen form.

The remainder of this study is disappointing from this researcher's viewpoint in that it limits itself to a mere 2 labels - own brand and private label, failing to distinguish between brands, let alone basic types of bread. Consumer bread demand behaviour is examined only from an elasticity viewpoint on price and income factors.

Title "An experiment to study the effect of taste experience on ability to discriminate and preference reliability in food acceptance tasting" by Kenneth George Hardy, University of Michigan for Ph.D. in 1969.

Summary

This work was referred to in the hope that some study of bread might feature in Hardy's research. Whilst this hope did not materialise, Hardy did test the following two hypotheses using both paired comparison and monadic rating methods with instant coffees as the stimuli:

I. The ability to discriminate of untrained respondents will improve over repeated taste trials

II. The respondents who qualify as discriminators will demonstrate preference reliability.

Both hypotheses were in fact rejected on the basis of results of two test sessions with 20 samples of instant coffee of 204 respondents. Hardy's own summary of the implications of the

results (which might well apply to bread) postulates that human taste receptors are both insensitive and reliable, also that granulation, packaging, pricing, promotion and distribution must be assessed as of greater importance than product quality in the consumer buying decision.

It would therefore seem that taste trials as a means of uncovering viable market segments for new types of bread should be firmly rejected unless the physical stimulus is significantly and perceptibly different from other related products. That this not so in the case of small bakers' versus plant bakers' bread was demonstrated in the "Which?" test report on August 1966 previously referred to.

4.3 A CRITICAL APPRAISAL OF CORNWELL'S RESEARCH

Cornwell's study constitutes a useful reference to all previous research work conducted under the heading of "Medical" and as defined in this research under Controversy category 1 and category 2.

However, since the word "Consumer" is contained in Cornwell's title (and indeed several references to the bread consumer can be found in the text) it was felt that some useful relationship with the writer's own study would emerge. Cornwell does explain why the National Federation of Bakers has not been seen to conduct any major research in defence against the criticisms of its members or their products. His entire analysis is focussed on the fact that a separate Government - aided body is responsible for the industry's research. This body is the Flour Millers and Bakers Research Association (FMBRA) which was formed in 1967 as a result of the amalgamation of The Research Association of British Flour Millers (RABFM) and the British Baking Industries Research Association (BBIRA). In reviewing the work of these bodies Cornwell makes the interesting proposition that all research falls

under three headings - 'Defensive, Offensive and Basic'. He then goes on to claim that this classification is valid 'for a good deal' of the work of RABFM, BBIRA and FMBRA and in between states in contradiction that 'much of the Research Association's (R.A.) (meaning RABFM and BBIRA and the newly formed FMBRA) work is somewhat nondescript, a cross between basic and offensive research'. Cornwell also generously states:

> It does not follow that defensive research is research against the interests of the consumer though this is quite likely. For example if the RA foresees the possibility of a criticism of the industry, that it may then initiate a research project in order to prepare a defence of the industry may well be in the interests of the consumer because it calls attention to the problem

- but then later finally concludes 'Defensive research is not generally in the consumer's interest; it is aimed at allaying public controversy'.

Cornwell's work does at the very least confirm the author's own assertion that the industry itself has conducted very little defensive marketing research against attacks under the heading of "Consumer Preferences".

By far the most interesting and relevant parts however, are Chapters 3 and 4 entitled "Research and the 'Interests' of Industry and the Consumer" and "The Concepts of Bread Quality" respectively. In Chapter 3 Cornwell cites the following quotation from a 1967 editorial in "Milling" (a trade publication), written in response to a doctor's letter published in a women's magazine, who wondered whether housewives really do like white bread as they had never actually been consulted. 'Both millers and bakers

are in business to satisfy consumer demand and nothing else, whether it be for a white, off-white, or plain brown product.' The editorial went on to claim that consumer consultation was quite unnecessary: consumer demand was sufficient.

Cornwell is highly sceptical of the industry's acceptance of the concept of "consumer sovereignty" and scathingly states that the idea that consumer demand commands and industry obediently follows is quite inaccurate. He quotes Professor J. B. M. Coppock, ex-Director of Research at BBIRA and member of the FMBRA's Council as saying, when dismissing the idea of consumer representation on the Council - 'all of us on the Council are consumers in one way or another and have the added advantage of knowing something about the products we are talking about.'

Cornwell quotes with, it may be fairly said, undisguised cynicism, the fact that the heads of Research of the then three big firms - RHM, ABF and Spillers-French meet informally with the Director of Research of the RA two or three times yearly to discuss the latter's research programme. He claims that this has a major effect on the R.A.'s programme and that control lies effectively with the big three firms. Cornwell is equally sceptical about the work of the Flour Advisory Bureau (FAB):

> FAB has close links with the RA and is funded by Trade Associations and individual firms in much the same way as the RA is. It is involved in a general nutrition education programme into which it injects not a few kind works about bread in general and white bread very particularly. Its offices in Arlington Street, London are shared with the National Association of British and Irish Millers (NABIM), one of its major founders; the same offices were once shared by the RABFM which illustrates the close links existing. Much of the FAB's work is sending speakers round the country speaking to women's groups, housewives etc., putting forward a sort of healthy diet - means - bread, philosophy. It

> does more routine public relations work as well, such as answering any criticisms of bread that appear in the press, and putting out press statements where necessary to deflate such criticisms. It also holds yearly Nutrition Conferences to which prominent nutritionists, many of whom look favourably on the FAB, are invited e.g., Sir Charles Dodds, John Yudkin, etc. The RA co-operates closely with the FAB and the RA's Director of Research is a frequent speaker at the FAB's conferences. The FAB acts as an early warning system for the industry in that it keeps a close watch on both local and national papers, and on the scientific press - from which it issues press cuttings regularly . . . .

In exploring whether the RA and the industry are concerned largely with defensive research, partially at public expense, Cornwell states that there are two distinct forms of external attack. One is the threat of another industry's products. The second is criticisms of the industry's products and/or processes by Government committees, academics or consumer bodies. As far as the baking industry is concerned the latter is surely much the greater danger. After concluding that the RA's work was a cross between offensive and defensive research he then states:

> It is clear that though white bread has come in for considerable criticism, there are only a few criticisms of bread sufficiently well known to the buying public that the industry and the RA need counter . . . . For this reason only a minority of research projects carried out by the RA are defensive in nature

On quality of bread, Cornwell goes into considerable detail on the well-researched medical aspects of various types of wheat, pesticide residue, fibre content, nutritive value, the milling and breadmaking processes, additives etc, which seem to constitute, the scientist's measures of quality. He goes on to point out that the baker's view of a good loaf can and does differ considerably from what the marketing function prefers to

portray as quality, which again differs from the scientists' view and yet again differs from what consumers might think of as quality. He points to the FAB's various advertising campaigns, the three major ones being "Use your loaf" emphasising the cheapness and usefulness of bread, "Take a Fresh look at Bread" emphasising usefulness and freshness, and finally "Six slices a day is the well balanced way" emphasising nutritive value. Following a similar examination of individual company promotions, Cornwell concludes that the idea of quality projected by advertising centres on freshness, utility, cheapness and nutritive value, in that order.

Cornwell postulates that the consumer's view of bread quality is strongly influenced by advertising and secondly by whatever nutritional knowledge they might possess. He then quotes from a survey carried out by the U.K. Margarine and Shortening Manufacturer's Association referred to in "Milling" (1967) in which participants were asked what foods they should give up even though they liked them. Apparently eleven per cent said bread, eighteen per cent said cakes and biscuits but only eight per cent would give up sweets and sugar. On sources of nutrition, fifty-eight per cent named bread as a source of starch, only four per cent as a source of protein, two per cent a source of calcium and a mere half of one per cent as a source of thiamine or iron. Asked where they acquired their knowledge, twenty-seven per cent said at school, thirty-three per cent from reading papers, books, magazines and twenty-one per cent 'just picked it up'. After stating that:

> it is not clear yet that the British housewife is ready to respond yet to advertisements emphasing nutrition . . . her knowledge of the importance of nutritive values and balances is inadequate to equip her to make choices of foods on these grounds.

Cornwell goes on to urge the bread industry in their own interests to educate the buying public (not the eating public) on the relative nutritional merits of bread. He then states with what appears to be some regret:

> At the moment, the consumer apparently cares more about characteristics such as the bread's freshness, convenience (especially as sliced and wrapped), "butterability", crustiness and cheapness than its relative value in the diet. These characteristics have less to do with the quality of bread as food and more with its quality as a "convenience food", as a useful "filler" or a vehicle for various spreads . . . . This is for the housewife, the most useful concept. For this reason, it is important not to dismiss concepts of bread quality other than the strictly nutritional one. They are all part of an overall standard.

Whilst not allowing the possibility that staling time or mould may enter the housewife's concept of quality and thereby affect her current preferences, Cornwell does grant that the RA has carried out extensive and valuable research on these problems. He regrets the 'apathy' of the industry in not furthering more staling research and waxes enthusiastically on the possibilities of an economic solution which:

> could have a profound effect upon the industry and also perhaps on the buying behaviour of the consumer. It could cut out the weekly and other short-term fluctuations in production demands (40% of weekly sales occur on Friday and Saturday) though this would necessitate sharp increases in storage capacity. Furthermore, if the solution were say, a chemical additive and not dependent on special storage conditions, it could radically alter the market behaviour in that the consumer could then buy as much bread as he needs for a week or more in a single purchase. This would cut out much of the waste and hence some of the total market requirements.

It would therefore seem ethical to use chemical additives for an economic solution of the staling problem but not to restore vitamins lost in the roller milling process! Cornwell makes some useful pointers regarding production constraints in meeting consumer preferences when referring to the Chorleywood Bread Process (CBP) dating from 1958 and Activated Dough Development (ADD) first put on commercial trial in 1967. He sees ADD as being complimentary to CBP. The latter process has been extensively adopted by the larger bakers and complaints of blandness have not been supported by taste panels. Another criticism of the widespread use of CBP (responsible for over seventy per cent of bread produced in the U.K.) is that it has led to uniformity of bread appearance and taste, hence inducing apathy in the consumer. ADD is seen as a useful extra process by CBP bakers for 'variety' bread production and a cheap alternative to CBP by those bakers still using BFP (Bulk Fermentation Process).

Cornwell also refers to 'the great white versus brown controversy' making a series of comments as follows:

> BBIRA through some of its members in Scotland[1] carried out a consumer preference test on white bread - brown bread using 2,000 subjects which showed a statistically significant preference for white bread.
>
> . . . The bread industry <u>not surprisingly</u> wishes to maintain a good image for its main product (i.e. white bread) as opposed to the much less important brown or wholemeal loaf and hence the RA has consistently defended the white loaf from its ever gathering host of critics . . . RABFM's work post-war was very much concerned with the controversy of brown versus white bread . . . .

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1 Professor Todd, Dr. Urie of the School of Bakery, Royal Technical College, Glasgow. P.5 BBIRA Annual Report 1952.

> The RA provided and analysed the flours used in the McCance-Widdowson experiments on German school-children comparing white and brown bread. The experiments showed no differences in growth and general health of the sets of children fed flours of different extraction rate . . . . The main problem is that traditionally brown bread has been regarded as the most nutritious, as indeed it probably is . . . . There is good reason to believe, therefore, that pushing wholemeal and brown bread in advertising would increase interest among consumers . . . there seems to be grounds for assuming that consumption of brown and wholemeal bread goes up as income rises; it would see, therefore, to be in the interests of the industry to cut down on its emphasis on white bread and to promote these breads more strongly. There appear to be few other possibilities if the bread industry is to halt the declining consumption other than, perhaps, flavoured bread.

Cornwell and some of the people quoted in his work would seem (upon an examination of their criticisms) to subscribe to the view that wheat growing, milling and bread baking should all be strictly controlled on scientific/medical grounds. No pesticides, additives etc, should be used, bread should not be bleached white or have the fibre extracted, be sliced and wrapped etc. The possibility that the resultant loaf might be unpalatable to the consumer, difficult to slice and spread and perhaps several times the current price does not appear to have been considered. As long as the loaf is of good (in the scientific sense) quality the consumer should apparently be obliged or 'educated' to accept it. The advocates of this concept clearly fall into the very same mould as the bakers they so ably criticise. Cornwell has criticised the FMBRA for disallowing consumer representation on its Council on grounds of lack of expertise, charged the industry with paying mere lip service to consumer sovereignty and the RA with biased research. But he then goes on to state that the consumer might not yet be ready for nutritional advertising,

'should be educated' etc. This scorn of the consumers' intelligence and apparent desire to manipulate attitudes more in line with his own, seems to the writer to constitute a basic contradiction of his earlier statements. Allegations as to the housewife's concept of quality (whilst perhaps true) are not seen to be based on any scientific research in that no references are provided. Cornwell's work does therefore provide extra justification for research aimed at discovering what breads consumers really prefer.

4.4 BAKING INDUSTRY RESEARCH RELATING

Title "Attitudes to Bread: Quantifying Study". Market Investigations Ltd., 1965.

Summary

Prepared for Associated British Foods Limited, C.W.S. Ltd., Rank Hovis McDougall Ltd., United Bakeries Ltd - that is, what were then the four big plant bakers - the broad aim of the survey was 'to investigate among housewives in Great Britain prevailing attitudes towards bread in general and towards Plant bread in particular and the extent to which these attitudes are held among different sections of the housewive population'. The marketing background to the study was that although sliced wrapped bread sales were growing in contrast to decreasing per capita bread consumption, 'the product especially the Plant made loaf, has lately been subject to a considerable amount of adverse criticism and publicity.' A total of 2502 personal interviews were held with a representative cross-section of housewives selected on a random cluster basis - Purchases during the seven days prior to interview totalled 13,254 loaves and were analysed as follows:

Table 2: PLACE OF PURCHASE

Type of loaf	%	Shape of Loaf	%	Place of Purchase	%
Brown/ wholemeal	15	Square/tin/ sandwich	84	Grocer	37
White	85	Bloomer	5	Baker	56
Sliced	59	Coburg	2	Some other shop	7
Unsliced	41	Farmhouse	1	Not stated	
Large	67	Vienna	1	Self service shop	12
Small	33	Cottage		Not S.S. shop	85
Starch-reduced	4	Twist		Not Stated	4
Not starch-reduced	12	Others	5	Co-operative	15
Not stated	4	Not stated	1	Multiple	59
BOUGHT AT THE SHOP		- 66%		Not stated	4
DELIVERED -		34%			

The main findings of this survey, relative to the author's work were:-

a. There was no clear evidence that public criticisms of plant (sliced) bread had inhibited consumption of the product; nineteen per cent housewives were aware of this criticism but only two per cent said it had altered their bread buying habits.

b. A substantial minority (twenty-seven per cent) said that they did not buy plant bread and were highly critical of it on grounds of deficiency in nourishing properties and tastiness, being doughy, containing chemicals and lacking in keeping qualities. Strong prejudice was observed amongst these non-users, evidenced by thirty-two per cent not agreeing that sliced bread was quick and easy to use, forty-two per cent disagreeing that it was easily obtainable and thirty-two per cent disagreeing that it was hygienic. Greater than average proportions of non-users were found among middle class housewives, those over fifty-four years of age, those without children and those spending less on bread than average.

c. The researchers recommended a publicity campaign (subsequently activated by the F.A.B.) to combat some of the factors found to be inhibiting the consumption of plant bread, but thought that other criticisms such as lack of taste, being doughy etc. could not be countered by purely promotional means.

d. When specific aspects were mentioned the main criteria upon which the goodness of bread were judged measured by the response 'it matters a lot' were found to be - freshness (88%), hygiene (43%), taste (84%), nourishment (78%), lack of doughiness (70%), availability (69%), consistent quality (58%).

e. Plant (sliced) bread inhibiting factors were found to be - no goodness (35%), not tasty (80%), too doughy (36%), containing chemicals (37%).

Encouraging factors were - easy to use (88%), hygienic (84%), easily obtainable (80%).

f. By contrast bread baked on shop premises was easily obtainable (23%), hygienic (13%), easy to use (9%), tasty (70%), not too doughy (87%), nourishing (67%), consistent (32%), has chemicals (11%).

g. When asked to complete the sentence 'A good loaf must be . . .' nourishment did not feature as one of the spontaneously given criteria.

h. When asked to complete the sentence 'The bread I would always have is . . . 'major replies were - Home-made (24%), Brown (9%), fresh (8%), crusty (6%), oven-baked (5%), white (4%).

Comments

The survey confined itself to two main types of bread only - brown/wholemeal and white. It then separated (on a qualitative basis) all bread into plant (sliced) bread and bread baked on the premises. The attempt to define bread types entirely by shape was in this researcher's opinion distortive in that confusion would have been likely between Bloomer and Farmhouse, between Vienna and Twist - see reproduction of showcard in appendices, noting that names were omitted on actual use. The place of purchase figures are also open to doubt in that these represent the housewife's image of a self service shop, a multiple etc. More importantly no explanation was given of 'starch-reduced' and 'not starch reduced'; the figures added up

to only twenty per cent and no further reference to this item was made in any of the findings. No attempt was made to correlate the housewife's statement of purchases with actual sales either as published by the Government or as elecited from the local bakeries in a given area. The figures relied upon housewive's memory of bread purchases over the previous seven days and may therefore be suspect in that the bread purchase may be relatively unimportant to the housewife or in fact subject to distortion by the respondent for a variety of reasons.

Title: "A market research investigation into bread", submitted to F.A.B. by William Schlackman Limited in 1967.

Summary

This study is highly regarded by the industry as of major importance perhaps because its findings were favourable when compared with the 1965 Market Investigations Ltd research into attitudes. The Schlackman report was wide ranging, covering:-

a. The role of bread in the family diet.
b. The purchase of bread, the price factor and the significance of brand imagery.
c. The image of bread.
d. Consumer attitudes to bread attributes and types.
e. The availability of different types of bread.

This summary is confined to the last 3 items as being more relevant to the author's own work. On these items the main findings were:

c. The image of bread:

Bread is regarded as the best (most nutritious) filler food. Though fattening, if eaten in excess, it is almost univerally agreed that it forms a vital part of a balanced diet. While housewives may watch their own consumption of

bread more circumspectly, few feel that it is desirable that the bread consumption of men and children should be controlled. On the contrary it is thought that bread is essential for growth. Only one or two per cent of respondents felt that doctors or dentists disapproved of bread professionally.

d. Consumer attitudes to bread attributes and types:

In the main, the housewife would ideally like her bread to be white, crusty even-textured and "home-baked". While this profile closely resembles the stereotype of the local baker's oven-baked loaf, and there is evidently some measure of nostalgia for the home-baked bread of yester-year, there is little concrete dissatisfaction with the current plant product. In particular, it is notable that the younger generation is very largely conditioned to view bread as sliced-and-wrapped. While there is evidently some demand for a bridge product which combines the convenience benefits of the sliced-and-wrapped loaf with the crust, taste and textural advantages of oven-baked bread, few housewives - especially young housewives are prepared to compromise with convenience. The majority prefer sliced-and-wrapped bread because it is pre-cut (not because they do not possess a bread knife or bin), because it keeps better, is suitable for sandwiches and is hygienic. Above all it is versatile. Some housewives prefer a soft, moist, crumb others a firmer texture. This suggests a possible basis for market segmentation. Those housewives who prefer brown bread think of it as tasty, wholesome and nutritious. However, it is not seen as generally acceptable for family use. It might be described as the personal preference of the housewife . . . . Sixty-four per cent of respondents were aware that preservative ingredients were added to bread and, on the whole, their reactions were favourable.

e. The availability of different types of bread

The Main Retailer Survey demonstrated that, in terms of variety, consumers were generally well served by the outlets at which they normally bought their bread. Only five per cent of respondents complained that there was any type of bread that they could not get at their normal outlet, and at least one fifth of such complaints were invalid.

Comments

The main findings have been quoted verbatim so that the reader may judge for himself or herself whether or not this report appears biased. It seems somewhat surprising that the findings were not apparently effectively used by the industry in defence against media criticisms of plant-produced bread. Conversely perhaps the industry tried to do this but found that the media were not interested in publicising the Schlackman findings in their own selfish interests. Certainly to place the entire report in the hands of the media would have proved somewhat embarassing for the industry since the 'Blue-print for action' sections recommends such prevocative things as encouraging overtly a more permissive attitude to waste and increasing the price to release more funds for marketing. Certainly, the methodology employed by William Schlackman Ltd was superior to that used by Market Investigations Ltd in that not only did the former recruit at random a representative sample of 2,500 housewives who were then asked to complete a diary (rather than relying on memory) as well as a questionnaire, but also a Retailer Survey of 191 outlets was conducted, the retail outlets selected being those at which a sub-sample of housewives interviewed, normally bought their bread. Of particular interest to this writer was the finding that brand imagery had little influence on consumer choice and the fact that Schlackman's promptcard split bread into clusters of 10 types (see appendices) thus avoiding the potential confusion inherent in the Market Investigations Ltd approach.

Further extracts from the detail of the Schlackman study of relevance to the authors own work area:

f. It is remarkable that only two per cent of respondents stated that it (bread) was not as good as it used to be, a result which tends to confirm the more general finding that, except for a small fastidious element of the higher income groups the prevailing attitude

to todays bread is complacent . . . . It is evident however that the strength with which this view is held varies considerably with age and it is probable that in the years to come, when there are fewer people who can recall the era prior to the advent of plant bread, it will diminish still further.

g. Sliced bread was mentioned very much more frequently by younger respondents. There is other evidence too which suggests that, at least for the younger generation, bread means sliced-and-wrapped; Hovis was the only brand name mentioned by more than a few isolated respondents; Awareness of crusty bread is distributed more or less evenly amongst the population; Housewives in the higher income groups displayed a higher level of awareness of all types of speciality bread.

h. Except in a very few instances, amounting to less than one per cent, respondents were able to buy, either regularly or occasionally as they wished, the types of bread they wanted to buy. This is consistent with all other indications that there is no imbalance between supply and demand and that the consumer is well served by the retail trade.

i. The ideal loaf should be white (83%), made in a local bakery (59%), large (63%). Strangely only 43% voiced a preference for a sliced loaf, 30% for it to be crusty, 48% for it to be pre-wrapped.

j. In total 46% of respondents claimed to have bought speciality loaves (higher claims from the younger and higher income groups) but only 2% bought them every day and 59% less than once weekly.

k. Dieting is relatively much more prevalent amongst the higher income groups and concentrated in the 25-49 age group.

Title "A survey of the consumer market for bread". Prepared for F.A.B. by N.O.P. Market Research Ltd through Ogilvy Benson and Mather Ltd in 1973.

Summary

One of the most recent researches, carried out in three stages and based on a random sample of men, women and teenagers aged above 16. A total of 1924 informants were interviewed with

cluster and factor analysis applied to quantify bread consumption by sex, social class, family type etc. An 'Automatic Interactions Detector' (AID) process was applied to examine those demographic usage and attitudinal characteristics which most determine bread consumption. The findings included information as to:

a. Who usually buys bread - housewives (91%), men (16%), non-housewife females (17%).

b. Where usually bought - bakers shop/specialist bakery (32%), delivered (21%), supermarket (20%), grocer (18%), general store (7%), other (6%), indicating a move away from delivered bread.

Of particular interest relative to this study was that the N.O.P. survey found that seven per cent of the respondents claimed to sometimes have difficulty in buying bread and the reasons given for this were as follows:

c. Reasons for difficulty in buying bread - shops selling out (45%), little choice or variety (27%), difficult shop hours (8%).

With regard to the eighty-seven per cent of respondents who were housewives, seventy-two per cent of these said that there was no type of bread they would like to buy quite often which they found they could not really get in the shops. French loaves were mentioned as being difficult to get by four per cent of the housewives but no other particular type of loaf received more than a two per cent mention.

Unfortunately apart from this open question on types which generated replies indicating specific varieties like French loaves, the survey confined itself to the following bread types:-

Wrapped white sliced bread
Wrapped white unsliced bread
Unwrapped white unsliced bread

Wrapped brown sliced bread
Wrapped brown unsliced bread
Unwrapped brown unsliced bread
Other bread
White rolls

Title "Shopping Habits and Attitudes to Shop Hours in Great Britain". Office of Population Censuses and Surveys, Social Services Division. An enquiry carried in October and November 1970. Published H.M.S.O. 1975 on behalf of the Home Office and the Scottish Home and Health Department by Michael Bradley and David Fenwick.

Summary

2747 respondents (1215 men and 1528 women) to 66 questions by personal interview. Of these 1295 women, but only 117 men were responsible for household shopping.

Certain of the questions were related to this researcher's work as follows:

Question 18 Are there any shops which you find it difficult to get to? If yes, which are these? - None of the women answered yes and only 1 of the 117 men answered "bakers/confectioners".

Question 19 How convenient or inconvenient do you find getting the following? (there followed a list of products including bread) - Of the total of 1412 valid respondents (117 men, 1295 women) 79% (69% male, 80% female) said that bread was very convenient; 15% (21% male, 15% female) thought bread was fairly convenient; 3% (6% male 3% female) answered not very convenient; 1% (2% male, 1% female) replied very inconvenient and 1% (1% male, 1% female) did not know or were not concerned.

Question 21 (a) Do you have any of the following deliveries? (list included bread) (b) If not, why not? 1. No delivery service available 2. Shops I use do not deliver 3. Others (please specify) - 24% (13% male, 25% female) had bread delivered. Of the 1073 people who did not have bread delivered, 34% said demand was too small; 28% said shops were handy; 24% said there was no delivery service; 12% said no-one was at home; 7% said quality was better in shops; 6% said they preferred to see what they were getting; 5% said the delivery service was unsatisfactory; 2% said that they baked their own bread. (these were mainly in the Professional Class which was 4.5 times greater than any other class); 3% said that it was cheaper not to have deliveries.

Question 23 Was concerned with mobile shops. A total of 411 respondents had mobile shops available to them but only 32% of these actually used them, of which only 12% bought bread from them.

Comments

A total of sixty-six somewhat complex questions must have been found rather tiresome by some of the respondents and this may have led to some bias in replies to the later questions. The survey was difficult to understand and one wonders why the survey design covered 1215 male respondents to discover that only 117 of these were responsible for household shopping. Some of the subsequent male-female breakdowns (eg 1% or 2% meaning a mere 1 or 2 men) were therefore rather misleading.

Title "How homemakers think about bread and baked goods in general" - a depth group interview by David G. Watrous and Associates, Inc Illinois, July 1973.

Summary

The purpose of this study was to disclose to the American Bakers Association the quality and quantity of research findings available to bakers locally through the proper application of the research device known as the "focus" or "taped" or "depth group interview". All four sessions were conducted in the Chicago metropolitan area, respondents being both blue-collar and white-collar homemakers with families which included at least two children and at least one teenager.

The findings showed that American adults were interested in baked goods variety; that even then the homemaker wanted to try and buy rarely-purchased bread types with which she and her husband were already familiar; 'Yet a very large share of families never satisfy that interest, because the products available are not tuned-in to their perceived requirements.' In addition Watrous found that the homemaker has a high level of curiosity in (and willingness to try) new and different bread products if only bakers would give her an opportunity to do so in a manner which 'accommodates to her perceived needs and concerns'. The study left Watrous with the very strong suspicion that bakers' turning away from adult interests and variety is importantly responsible for the incursions of other product types which have 'chipped-away pieces of the baking industry's business and will continue to do so.' Examples given include toaster, rice, pasta and snack products which he postulates have taken away a large piece of a business much of which could have belonged to the baking industry and once did. Watrous confidently predicts that the next ten years will spawn exciting new ideas in bakery products

but poses the question as to whether these will be generated by the bakers themselves or by other food marketers, instancing how meat separated into the two industries of 1. Fresh 2. Processed.

Title "Mintel Market Intelligence Report on Bread, August 1974"

Summary

This report summarises some of the National Food Survey data. More importantly, in an attempt to obtain an up-to-date picture of bread buying, Mintel commissioned British Market Research Bureau to conduct research on a sample of 964 housewives in May 1974 and releases the more pertinent facts in this report. It gives brand shares for Hovis and the slimming breads (Slimcea, Procea, Nimble) and Energen Rolls. Also source of purchase data and types of bread bought by families with/without children by the following varieties:-

White unwrapped and white wrapped
Brown unwrapped and white wrapped
French bread
Slimming bread
Bread rolls
Other bread
None

The data is analysed by area, age and social class. The report is completed by a penetrating summary of the future of the bread market. This piece of research comes the closest to the writer's chosen area and certainly supports the view that some of the criticisms of the baking industry might be unfounded. For example:

> Much criticism of the bread industry is ill-informed but in general, it falls into two categories, the first group centering round the alleged taste and

> nutritional deficiencies of white bread and the second about bread prices. Mintel is not qualified to discuss bread's nutritional value and so will make no comment in this area. Taste must be a matter of opinion but it has been observed that even when a housewife is in a family baker's shop with a choice of buying a freshly baked loaf or a wrapped, sliced, branded product she often buys the latter, even though she may use the shop because of its fresh bread aroma. Certainly the success of wrapped bread indicates that it is generally acceptable. It is more reasonable to take the results of the public's buying habits as indicating what most people like than T.A.C.C. whose research into consumer complaints for their recent publication "Bread" ended with just one quote from a farmer who lived alone and baked bread for his dog - hardly a typical consumer!

These then are the major baking industry market researches relating to consumer preferences by type of bread. Taken together they certainly shed some light on attitudes towards the "British Standard Loaf" which can be taken to mean plant-produced white wrapped and sliced bread. However, they fall short of establishing quantified preferences for individual varieties such as slimming breads, "Danish",crusty breads, "Hovis", milk loaves etc. and make no attempt to correlate preferences with known production i.e. to set demand against supply by variety, indeed this is not their objective. The major industry researches discussed, cover a span of about ten years during which many changes have taken place not only within the industry itself but also within the societal framework in which it operates, including population structure changes and the increasing pressures of "consumerism".

4.5 OTHER RELATED ASPECTS

The purpose of this section is to examine some of the special circumstances in the British bread industry which have a direct bearing on consumer preferences and/or baking industry

production. For the sake of simplicity these circumstances are examined under the four headings of Production, Distribution, Organisation and People.

Production Like its American counterpart the British baking industry has consistently been in a situation of being over-planted. The major causal factor creating this situation is the decreasing consumption of bread per capita. Population increases of the right proportions would of course have offset this factor but these have not materialised and the previous population increase forecasts can now be seen to have been somewhat optimistic. If decreasing bread consumption per capita can be attributed to increasing affluence, only severe and sustained economic depression appears to remain as a counterweight to the alternative of continually contracting production during a period of no growth in population. The "if only" type of discussion, that is discussion along the lines - "if only bread could be made more exciting to eat," seems to be highly speculative and better left alone. Recent production history is therefore a depressing picture of bakeries being closed down and continual contraction in terms of the total weight of bread baked. Much of the plant however has either become technologically obsolete or has exhausted its useful life and so there have been a number of new bakeries opened, where demand, distribution savings and lower production costs per loaf have provided justification. Profitability in the baking industry is in general terms relatively low - a situation suggested by the existence of too many bakeries in relation to too little demand.

The lack of satisfactory profitability is more basically due to rising costs, particularly increased distribution costs - a problem exacerbated by price increase constraints imposed by the Government, usually as part of prices and incomes policies.

A report in "The Grocer" (November, 1975) referred to a spokesman for the Federation of Bakers claiming that government price increase restrictions would mean some manufacturers facing 'an even larger loss on the production of standard bread than they are making at present'

At that time Spillers made no secret of the fact that production of standard bread was proving unprofitable and RHM were predicting closures.

That these predictions were correct is confirmed in a report by management information specialists ICC Business Ratios publicised by "The Grocer" in October, 1979, a section of which under the headline of 'Spillers must have felt they were on a hiding to nothing' states:

> The baking industry provides a good reflection of some of the problems which have been facing the food processing industry over the past few years Bread sales are currently worth £1.2 bn a year, but the product has always been "political" as it plays such a basic and emotive part in the nation's diet. Various governments have tried to control its price in one way or another.
>
> In 1935 there were around 24,000 bakers and confectioners and the three largest of them accounted for only 10% of the market. Until May 1978 three big companies - Ranks (sic) Hovis McDougal, Spillers and Associated British Foods - supplied around 62% of the nation's bread and a further 40 independent bakers supplied another 11%, the rest being sliced up between 5,000 small master bakers. Then on the heels of a long and bitter industrial dispute which hit the industry hard, Spillers, the Wonderloaf and Homepride baking group, which had 16% of the market, decided to withdraw from the bread business altogether, closing 23 bakeries at a cost of £16 m in redundancies and other expenses and selling 13 to RHM and ABF for £15.5 m. The closures took place against a background of rapidly declining bread consumption - from 51.08 oz per head per week in 1966 to 33.11 oz 10 years later - and a rise in supermarket chains with the emphasis on price cutting and their bulk buying discounts.

> With the average profit on a price controlled standard loaf (as it was then) of 0.02p, Spillers must have felt that they were on a hiding to nothing . . . .
>
> And following a further 5% drop in bread consumption, ABF have closed two of their newly acquired bakeries - at Cambridge and Swansea.

"Keynote's" report in June 1979 confirms 'the major problem that bread producers face is overcapacity' and expected a further fifteen to twenty bakeries to close during 1979.

As in all large companies, the production managers in the bakeries owned by the big plant bakers operate under a system of budgetary control. Owing to low profitability and continual contraction, these Production Managers are, as might be expected, subjected to two sustained concerns, one being the frequent and rigorous examination by Head Office of their production costs and the other being the ever present fear that their bakeries might be closed down. It is not surprising therefore that production managers look carefully at the costs of the different varieties of bread baked and perhaps become antagonistic towards those which can be seen to be adversely affecting profitability. Owing to the fact that yield per 280 lb sack of flour is imprecise (it varies from a poor yield of 220 standard loaves per sack to an excellent yield of 234 standard loaves according to the quality of flour, moisture added and type of loaf being produced[1]), actual production against orders is accepted as being inaccurate by a small percentage either way and a system of "plussing" or "minusing" emerges. That is to say that where over-production of a given variety occurs, the van salesmen get "plussed", in other words - given more of that variety to sell that day than they

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1 Figures obtained from a variety of bakery production managers, different companies.

actually ordered. Where under-production occurs, the van salesmen are "minused", that is receive less of that variety to sell that day than ordered. Under these circumstances a production manager might be forgiven if he was tempted to deliberately over-produce the more profitable varieties and under-produce the less profitable varieties in what he may regard as being the best interests of his company.[1]

A van salesman continually subjected to minusing of a relatively minor variety and facing daily the consequent irritation of some of his customers might equally be forgiven if he either ordered more of that variety than he actually wanted (in the expectation of being minused) or decided not to bother with that minor variety in future (because the variety gives him far more problems than it is worth[2]). The end result of the interaction of the process just described is a distortion of the real demand-supply situation for certain varieties. However the bending of demand towards more profitable varieties and away from less profitable varieties is by no means the prerogative of the baking industry and might be regarded by some as a legitimate tactic to be employed by all businesses.

Distribution Baking may be regarded as a distribution - intensive industry in that the greater proportion of total wages cost can be found in this segment.[3]

John Sussams, a senior consultant with MHL Consultants Ltd published an article in "Management Services" (1977) which

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1 Interviews with ex-Spillers and ex-RHM bakery production managers.

2 Interviews with bakery van salesmen and sales training personnel.

3 Spillers regional accounts.

compared delivery costs for different types of bread delivery routes on a 'per ESL' (equivalent standard loaf) basis. The ESL is used to convert all other bread than the large 28 oz loaf (the standard loaf) into its equivalent. For example a small 14 oz loaf would be 0.51 ESL's (allowing for differences in yield per sack of flour). The following results were stated:

TABLE 3 : DELIVERY COSTS

Type of delivery route	Average cost per ESL
1) Trunking	1.375p
2) Bulk to major retailers	5.96p
3) Typical urban to retailers	5.55p
4) Typical rural to retailers	7.30p
5) Mixed route, mainly to retailers	6.72p
6) Mixed route, mainly door-to-door	7.60p
7) Door-to-door only (1750 ESL's)	5.71p
8) Door-to-door only (1250 ESL's)	11.20

Profitability was given for other than door-to-door routes (largely unprofitable) as follows:

TABLE 4 : ROUTE PROFITABILITY

Type of route	Profit per ESL
Bulk	5.96p
Urban	5.55p
Rural	7.30p
Urban with trunking	6.93p
Rural with trunking	8.68p

Van salesmen are engaged in distribution just as much of the trunker drivers who deliver in bulk from bakery to depot or from one bakery to another (in circumstances where production of a given bread variety has been "rationalised" to be made at one bakery but is in fact in demand at several other bakeries

within a regional cluster). Bread until recently was distributed in two main ways, one being through shops of various kinds, the other being door-to-door. The latter form of distribution was traditionally achieved by a mix of employed van salesmen and self-employed agents. As more sophisticated cost analysis (such as individual route costings) became employed in the pursuit of increased profits, it was discovered that the employment of door-to-door (retail) van salesmen resulted in overall losses, whereas self-employed (franchise) agents were overall a profitable channel of distribution. In recent years therefore, the larger baking concerns have shed employed door-to-door salesmen in favour of self-employed agents. The process caused a great deal of disruption in that typically, the retail route weekly turnover achieved by an employed retail van salesman was considerably below the level required to make it attractive in terms of constituting a profitable proposition for a self-employed franchise agent. Consequently retail routes had to be merged before enfranchisement and in the process a proportion of door-to-door business was either lost or abandoned. This, it is suggested, was the underlying cause of the change from thirty-four per cent of all bread being delivered in 1965 (ex Market Investigations Ltd) to twenty-one per cent in 1973 (ex NOP Market Research Ltd). There were of course other factors, including mergers/takeovers, the ceasing of Co-operative dividend on delivered bread when the Co-operative bread baking interests were acquired by Spillers and, last but not least, cut-price bread offered by local shops. However, strange as it may seem, a large number of housewives remained remarkably loyal to their delivery man, continuing to pay as much as 4p per loaf more than they would pay for the same bread obtained from their local supermarket. The sharp decrease in the proportion of bread delivered direct to the housewife will perhaps constitute a further contributing factor in the possible distortion between supply and demand of individual bread varieties. The reason

for this view is that the van salesmen delivering direct to the housewife and having personal contact is likely to be a more accurate reflector of actual demand than the van salesmen delivering to shops and who were traditionally allowed a great deal of autonomy in which types of bread were put on the shelves in a majority of supermarkets (which are in themselves more remote than the customers' opinions than counter-service shops).

Referring now to the shops selling bread, these of course split into a variety of shop types, the proportions of which have altered radically over the past 10 years. The Census of Distribution 1971 clearly shows the decline in numbers and market share of independent grocers between 1961 and 1971 (down 25.6% in numbers and up in turnover per outlet by only 92.8% against multiples turnover per outlet growth of 338.5% and co-operatives 102.5%) By contrast baker's specialist shops (as opposed to grocers) actually increased numbers from 17,260 in 1961 to 17,299 in 1971 but turnover per outlet grew by a mere 42.7%. Department of Industry figures show that from 1971 to 1974 independent baker's shops gained 48% on monetary sales against only 38% by multiple baker's shops (mainly owned by the larger plant bakers) and this can be taken to indicate some swing in demand since prices will tend to be a great deal higher in independent baker's shops than in multiple grocers and higher in independent baker's shops than multiple baker's shops as any consumer advice centre conducting shop prices tests will confirm. However, it should be pointed out that the above figures include all products, not merely bread.

Organisation If the plant bakers whose forte is white wrapped and sliced bread strengthen their organisation relative to independent bakers producing breads on the shop premises, then it could be expected that some changes in the supply versus demand situation on individual varieties would result. It is

interesting to recall Drucker's statement (1961) to the effect that the basic objective of any organisation or enterprise is to survive. Even the Co-operative with its huge assets and J. Lyons with its high overall profit saw unprofitable bread baking operations as a threat to their corporate survival and in December, 1970 the two companies baking interests were merged into a separate new company - J. W. French Ltd. The operation was unsuccessful and in a further attempt to survive J. W. French was merged with the then United Bakeries Ltd (the unprofitable[1] bread baking division of an otherwise profitable company namely Spillers) less than a year later (on October 14th, 1971) to become Spillers-French Baking Ltd.[2]

This merger was of immense significance to the industry especially since rumours of a merger between United Bakeries Ltd and Rank Hovis McDougall had been rife for a number of years, even occasionally reaching some respectable financial columns in the press. Spillers were hardly likely to be interested in acquiring the production facilities of J. W. French Ltd. being itself already overplanted. The real purpose might be construed as obtaining distribution into Co-operative outlets (then a significant bread market share of seven per cent) who were already beginning the hard and increasingly successful battle to regain grocery market share lost to the other multiples. In fact the Lyons' bread brand (occupying one and a half per cent market share) was quickly phased out as one of the merger policies and an unexpected "courtship" began with Spillers (a former competitor) as the suitor to the somewhat reluctant socialist Co-operative retail societies. Surprisingly and not without some yielding of the suitor, reasonably harmonious relationships were established even to the point where Wonderloaf and Homepride brands were allowed on Co-operatives' shelves alongside their own label (Co-operative brand) bread. At this point many of the ex-Co-operative bakeries were closed

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1 The overall contribution on sales turnover towards Head Office expenses was in the region of two per cent

2 See Appendices for later figures confirming lack of pre-tax profits for all 'big three' plant bakers.

and their managers made redundant. It had been thought with some justification that the Co-operative retail societies regarded themselves as being more professional than their former baking operation and therefore perhaps welcomed more warmly than anticipated the greater professionalism of Spillers' baking division, backed by the formidable reputation and expertise of the Spillers' flour and grocery divisions with whom the retail societies were of course already trading for other products. The consistency and wrapping of much of the Co-operative label bread improved upon transfer to the more modern Spillers' plant and changes in varieties offered took place, for example, more slimming bread introduced on the shelves.

People Changes in people will obviously precipitate changes in attitudes and preferences towards products including bread. Over the past decade we have witnessed quite startling alterations in tastes as regards music, fashion and sexual permissiveness. We have seen "consumerism" emerge as a powerful pressure, encouraged by some politicians and resulting in new laws. Changes have taken place in education (like the raising of the school leaving age and the growth of comprehensive schools), in the economy (such as the level of affluence and the joining of the Common Market) and in the structure of the population itself. (More and more women are going to work and a rise in the coloured proportion of the population.)

These are but a few of the significant changes which have occurred in the last ten years but which should be sufficient to suggest that some differences between consumer preferences towards bread now and ten years ago might logically be expected.

4.6 CONSUMERISM

It is felt to be appropriate here to make some reference to consumerism as a force for market change other than that already made in the critique of Cornwell's work.[1]

It is not proposed to assiduously chart the growth of consumerism in America and its spread to Europe or the form of its organisation in Great Britain since other literature adequately does this - but rather to accept the presence of consumerism as it exists in British society today and then to examine its relevance to the controversy under discussion.

That consumerism does have relevance to the bread market is evidenced by a report in the "Baking Industries Journal" (1976) that following on the success of the "Campaign for Real Ale" comes the "Campaign for Real Bread" from the Vegetarian Society of the United Kingdom:

> Their demands appear to be for more wholemeal bread and greater use of home grown wheat.... What they want is available but not abundantly. And it is not available abundantly because there is not sufficient demand. If the Camreb - yes, that's what they call themselves - people would concede that bakers... have a certain business interest in their profession, they might also concede that if bakers had sufficient demand for this type of product they would make more of it. Let's face it, they could charge a premium on the price.

Also in 1976, the European Communities Commission published a background report which stated that it wished to tilt the Community in favour of a 'Society of Consumers' rather than a 'Consumer Society' and to help evolve policies towards this end it had interviewed 9,500 people over the age of fifteen throughout the Community. It was found that just over half (fifty-three per cent) were either indifferent or reasonably satisfied as

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consumers, contrasted with the remainding forty-seven per cent who were highly dissatisfied. Some countries including Britain were shown to possess a much higher level of vocal consumer concern and education than others but the report did not reveal whether this resulted in more discerning purchasing.

Mary Jennings (1974) refers to some work by J. Walter Thompson culminating in their "New Housewives' Survey", September 1973, which probed into the question "How satisfied are British consumers?" The following table indicates less public dissatisfaction with manufacturers of advertised products and their supermarket outlets than with nationalised industry:

Table 5

Consumer opinion on different businesses

	International companies %	Supermarkets %	Mfrs.of advertised products %	Elec. Boards %	Gas Boards %
Ready to listen to suggestions from the public	4	10	10	6	5
Too big to give personal advice	10	12	10	7	12
Good at acting on complaints	6	18	12	11	11
Trying hard to keep a good reputation	33	44	40	26	25
In touch with ordinary people	4	30	12	16	17
Efficient	9	16	10	11	9

John Methven (1974), then the first Director General of Fair Trading said in reply to a question concerning irresponsibility of consumer educational programmes on radio and television:

> If you can get an informed consumer then the amount that you have to regulate by statute becomes so much less and that certainly is an objective. You have got the consuming public divided into two sections in any Western country. Only about 30 to 35 per cent are highly sophisticated, highly informed and the problem is to try to extend this section.... There is always going to be irresponsibility on both sides, but because I want to see the consumer better informed you won't see me readily criticising the one any more than the other. I could just as easily criticise a lot of the advertising that trade and industry put out....

Chisnall (1975) when analysing the results of an Advertising Association survey conducted in 1972 concluded:

> Marketers should note carefully the findings from the AA survey. Women, in particular, seem to be far less favourably inclined to advertising communications; since 1966, the number of women who felt that advertising was misleading has practically trebled; and there is less willingness to concede that advertising results in lower prices. Whilst the better-educated appear to dislike advertising more than the average, they are also more ready to admit that it may be necessary sometimes. In communicating with "up-market" consumers and those who are well-educated, marketers should bear in mind that their messages will be scrutinised critically;

The National Federation of Consumer Groups (NFCC) was formed in March, 1963 and has a membership of about sixty consumer groups throughout the country which represent altogether some 10,000 men and women. The aims of the local groups are 'improvement by constructive criticism, of the standards of goods and services locally and the enlightenment of the consumer'. Clico MacIntyre (1974) states that the federated groups achieve these aims by providing informed consumer opinion to local bodies 'and by seeking publicity for its views in both members' publications and through the media.'

The attitudes towards plant-produced bread of the NFCC are therefore germane to this study in that adverse opinion could well result in adverse media publicity giving a false impression of general public dissatisfaction with plant-produced bread. It was for this reason that separate research was conducted with regard to members of consumer groups as opposed to ordinary members of the general public.

CHAPTER 5

METHODOLOGY ADOPTED

5.1 DATA SOURCES - BREAD PRODUCTION

Initially it had been hoped to examine the question of bread variety production versus bread variety supply on a quantified basis by establishing national bread production by type (from data assumed to be reasonably easily available from published sources) and then comparing this data with that for consumer preferences, the latter to be elicited from a purpose-designed consumer survey. However, when it was discovered that data on national bread production was not actually published and appeared to be unknown by any vested interest as a total figure let alone by type, alternative methodologies needed to be considered. A priori, estimates of national bread production for each of the required types needed to be made and it was decided to base these estimates on the best available data publicly or privately available rather than personally researched. Where necessary, following the lead of Government's statistical authorities, sales figures would be taken as being indicative of production. Plots of all available data, taken from all available sources, would be made and bands established for each type of bread over a time scale. In this way it was hoped to construct upper and lower parameters for each type of bread as proportions of total volume, that would be found acceptable as the best available estimates of national production. It should be remembered that the previously established body of criticism forming the basis of the hypothesis could be seen to be aimed at the large plant bakers, meaning largely the "big three" who in fact accounted for approximately seventy-six per cent of all bread production in 1975. Since requests for data on bread production by the "big three" had already been rejected there seemed little statistical or hypothetical point in seeking to establish by research bread production by 5,000 or so small bakers most of whom would in any case be "non-plant" by previous

delineation and accounting for the twenty-four per cent minority share of national bread production.

Since the forbidding of the practice of "sale or return" by Shirley Williams in September 1974, sales figures could be taken to represent at least ninety-eight per cent of production according to personal interviews with the Marketing Managers of the then big three plant bakers. The primary data source is Business Monitor PQ 212, a quarterly publication of the Government Statistical Service. Table 1 of this Monitor purports to show sales of bread by U.K. manufacturers. Unfortunately the figures are for two categories only (white bread and other) with no further breakdown and are only gathered from establishments employing twenty-five or more persons in the bakehouse and 'thought to account for 94 per cent of employment in all establishments classified to the industry.' Excluded from the figures therefore are the productions of the 5,000 or so Master Bakers, all the in-store bakeries which certainly employ less than twenty-five persons in the bakehouse and of course bread produced in the home estimated at two per cent of all households by the Home Office in Autumn 1970. Response to the enquiry can drop below eighty-five per cent for any given period, whereupon estimates are included for the missing figures. Clearly Table 1 is hardly an ideal or reliable data source for bread production by type estimates. Table 4 of the same Monitor gives estimates of bread consumption per capita by seven different types and this data derives from the National Food Survey (N.F.S) a survey based upon consumers rather than manufacturing enterprises. The N.F.S. uses a continuous three-stage stratified random sampling scheme and asks households to voluntarily record details of all food purchases made during the survey week. Results are not normally subject to sampling errors of more than two or three times the standard error and the exact actual errors are given in Table 15 of the survey. Unfortunately however, wholewheat and wholemeal bread purchases are

shown as being subject to sampling errors of 6.3 times the standard error. Nevertheless Table 4 of Business Monitor PQ212 constitutes the best and most reliable data source published for bread and the only real base for estimating bread production by type generally available. Although not generally available, use has been made of retail audit data for given periods and of the Television Consumer Audit (TCA). Both these sources confine themselves to wrapped bread and by definition exclude all plain (unwrapped and unbranded) bread sold in the shops as well as that considerable proportion of plain bread supplied under contract to catering establishments, schools, hospitals etc. A fifth group of sources utilised included the relatively small number of ad hoc researches conducted by FAB, individual plant bakers, various media and private individuals working for higher degrees or other academic goals.

5.2 ESTABLISHING THE TYPES OF BREAD FOR RESEARCH

In 1972 there were over 200 separate varieties of bread recognised by the computer at Spillers-French Baking Ltd. alone, taking differences of slice thicknesses and wrapper designs or labels into account. Allowing that some consumers would recognise or claim to recognise different brands of bread as being different types (for example a Mother's Pride 28 oz wrapped and thin-sliced white loaf is a different type to a Sunblest 28 oz wrapped and thin-sliced white loaf) then clearly myriads of different wrappers across the country posit a minimum of several hundred "types", for the purposes of a consumer survey.

Again it is observable fact that identical loaves are called by different names in different parts of the country and this situation adds complexity to any comprehensive exhaustion of all bread types bearing in mind that not all bread is wrapped and a non-wrapped loaf can only be recognised by a name against its physical appearance. Sometimes the type of loaf is distinguished by whether or not it is baked in a tin, if so what type of tin and even by the number or type of cuts made on the top. For example a coburg or round loaf made without a tin and baked plain without a cut is then called a"cob"(an old word meaning head), whereas cuts in a chequerboard fashion would dub the loaf a "rumpy". Yet another way is just one cut which makes a loaf looking like a large roll and sometimes called a"Danish cob." These problems have of course been confronted by previous researchers and by Government statisticians. The Secretary of State's Bread Prices Order 1974 recognised eight categories, ten trade names of plant bakers and eight varieties. For example categories 1-4 comprised 28 oz and 14 oz standard loaves, wrapped and unwrapped and the eight varieties were box, long pan, open top, pan, plain, sandwich, small pan and split tin. Taking four categories multiplied by eight varieties multiplied by ten trade names, results in a potential 320 combinations without taking other

recognisable differences such as white or brown, slice thicknesses etc. into account. In the same order, categories 5 and 6 comprise a list totalling thirty-three names including "Beats", "Liverpool Pilot", "Rasp" and "Tiger Skin". Even then care is taken to point out that the list is not necessarily exhaustive. Small wonder that the Act is found somewhat difficult to enforce in practice, as claimed by Elliott (1976). New names are continually being added to the bread type vocabulary viz. "Jubilee" bread made from twists of dough coloured red, white, and blue by F. Bates and Son of Ashbourne according to a "Nottingham Evening Post" report in 1977. On a priori grounds, the categories of bread adopted by the Ministry of Agriculture for Business Monitor tables were not found appropriate in modern terms in that recently important varieties such as Danish, slimming breads etc. are not separated out and are included with varieties of lesser importance under the heading of "Other". Whilst it is appreciated that the Ministry need to maintain categories in the long term to enable meaningful comparisons to be made, it was felt that this researcher's consumer survey should reflect modern trends in bread variety consumption and therefore the Ministry's categories, convenient though they were, were rejected. It was decided to dispense with one dictionary definition of the word "type" meaning a mark or figure stamped upon something and to adopt another dictionary definition meaning that which combines best the characteristics of a group. To all intents and purposes therefore the word "type" used herein after means a group of separately distinguishable loaves.

The reader might be wondering why the published figures could not simply be broken down into their constituent individual varieties or names and then rebuilt into whatever groups or clusters were subsequently deemed suitable for consumer research. The adoption of this method would then ensure a perfect basis for comparison between the two sets of figures. Unfortunately however, correspondence with the NFS finally resulted in a letter from

Professor J. A. C. Brown of the Institute of Economics and Statistics, University of Oxford which advised that the only form in which more detailed information (i.e. a finer classification of foods) exists than in the NFS publications is in the original questionnaires and that whilst in principle the Ministry of Agriculture would allow access to these, the labour involved in extracting the required data would be prodigious.

The possibility has also to be borne in mind that since the inception of the NFS statistics on bread in 1940, a number of new types of bread have been introduced which do not feature in the original classifications and that some types which are featured are no longer significant in the market.

Having explored the possibilities of adopting the NFS classification system and that used by the legal profession in drawing up the Bread Prices Acts, reference was then made to the systems adopted by previous private or trade researches on bread like the one used for the Schlackman study which was financed by the FAB on behalf of the industry and employed resources well beyond the scope of this author. It was however found that different researchers have used different classification systems none of which appear to have attempted correlations with NFS data, which is felt to be most important, bearing in mind the ongoing nature of government statistics and the ad hoc nature of private trade or individual research.

It is also felt that the problem of classification of bread types is a central issue to this type of research and that the reader should be left in no doubt as to the complexities involved. The final dilema lay in choosing between an all-embracing classification system compatible with NFS data on the one hand and the need for a simple group classification <u>easily recognised by the consumer</u> on the other hand. After much thought the actual decision was based upon the following major considerations:

1 The number of types of bread should be relatively few so as to avoid consumer confusion and to enable meaningful analysis to take place. This consideration automatically precludes the use of individual names numbering several hundred and enforces the use of terminology describing clusters of breads which whilst being individually different and distinguishable, nonetheless have common attributes.

2 The groups or clusters chosen should adequately represent the market and be mutually exclusive i.e. any individual loaf should clearly belong to a given group and no other group.

3 The use of fixed terminology or descriptions should be avoided if at all possible in view of the fact that different people use different names for the same type of bread and also that a given name can be ascribed to different types of bread by different people.

4 The groups of bread selected for this consumer survey should be capable of comparison with publicly available figures of bread sales/production as well as demand/distribution data obtainable from previous private or trade research.

Taken together the above four considerations proved quite formidable and perhaps explain why previous researchers have more often than not adopted different classifications of bread types to the NFS and to each other.

In the event a compromise was made in that only types of bread having at least one per cent of the national market (as revealed by all previous research) were separated out for description, to realise a total of twelve groups, including "other". This satisfied the first and second major considerations. The third major consideration concerning the danger of fixed terminology was to some extent overcome by using diagrams indicating the varieties of loaves included in each of the twelve groups as the prime method of description, supported by a subsequent written description which avoided individual names and referred only to group attributes.

The fourth criterion was easily met since more groups were employed, than previously conducted research, enabling the extra groups to be subsumed ceteris paribus by the more basic groups where necessary for comparison purposes.

The use of a national market share minimum of one per cent as a delimiting device did carry the disadvantage of omitting local lines significant to more than one per cent on an area basis.

5.3 SELECTION OF CONSUMER SAMPLES

Like most consumer researchers the author found himself between two stools one being the desire to achieve perfect statistical respectability as regards the representativeness of the samples and the other being sheer economic necessity, namely the constraints of cost and time. As Colin McIver so aptly remarked in 1972:

> True random sampling requires that every member of the defined population has an equal chance of being interviewed a requirement that is virtually impossible to satisfy affordably. (A special trip to the Outer Hebrides to interview Aeneus MacLeod whose name has popped out of the computer - and who turns out, when the interviewer gets there, to be on holiday in London - will knock a sizeable hole in any research budget).

Also Professor M. J. Baker (1974) helpfully points out:

> The Law of Statistical Regularity... holds that any group of objects taken from a larger group of objects will tend to possess the same characteristics as the larger group.

Notwithstanding this, great anxiety was felt regarding the possibility of allegations of statistical non-representativeness marring the results of the research. Partly because of this but more because of the need to achieve a nationally representative sample, the

services of a well respected professional marketing research agency were employed. Obviously interviewing on a national scale by a lone researcher was untenable and the cost of hiring interviewers to work to one's own sample design was exhorbitant.

Use was, therefore made of an omnibus consumer survey based upon Random Location Sampling to a total of one thousand housewives. This particular sampling method was developed to eliminate some of the more unsatisfactory features of quota sampling whilst mitigating most of the cost and other penalties of strict probability methods. Selection of respondents by interviewers is largely avoided by drawing within a few randomly selected and carefully specified streets from a master sample of 200 constituencies designed to achieve correct geographical and social class distribution. Further details of sample design and fieldwork together with nomograms allowing the establishing of confidence limits for all samples and sub-samples are given in the appendices.

In addition to this main sample, further samples were selected for postal questionnaires by the researcher as follows:-

Sample 2 A poll of all 63 branches of the National Federation of Consumer Groups was made, partially because a high response rate was guaranteed at low cost, partially because of the importance of this movement as potential opinion leaders and publicity seekers. It was felt that the possibility existed of a situation whereby the silent majority of housewives were reasonably satisfied with the products of the big three plant bakers and that a false impression of dissatisfaction might be engendered by a vociferous minority adept at securing publicity. The securing of data on active consumerists would allow comparisons to be made between the

bread eating habits and attitudes towards bread of these more aware and possibly more discriminate members of the population and those of the normal or typical housewife. A list of the branches involved can be found in appendices together with the covering letter from headquarters requesting branch co-operation in the completion of questionnaires. An approach was adopted whereby each branch was sent twenty questionnaires for distribution to members at the next meeting. A precaution was taken to guard against the danger of questionnaire completion by respondents having no part in the consumerist movement. These were marked N/A and in the event removed from the sample.

Sample 3 Following the rationale explained for sample 2, it was also decided to poll all colleges and universities known from sources available to the writer, to employ a marketing lecturer. In this case, ten questionnaires were sent with each mailing. Responses from teachers/lecturers only were retained in this sample and all other responses including of course a high proportion from students were removed. In this way a further sub-sample of other potential opinion leaders was obtained for comparison purposes.

5.4 SELECTION OF SURVEY CONTACT METHODS

There is little disagreement amongst authors as to the advantages and disadvantages of each of the major ways of contacting consumers viz. personal, postal and telephone. For example Baker (1974) writes:

> the telephone possesses the major disadvantage that private subscribers represent only a proportion of all households and tend to be concentrated in the higher socio-economic group. . . . The mail survey possesses the advantage that it enables the researcher to reach any household. . . at very low cost. It also avoids the problem of interviewer bias. Unfortunately the ability to contact an individual does not ensure his co-operation and mail questionnaires suffer from very high refusal rates - 50 per cent response would be considered excellent. . . . it is reasonable to argue that people who do not complete mail questionnaires are different from those who will not. As with the telephone there is also the possibility of mis-interpretation of the actual questions asked. . . . It is because of the disadvantages associated with telephone and mail questionnaires, that the personal interview remains the most popular survey technique despite its high cost. The use of trained interviewers invariably produces a high percentage of acceptable returns with a low refusal rate. The ability of the interviewer to clarify ambiguities improves accuracy. . . and greatly reduces the problem of respondent self-selection

Seibert (1973) enlarges this as follows:

> Surveys may be made according to several techniques: by personal interviews, by telephone or by mail. There are advocates of each approach. Each has features in its favour, but each also has limitations. A personal interview survey can be accomplished fairly quickly. Experienced interviewers are available in almost all sections of the country (note this is the U.S.). . . Personal interviewers can supply information on the surroundings, type of home, the estimated social and income status, the sex, race and age of the respondent. If questions are not interpreted correctly and uniformly the interviewer can supply the needed explanations. . . .
>
> Limitations of the personal survey. The problems encountered in personal interviewing are important too. The interviewer may not follow instructions properly. . . . Many times there are sampling problems because people are not at home or refuse to be interviewed.

> Advantages of mail surveys. Sometimes respondents are willing to give more personal information by mail especially if the identity of the person returning the form is not made known. . . Furthermore those who do return a mail questionnaire have elected to help the researchers and voluntarily decide to take the time to provide the needed information. . . . If the questionnaire is well prepared and interesting, the responses under these conditions may be superior to those obtained under the strain and pressures of face-to-face or telephone interviews.

However as Adler (1964) points out in industrial market research no problems of social class bias exist for the telephone survey. The universe consists of people who are on the telephone. Even in consumer goods research, challenges are being made as to whether the objection of bias is any longer viable. For example some new research by David Milne (1976) Research Director of Saatchi and Saatchi Garland-Compton shows that samples of telephone owning households give results similar to those obtained by conventional samples, for certain types of consumer goods and at less cost.

Nevertheless the use of the telephone method for survey contact purposes was rejected principally because its validity for consumer research has not yet been firmly established and also because previous research has shown relationships between types of bread eaten and social class. Another reason was that of possibily higher costs bearing in mind that a national survey was required and the unknown proportion of paid-for calls that might not gain co-operation. The use of observational techniques bears obvious attractions for any researcher concerned solely with in-store purchase behaviour and content to work on a micro-scale. As Seibert (1973) points out with no interviewers and no questions there is no question of bias. Factual information on purchases is:

> Simply a matter of stationing an observer at a representative number of locations. . . . The overt actions may even offer some clues as to the motivations behind the purchases. . . . Shoppers test bread for softness, suggesting the importance of softness.

Some researchers would however question whether the use of an obvious human observer rather than a hidden mechanical device such as a camera might mar the scientific objectivity of this approach. Notwithstanding these arguments the cost and limitations of the observational technique rendered the method unsuitable for the prime purposes of this particular study.

In having rejected the use of observational techniques and of the telephone for the survey contact method, two major alternatives remained namely that of the personal interview and that of the postal questionnaire. Noting the large measure of agreement in the literature that a well conducted personal interview represented the best option for this type of consumer research, this method was chosen for the main sample. Particular store was set by an advantage of the personal interview stated by Elliott and Christopher (1973) in making the decision and which has great pertinence to this study, namely 'A greater range of respondents may be used (e.g. the very young, the very old, illiterates, etc., who could not complete a written questionnaire)'. It was important to gain responses from the old since it was felt this age group would be more likely to bake their own bread.

With regard to illiteracy this problem appears to have received too little consideration in the past. It was stated on the BBC National News at 6.15 a.m. on 2.2.1977 that the latest estimates gave a figure of about two million illiterate adults in this country. This is equivalent to one in twenty adults and could mean an expectation of five per cent non-response to postal questionnaires, as a minimum figure.

Wells (1979), Director, Adult Literacy Unit writes:

> The development of adult literacy provision in recent years has been one of the most significant educational innovations of the 1970s. All the resulting publicity, although not totally effective, has certainly made people, both inside and outside education, aware of the problem and its effects.

The development of omnibus surveys has now brought the possibility of face to face interviewing on a national scale within the bounds of economic feasibility for the academic researcher. Whilst not many authors on marketing research do more than mention the growth of omnibus panels and include these in their list of method possibilities, Kendall (1972) writes comparitively extensively on the method. However his summary of disadvantages does nothing to dissuade the academic researcher from using the method, providing of course that the services of a well established and respected survey marketing concern are enlisted.

The adoption of the postal questionnaire methodology for sub-samples, came about largely because biased samples were being deliberately sought; obviating the major criticism arising from partial or minority response and also because of the somewhat special circumstances offering the promise of relatively high response rates for extremely low costs.

5.5 REPERTORY GRID TECHNIQUES AND MULTIDIMENSIONAL SCALING

In response to the Business Board of the C.N.A.A. having suggested consideration of the above as alternative methodology, a number of books and papers were read on the subject and supplemented by talks with experts in these fields including R. E. Thomas of the Ashbridge Management Centre (former Professor of Marketing at Lancaster University), Professor P. Doyle of Bradford University and Dr. A. Meidan of Sheffield University.

Firstly, with regard to repertory grids these were developed for practical psychological use by G. A. Kelly in 1955 and are extensively explained in his theory "The Psychology of Personal Constructs" published in two volumes. In later writings Bannistair and Mair (1968) whilst being ardent admirers of Kelly state 'The validating of grid method has not yet begun. . . . It seems clear that the grid will never be a very handy or easy tool of psychological investigation.' However, in this same book there is a brief one line reference to a grid having been constructed by

'Jones' to subsume types of bread in 1963. This was eventually traced to Professor H. Gwynne Jones of the Department of Psychology, University of Leeds. Professor Jones had, during the early days of repertory grid work in Britain, conducted a little-known commercial marketing research study in 1962 which employed the use of a repertory grid, followed by factor analysis in order to determine those "constructs" which were relevant to bread. The main purpose of Jones' study was to determine attitudes to branded bread with particular reference to "Sunblest" and constitutes the only case of a repertory grid technique being applied to bread marketing research in the knowledge of the writer.

The major reason for professional market researchers rejecting the use of repertory grids for large national studies appears to be the limited number of respondents which can be suitably studied in this way (thirty-two in the study by Professor Jones). After all, Kelly designed the repertory grid test for use on individual psychological cases. At this point in time repertory grid techniques are useful as pre-mass survey tools for areas in which "constructs" which determine attitudes are relatively unknown and therefore relevant to questionnaire design. In the present case it is held that attitudes towards bread are relatively well known as a result of previous research and that the use of repertory grid techniques is therefore unnecessary. In addition to this the complications inherent in administering a suitable grid to say nothing of the considerable amount of respondent time demanded by the technique, render the method more suitable to a micro study than the macro approach adopted by this researcher.

As the repertory grid technique developed from Kelly's "Theory of Personal Constructs", so did multidimensional scaling techniques arise as a natural extension of repertory grid studies. Essentially the theory states that individuals compare and contrast any stimuli which confronts them on a number of bi-polar constructs, which will then describe how the stimuli will behave in the future.

The mesh of evaluative constructs will be modified each time that stimuli do not behave in the manner predicted. The extent of the modification may vary from a mere shift towards or away from one of the bi-polar extremes, to a rejection of that particular construct as a suitable evaluative tool and the adoption of new bi-polar labels found more relevant. The repertory grid technique attempts to determine the nature of the constructs utilised by individuals for given stimuli and to gradually build up a picture of group evaluative criteria. The value of the technique lies in the objective determination of evaluative criteria from the respondents, rather than working with the researcher's own subjective assumptions of how people judge things. It is usual for respondents to produce between ten and thirty bi-polar dimensions with regard to attitudes towards brands.

Kelly's work as a psychologist naturally centred on individuals' constructs used for evaluating stimuli in the form of people, particularly self and people relative to self such as mother, friend and boss. Bi-polarity labels used were 'emergent pole' as opposed to 'implicit pole'. The following table expresses the principle:

Table 6 : REPERTORY GRID

Stimuli			Constructs	
Self	Mother	Boss	Emergent pole	Implicit Pole
	✓		Don't believe in God	Very religious
✓			Athletic	Not Athletic
	✓	✓	Understands me well	Doesn't understand me
✓		✓	Successful	Unsuccessful
		✓	Similar education	Different education

The repertory of constructs used to evaluate different stimuli varies both with the individual and the stimuli and can remain permanent (where its use satisfactorily evaluates a given type of stimilus) or be in a state of evolution (where its use is found lacking relative to the satisfactory evaluation of a given stimulus). In the latter case old constructs might be rejected and new constructs experimentally applied until the repertory satisfactorily predicts the behaviour of the stimulus or satisfactorily describes it.

Kelly claimed that the above type of "Repertory Grid" has many applications pointing out that other data might be entered in the margins such as behaviours along one and occasions along the other or experiences versus culturally prescribed constructs. There are almost unlimited possibilities with regard to marginal entries and more than one combination of axes. It was possible said Kelly to build a three-dimensional grid although in his own experience this was a formidable undertaking.

The possible applications of Kelly's theory to marketing were seen later, as marketing theorists looked increasingly into the behavioural aspects of consumers in the buying process.

Repertory grid techniques began to be used to evaluate attitudes of housewives towards brands of consumer goods and have the advantage that the salient dimensions are elicited from the respondents themselves and in the evaluative language used by the respondents themselves rather than being prescribed by the researcher in his terminology with high consequent risk of errors. Elliott and Christopher (1973) illustrate the marketing application along the following lines:

Table 7 : REPERTORY GRID

Brands

A B C D E . . .

cheap	not cheap
modern	old
advertised on TV	not advertised on TV
used often	never used
.	.
.	.
.	.

Repertory grids fell short when attempting to site stimuli somewhere along the bi-polar construct. Often respondents were found to be unable to verbalise the exact scale positions for stimuli and sometimes incapable of explicitly verbalising the constructs. Multidimensional scaling (MDS) techniques were developed to help to overcome difficulties in placing stimuli along set scales. For example in attempting to clarify brand positioning for a given consumer goods market, respondents would be asked to select the pair of brands which were felt to be most dissimilar and then the pair perceived as being most similar and then to rank order remainding brands between these two extremes. A non-metrically scaled result for relative brand position then emerges as a two dimensional perceptual map, thus avoiding the disadvantages of attempting to position brands exactly along metric scales.

However a new difficulty emerges in determining and labelling the two dimensions involved, the interpretation of similarity having been left to the individual respondent. Sometimes however, the identification of the construct is clear from the data for example where brand X has been selected as most

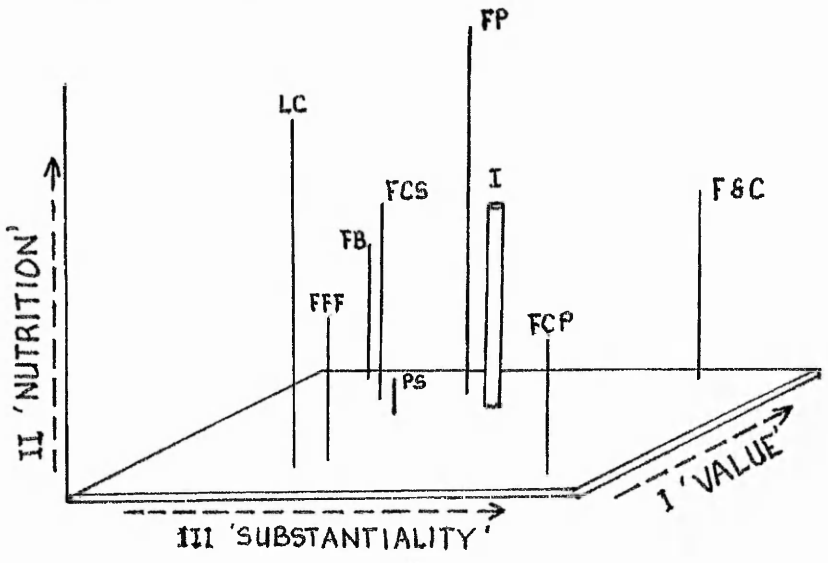
dissimilar from brand Y and where brand Y is the cheapest, brand X the most expensive thus indicating a price dimension.

Extensions of the mapping technique and employment of computers allow the concept of an ideal brand in perceptual space with actual brands positioned around it in a multitude of dimensions. For example brand X might be closest to the ideal for dimension one (say price), third closest for dimension two (say taste) . . . and in position fourteenth for dimension twenty-six (say lasting qualities).

Doyle and McGee (1973) describe some work done on eight convenience products with twenty-six housewives in the London area using sixteen scaled questions concerning their attitudes. They claim that the essential advantage offered by non-metric multidimensional scaling (NMS) 'is its use on non-metric input data to construct a psychological space in which the distance relationships between objects can be meaningfully interpreted.'

The following diagram illustrates the results of the work in terms of product space in three dimensions for the eight products concerned, relative to each other and to the ideal product.

Diagram 2 : Non-Metric Multidimensional scaling



Whilst admitting that so small and perhaps unrepresentative a sample precluded the deriving of clear recommendations Doyle and McGee felt that the illustration was highly suggestive for marketing management and that if brands were plotted the configuration would have many uses in brand image measurement and advertising effectiveness tests. Also that closeness of products would indicate the degree of competition or 'cannibalization'.

In a paper 'Applications to multidimensional scaling in marketing' presented to the Marketing Education Group conference in 1974, Doyle subsumes his earlier work; joint work with Fenwick and with Hutchinson, in 1973, as well as work by other researchers including Green and Tull (1970), Green and Rao (1972), Green and Carmone (1970), Carroll (1972), Carroll and Chang (1967), Kruskal (1964), Shephard (1962), and Tucker and Messick (1963). In this important and extremely helpful paper Boyle points out that computer algorithms underlying NMS date only from 1962 with the publication of Shephard's paper and that development followed by Professor Green and his colleagues at the University of Pennsylvania.

Whilst concluding in this paper that MDS offers a useful approach to the brand positioning problem, Doyle states that these and similar techniques should not be oversold and points to the work by Green and Tull (1970) which identifies technical problems concerning interpretation of results and by Ehrenberg et al which questions the usefulness of brand positioning and market segmentation. Doyle summarises the views of Ehrenberg (1972), Bird and Ehrenberg (1970) and of Collins (1971) on this matter as accepting that some brands possess different images and some consumer groups have distinct purchasing patterns but arguing that these differences are relatively minor in explaining buying

behaviour and that attitudinal/buying patterns can be explained simply from knowledge of the level of penetration of a brand. Meidan's (1975) paper is equally comprehensive and reviews 'successful applications' of the NMS methodology to a variety of marketing aspects:

> Whilst most of the past research and applications of the NMS techniques has been undertaken in the USA, some examinations and applications, especially in the marketing area, have been carried out lately in the United Kingdom. The main contributors in this country being Christopher (1973), Coxon (1972), Doyle (1972, 1973), Doyle and Hutchinson (1973) and Doyle and McGee (1973).

Green and Carmone (1970) state in their chapter on the limitations of the methodology:

> Problems were discussed from several viewpoints - computational, empirical and conceptual. It seems to us that marketing researchers can be of valuable help in resolving some of these problems, particularly those at the empirical level. The results of such pilot studies might be useful in suggesting various modifications to, and extensions of, the currently available algorithms. Research related to any of the three viewpoints is bound to be time consuming but, it seems to us, vital to any reasonable evaluation of these techniques in marketing decision making. The research commitment appears sizeable, but, if our limited experience is any guide, so does the potential.

Other comments on the subject this time from Green and Tull (1970) contradict the impression that the 'massive armamentarium' of non-metric scaling methods is just waiting for application to marketing problems. 'It seems fair to say that the computational side . . . has run far ahead of their empirical application. Even from a computational

point of view however, several problems remain'. They also refer to the 'labelling problem' and point out that respondents models can change with increasing complexity of stimuli to the point when some dimensions may be entirely ignored in the desire to reduce mental efforts associated with involved 'tradeoffs' among conflicting criteria. The statement is made that applications of NMS in marketing research are at a very early stage of development. Holmes (1972) is more optimistic in his hope that the introduction of time sharing computers and advances in higher level programming languages will enable researchers to utilize NMS to great advantage.

In the fifth edition of "Marketing Research" (1978), Luck et al point out:

> We cannot interpret the positions of the competing brands until we know the "ideal" product attributes as the respondents saw them. They could hardly be expected to share identical perceptions on desirable product attributes, but rather would tend to fall into clusters or segments.

Perhaps the latest pronouncement on this subject as far as British books are concerned is to be found in that by Proctor and Stone (1978) who see the disadvantages of MDS as:

> (i) Multidimensional scaling has not yet been applied to marketing research problems. Numerous possible applications have been suggested which include evaluating advertising methods, the analysis of product life cycles and the segmentation of markets. However, problems associated with the development of sophisticated techniques and computer analysis coupled with the high costs entailed have curtailed its use to theoretical applications.

(ii) Problems can be foreseen in the definition of criteria for the labelling of the various aspects of attitudes that would be measured. The respondent chooses his own criteria for analysing his attitudes which could present difficulties in interpretation.

In a personal interview with Professor Peter Doyle of Bradford University it was agreed that MDS required the use of a computer and that the availability of computer programmes in this country was such that MDS could be said to be inappropriate to the author's chosen study.

Contact was also made with Dr. A. I. M. Coxon formerly of the University of Edinburgh who was known to be working on MDS computer programmes but unfortunately his backlog of work was such that he was unable to assist in the development of a purpose-made programme for this application.

Whilst the idea of finding the ideal loaf in conceptual space is an extremely interesting one this is not the expressed objective of the present research. In any case the search for the conceptually ideal loaf should be made if and when the results of this research show that there is indeed a severe mismatch between the types of bread produced and the types of bread preferred. This would then point to a quantifiable gap into which the conceptual loaf could be slotted assuming it was capable of being produced at a price at which it would be bought. A subsequent research using MDS, if successful, would then be interesting in its revelations as to how close to the ideal, existing types of bread lie in conceptual space. However, surely not even the most antagonistic of the critics of the British bread industry would suggest that for some people at least, existing types of bread are not ideal and eventually the argument would devolve to one of quantifying exactly how many people

would actually find the conceptual loaf ideal. Here the author rests his case in considering the alternative methodologies of MDS and repertory grid techniques but finding them wanting for the particular purpose of this study.

5.6 THE SURVEY/QUESTIONNAIRE DESIGN

In stressing the need for survey design, Oppenheim (1966) states:

> Fact-gathering can be an exciting and tempting activity to which a questionnaire opens a quick and seemingly easy avenue; the weaknesses in the design are frequently not realised until the results have to be interpreted - if then! Survey literature abounds with portentous conclusions based on faulty inferences from insufficient evidence wrongly assembled and misguidedly collected

The major considerations dictating this questionnaire design were of course the need to elicit sufficient data from respondents to prove or disprove the hypothesis and to achieve a sufficiently high degree of response for statistical validity. Whilst these seem simple enough, in practice one operates against the other, that is to say the longer the questionnaire is, the more formidable is the task of completion and the greater the risk that a respondent will refuse to co-operate.

The major constraint is obviously that of cost and again the length of questionnaire affects the cost of production, the cost of the subsequent analysis and to some degree the cost of response (in that allowance has to be made for a proportion of non-response when determining the size of sample and this influences, ceteris paribus, the number of mail-outs or interviews)

Further considerations affecting questionnaire design are inherent in the survey contact method chosen. Generally speaking, a longer questionnaire is possible and a higher response rate is likely when conducting personal interviews as opposed to the postal method. Furthermore a personal interview allows verbal explanation of difficult points and subjective interpretation of response, whereas the postal survey leaves no leeway for mistakes. The questions set in a postal survey have to be that much more simple, unambiguous and short. The length of the postal questionnaire (assuming no material reward for the respondent) has to be such that recipients are not dissuaded from completing it by their impressions of the time needed to do so.

Since it was proposed to conduct more than one survey and to use both personal interviews and postal contact methodologies, the questionnaire design also needed to take this into account. Obviously, as comparisons were to be made between the results from the main omnibus survey sample using personal interviews and the results from the sub-samples using the postal survey method - these two questionnaires had to be identical in construction. That is to say that the questions had to be identical in wording and sequence. The only exception to this was on grounds of cost where the personal interview was allowed to terminate for those respondents who did not buy bread. Considerable note was taken, when deciding upon the form and sequence of questions, of Gallup (1947) who suggests the following ground rules:

1. Questions to ascertain the extent of the respondents' previous thinking, if any on the subject.

2. Open-ended questions to derive respondents' general feelings on the subject.

3. Questions, often multiple-choice, aimed at eleciting specific information.

4. Questions aimed at discovering why the views given in answers to 3. above are held.

5. Questions to determine how strongly held those views are.

Some encouragement in the use of postal questionnaires was obtained from the examples of success in achieving high response rates quoted by Levine and Gordon (1958-9) and by Chisnall (1973). Also noted and used was Scott's finding (1961) that personalised envelopes produced higher response rates.

A covering letter is vital to the success of a postal questionnaire. This covering letter needs to have sufficient initial impact to persuade the recipient to read it and secondly must carry a strong enough appeal to convince the reader to complete the accompanying questionnaire in this case without tangible reward.

The postal questionnaires were to be sent to two sub-samples comprising different types of people, (members of consumer groups and marketing lecturers) and therefore the covering letters needed to carry different appeals. Branch Secretaries of consumer groups were circulated with a covering letter from Federation Headquarters, suitably worded (in co-operation with this researcher) to gain maximum response.

The sub-sample of marketing lecturers received a covering letter trading upon the cameradie of the fraternity and giving a full explanation of the reasons behind the survey.

However, cognisant of the increasing, general resistance towards completing questionnaires (which seems to vary inversely with the quantity carried out), use was also made

of a strong personal appeal on the questionnaire itself. A photograph of the researcher was incorporated in the hope that the recipient would find it that much more difficult to refuse co-operation than might have been the case with a somewhat anonymous signatory. An appeal for help was placed opposite this photograph and an attempt made to postulate a benefit to the respondent for completing the questionnaire. As is usual, the respondent was guaranteed anonymity.[1] It should be emphasised that the motivation behind the adoption of these techniques sprang from a determination to achieve maximum response to the postal questionnaires in the knowledge that response rates to this mode of survey are traditionally low. Consideration was given to the results of some American research which indicates that the use of certain colours for the paper enhance the response rate for postal questionnaires, notably yellow followed by pink but it was felt that sufficient action had already been taken towards the achievement of a suitably high response. Also little is known of the psychological effects of the use of particular colours on different races and it was felt dangerous to assume that the effect of yellow paper on Americans would be the same for British respondents. Reminders were made in the newsletters from Federation Headquarters to Branches for the sub-sample of members of consumer groups and reminder copies of the questionnaire itself were mailed to non-respondents of the educationalists' sub-sample immediately after the expiry of the requested return date.

Stamped and addressed envelopes were employed for the consumer group branches and addressed envelopes without stamps for the educational establishments.

The actual questions set were designed to achieve no more than the limited objectives of this research and it is hoped that the temptation to ask questions of a "luxury" nature was effectively resisted.

1 See appendix

Hodgson (1974) refers to some research by the Louis Harris International's weekly quota omnibus survey "Speedsearch" in which three samples of approximately 1,000 respondents were asked 'If another person asks you to let them interview you again, would you agree to be interviewed again or not?' This question followed interviews of increasing length and different subject matters for each of the three samples and gave the following result:

> The general findings, therefore of this exercise in research introspection are that the longer and more prying a questionnaire is (prying in the sense of touching upon personal areas such as finance etc.) the less likely are respondents to agree to be interviewed again in future.

A factual rather than an attitudinal opening was considered to be an important questionnaire design feature on the grounds that it was essential to get the respondents thinking in terms of the product prior to posing a somewhat difficult and hypothetical question aimed at establishing or disproving the hypothesis. It was felt that as far as the postal mode was concerned a difficult attitudinal opening might well dissuade the prospective respondent from continuing and thus result in a lower response rate.

There were inherent difficulties in the design of the questionnaire from the viewpoint of wording. This problem is certainly exacerbated where the subject matter concerns such an apparently emotive and variable product as bread. Previous work had revealed the existence of literally hundreds of labels and the further complication of a given label meaning different things to people in different parts of the country. After initial testing it was felt to be a vital design feature that types of bread were indicated by full descriptions rather than labels with an additional precaution of the use of diagrams in the hope of

removing all doubt concerning the possibility of wrong interpretation. Photographs rather than line drawings were experimented with but were found to confuse respondents. A strong identification of bread type with shape was discovered during initial pilot testing and that shape was more easily recognised from a line drawing than from a photograph, confirming Kirkland's (1927) statement that:

> A loaf may be any irregular mass of bread with no describable shape; or it may be a carefully shaped article, the particular shape settling the name by which it is to be known.

An intrinsic part of the questionnaire design was of course that of obtaining personal details enabling the usual demographic analysis to be performed. In common with established practice the demographic section was placed last in the hierarchy of questions on the principle that reluctance to give personal details is partially reduced when respondents have co-operated on a number of earlier requests for information. In obtaining demographic data care has to be taken that it can be used that is, assembled in such age, social class and regional strata as is accepted practice by other researchers in the chosen field, in order to facilitate valid comparisons.

Also of great importance in postal questionnaire design is the employment of clear and precise instructions. If, for example, the respondent were to find the words "YES/NO" in the answer column without explanation he or she might assume a deletion is required whereas the designer expected a tick. Suppose the respondent deletes with a sloping line thus "YES/~~NO~~" then how is the answer to be interpreted?

In using personal interviews, note has to be taken of wastage and its effect upon the survey design. A useful illustration of this can be found in the survey of shopping habits conducted by the Social Survey Division of the Office of Population Censuses

and Surveys on behalf of the Home Office in 1970. The set sample size was 3996, the addresses actually dealt with were however 3968 which in fact realised only 3182 valid addresses. Of the 3704 sampled persons only 3118 (84%) realised complete interviews. The total erosion was therefore from 3996 set sample size to an actual interview realisation of 3118 namely 22% or in other words a response rate of 78%. This erosion was caused by a mixture of events, including addresses found unoccupied or demolished, occupants ineligible or unsure of eligibility and outright refusals. The end result was a mismatch between the structure of the sample and the structure of the population in that certain regions/age groups were slightly over or under-represented. Whilst this distortion was not serious, adjustments have to be made which need to be taken into account in the survey design. It will be noted that a similar scale or erosion (from a set sample of 1,000 to an actual response of 782) was experienced by the marketing research company commissioned by this researcher to undertake personal interviewing on a national basis.

5.7 TIMING CONSIDERATIONS

Relatively few authors make reference to timing considerations when conducting surveys presumably because whilst human attitudes and preferences are in themselves in a state of continuous formation, major shifts or alterations are generally slow to occur. However, some types of surveys will be extremely sensitive to timing. For example one on attitude towards hanging would be greatly affected by the recent occurrence of a public outrange, such as the London bombings or a series of particularly revolting child murders; a survey on the attitudes of motor scooter owners would likewise be affected by whether the survey took place in the winter when the disadvantages to the rider are at their worst or in the summer when the advantages are at their best.

However, with a long established product in daily consumption, not subject to high degrees of seasonal fluctuation such as bread, timing considerations are less important.

Nevertheless it was important that the postal questionnaire subsamples were timed, insofar as possible, for completion-coincidentally with the main sample of personal interviews. A great deal of anxiety was felt concerning the possibility of a major event in the bread industry occurring during the survey period which might bias results. The personal interviews were sub-contracted to a professional marketing research agency and the terms of the contract were such that approximately one thousand households would be contacted over a period of only one week. On the other hand there was no guarantee that a majority of the recipients of the postal questionnaire would actually complete them within seven days from receipt. In this respect the taking of all samples could not be claimed to be precisely co incidental. Obviously timing can be important where products being surveyed are subject to an appreciable degree to seasonal demand. In the case of bread however only small fluctuations in total demand are discernible between summer and winter and these are attributable more to actual weather conditions on a day-to-day basis than to the seasons themselves. Nevertheless significant increases in demand for specific products such as slimming breads do occur seasonally and the seasonal advent of alternative products such as crumpets or muffins, needed to be taken into account.

Two further factors involved were the avoidance of holiday periods for the public in general and educationalists in particular, if maximum response was to be engendered.

Taking all these timing factors into account it was decided that the month of September would represent the ideal period for the surveys to take place.

5.8 PRE-TESTING AND PILOTING THE SURVEY

Kotler (1972) stresses the necessity of checking each question to determine firstly whether it is necessary in terms of the research objectives and subsequently whether the form and wording avoid bias and convey the intended meaning.

Elliott and Christoper (1973) suggest that the first stage should involve asking informed colleagues for their opinions and obtaining critical appraisal from experts in the particular field under study. This advice was taken to heart and the survey concepts were discussed with industrial advisers, marketing research companies and leading academics. The survey design was evolved as a direct result of critical appraisals from these various experts. A similar approach was taken with regard to the questionnaire itself and various drafts were discussed with informed colleagues prior to seeking appraisal from marketing research companies. Mention must also be made of the study of previous research in this field and much was learned from a critical analysis of other persons' efforts.

Notwithstanding all this consultation, various forms of the questionnaire had to be tested on members of the public for possible bias, misunderstandings and ease of response. The prototype questionnaire was tested and amended many times before a satisfactory version evolved which was found adequate for a full pilot test aimed at a response minimum of 100 completions. This pilot test had to concern itself with both personal interview and postal modes for the reasons previously explained. It was felt that older persons would have the greatest difficulty in comprehending the questions and for this reason the opportunity was taken of approaching a considerable number of over sixties on the London to Glasgow train. The final pilot questionnaire (which was also pilot tested by the marketing research agency selected for the contract) was in fact adopted without further modification not because it was considered to be without fault, but because modifications would have led to further unaffordable questions and complications which were felt to be counter - productive.

In the end therefore, the final questionnaire was deemed to be the best possible compromise between that which was ideally desirable and that which was achievable within the time and cost constraints.

5.9 ANALYSIS OF THE DATA

Elliott and Christopher (1973) make the point that many market surveys are incompletely analysed, the researcher being content with the simple hypothesis test, when a more extensive analysis could lead to wider/deeper insights for no additional costs on data collection. Worse still insufficient analysis can lead the researcher to erroneous conclusions.

There is however an increasing danger in a modern computerised system that a researcher faced with a somewhat bewildering array of choice within multivariate analysis will overact to Elliott and Christopher's warnings and call for too many statistical tests and cross tabulations. In the end it is the researcher rather than the computer who has to read, interpret and conclude from the data and some limit needs to be set upon the amount of tables produced for human assimilation.

Elliott and Christopher also suggest that the inclusion of a core of common data will facilitate later marriage with other surveys even though the offspring of this union may not have been foreseen at the outset. In short that a researcher should include this core of common data as a legacy for other researchers subsequently seeking to make comparisons.

Pre-requisite to any analysis is due consideration of the form of data gathered and how it is to be transferred and manipulated. Obviously the more transfers made, the greater the possibility of errors and a questionnaire which allows optical reading of data thereon direct into a computer obviates any error in transfer. Such a questionnaire would require the services of a trained

interviewer and for this reason postal surveys cannot employ this technique. Use was however made on the postal questionnaire of an 80 column punched card coding strip. This enabled data to be transferred from one place on the questionnaire to another place on the same questionnaire without turning over the page. It was felt that data transfer from one document to another concurrent with a change of form to binary, involved an unnecessarily high risk of errors. The method chosen enabled the operator to punch cards direct from the questionnaire and the normal checks were then made for punching errors.

Having thus transferred the data to punched cards all that remained was the manipulation of the data using selected parts of version 6.00 of the S.P.S.S. programme (Statistical Package for the Social Sciences).

There was however some editing required. As Roughton (1972) so rightly observes, survey data is normally less than perfect and decisions have to be made with regard to how much interpretation is legitimate. Not all respondents indicate their answers with complete clarity and others omit to answer parts of the questionnaire, sometimes with intent and sometimes in error. The view was taken that where a questionnaire contained errors the data containing errors should be rejected but not necessarily the whole questionnaire itself.

PART THREE

RESULTS, ANALYSIS, CONCLUSIONS

CHAPTER 6

RESULTS AND ANALYSIS

6.1 RESULTS

The initial tabulations resulted in a surfeit of data which proved difficult to analyse within the scope of this research. Collaborative work between researcher and computer advisory staff ensued and a new programme was evolved designed to reduce the amount of data to a satisfactory level. Advantage was taken of the opportunity to amalgamate tables where expedient and to condense the number of classes in the demographic variables, so as to increase the numbers of respondents in these sub-groups to a more meaningful level. Numbers of children groups were relinquished in favour of a simple children/no children split.

Further difficulties were experienced when attempting comparisons between the writer's samples and the sample sub-contracted to a reputable company specialising in omnibus panels for market research purposes (sample 1). Firstly this latter sample had been weighted to achieve a greater degree of statistical representativeness, secondly the company concerned had not provided tests of statistical significance and thirdly the demographic data contained therein needed to be condensed into the same classes as the other samples to enable valid comaprisons to be made. This reconciliation by a manual process would prove lengthy and tiresome with consequent risk of errors.

In view of these difficulties it was decided to re-run sample 1 on the new computer programme evolved for the other samples so as to achieve complete compatibility. Fortunately, the punched cards had been obtained from the sub-contractor as part of the contract and although these were multi-punched, it proved possible to convert them to standard punching and to reconcile the different column positions for given bits of data.

Although some concern was felt in using unweighted figures for sample 1, the amalgamation of demographic classes reduced variances to a maximum of six per cent and tests on all four demographic variables employed showed that the unweighted figures gave even more significant results than the weighted ones and thus all claims made for significance could be validated.

The computer re-run eventually proved successful and a manageable amount of data was produced with the chi-squared test of significance for each table. In looking for greater detail on the more interesting aspects, it was nevertheless found necessary to conduct manually-worked chi-squared tests in order to determine individual row and column contributions to the raw chi-squared total.

The term 'significant' used hereafter can be taken to mean at the 0.05 confidence level and the term 'highly significant' means at the 0.01 level, as minima.

Detailed results are given in the analysis which follows. It was thought more expedient to present tables and figures in the body of the analysis, than in the form of appendices.

6.2 ANALYSIS

6.2.1 QUESTION ONE - BUYING MOTIVES

Respondents were asked which of the following reasons they felt to be the most important consideration when buying bread for everyday family use and then which reason they felt to be the next most important consideration:-

a) Price per ounce
b) Wrapped and sliced, right size and shape for sandwiches and toast
c) Readily available in most shops
d) Keeping qualities
e) Nutritious or health considerations
f) Taste or freshness
g) Some other reason
h) Don't know

This question had a design objective not only of determining buying motives but also of seeing whether the majority of respondents bought standard bread on grounds of price and availability, which might then indicate some disatisfaction with other factors and help in proving or disproving the hypothesis.

When designing the question, note had been taken of the work of previous researchers which appeared to indicate that the above reasons governed the choice of an extremely high proportion of bread buyers. Reasons (a) and (d) namely price and keeping qualities could both be said to lie under the more general heading of an economy rationale: Reasons (b) and (c), namely ease in use and ease in locating are thought to both fall logically under a convenience rationale (although wrapping also has a connotation of hygiene): Reasons (e) and (f), namely nutritious - health and taste - freshness considerations are both concerned with eating qualities of the product.

Clearly it was to be expected that some agreement would be found between the number of people buying standard bread and the number declaring an economy or convenience rationale; between the number of people buying crusty breads baked on the premises and the number stating a taste-freshness reason as the most important buying consideration; between the number of people buying wholemeal/wholewheat breads and the number opting for nutritious-health as their most important consideration.

This was not found to be the case. The following bar-charts (3 and 4) show that less than four per cent of respondents felt that price was the most important consideration and that the population at large (sample 1) was no different in this respect than teachers (sample 3) or members of consumer groups (sample 2). - see chart 3.

Chart 1 : Most important consideration when buying bread - percentages choosing availability to nearest 1% with 0.5 rounded upwards - Sample 1

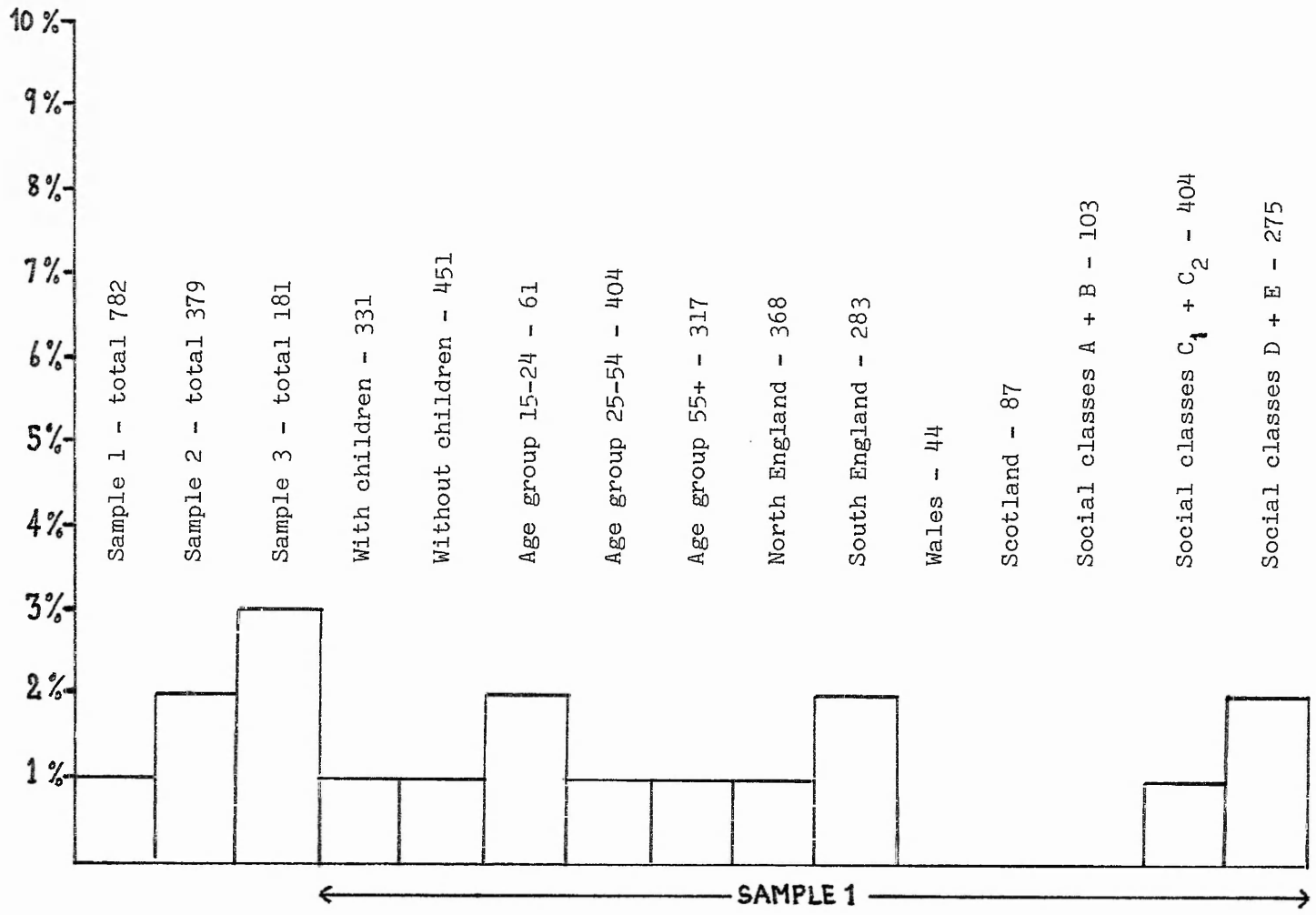


Chart 2 : Next most important consideration when buying bread - percentages choosing availability to nearest 1% with 0.5 rounded upwards - Sample 1

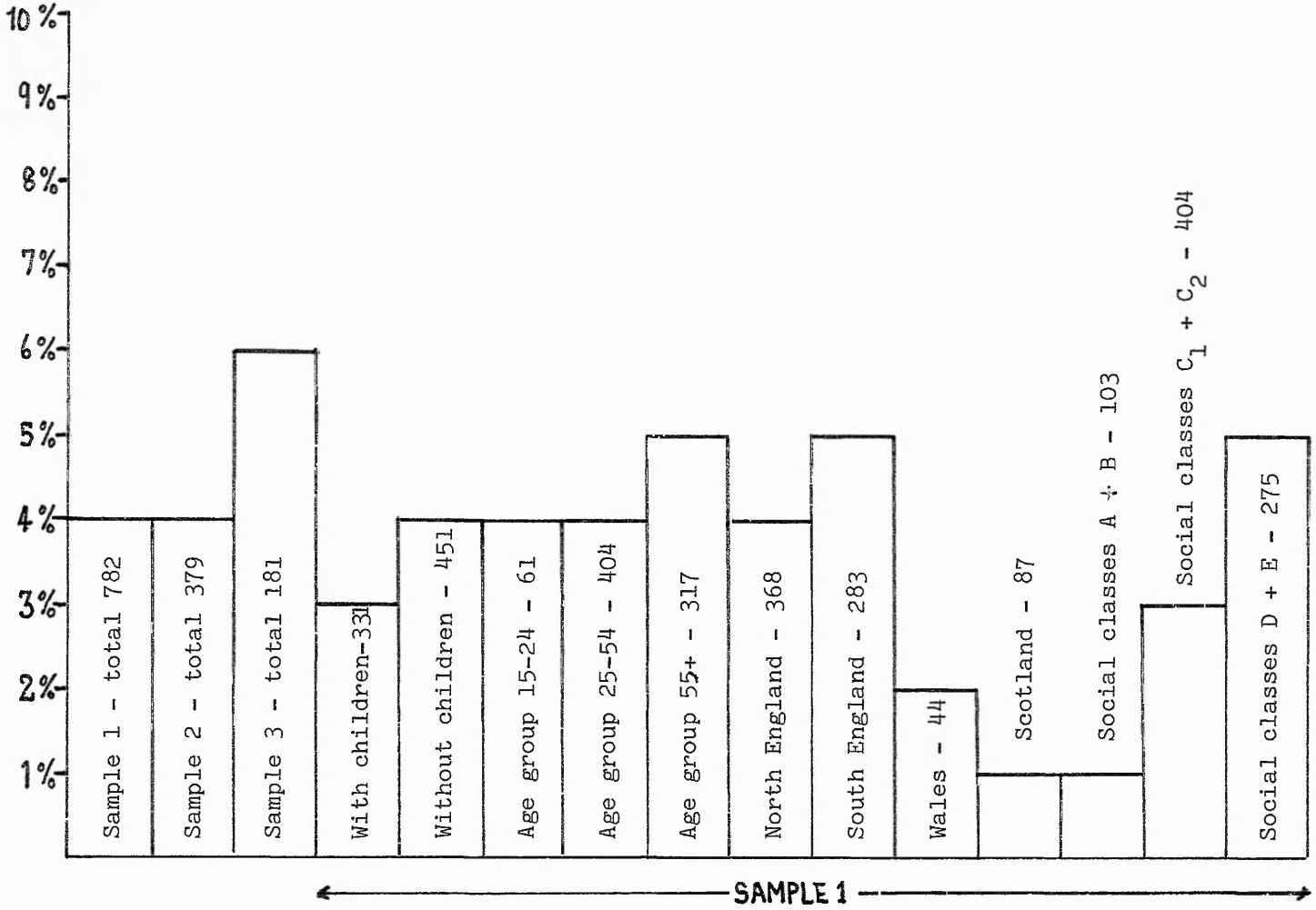


Chart 3 : Most important considerations when buying bread - percentages choosing price-to nearest 1% with 0.5 rounded upwards

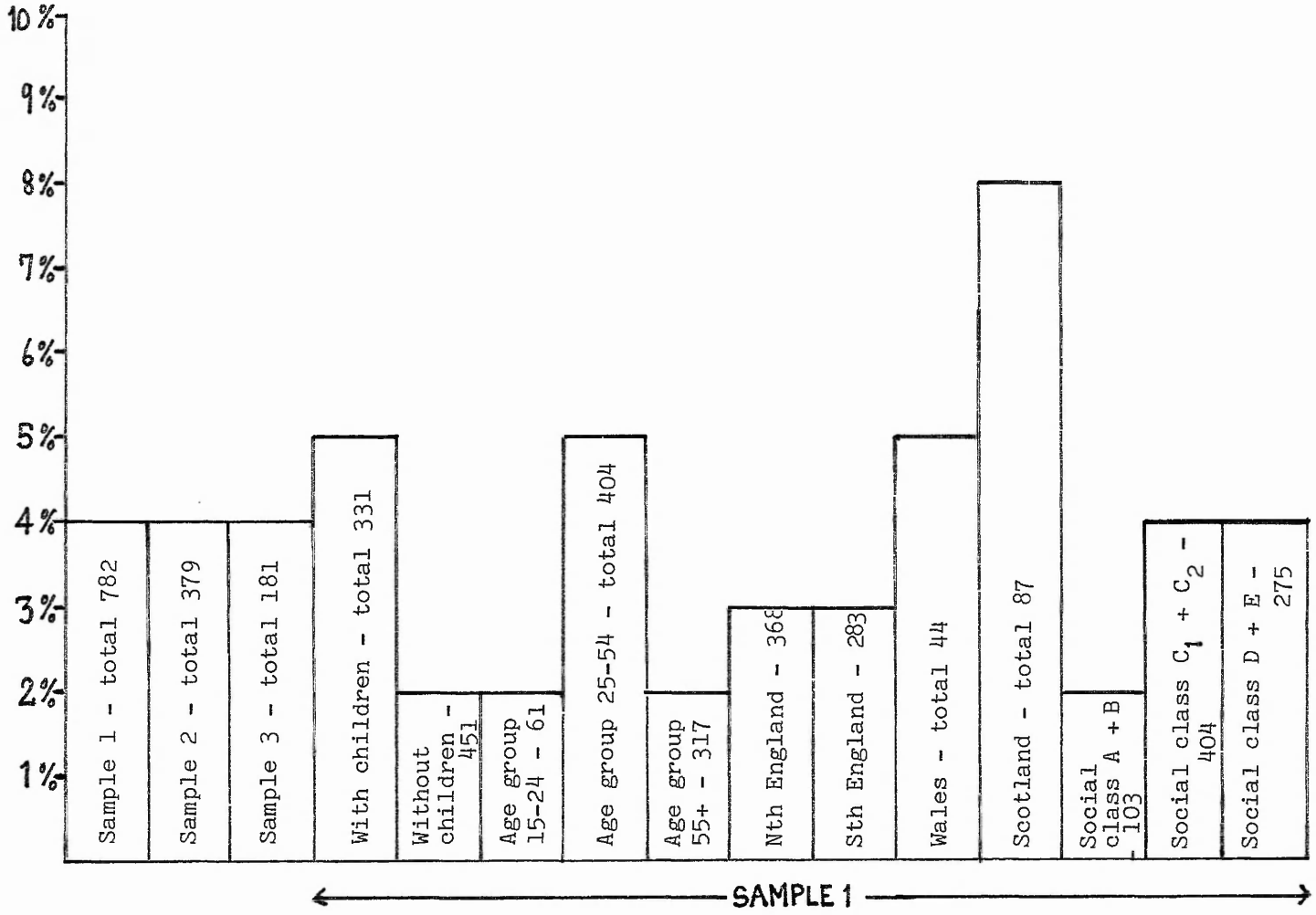
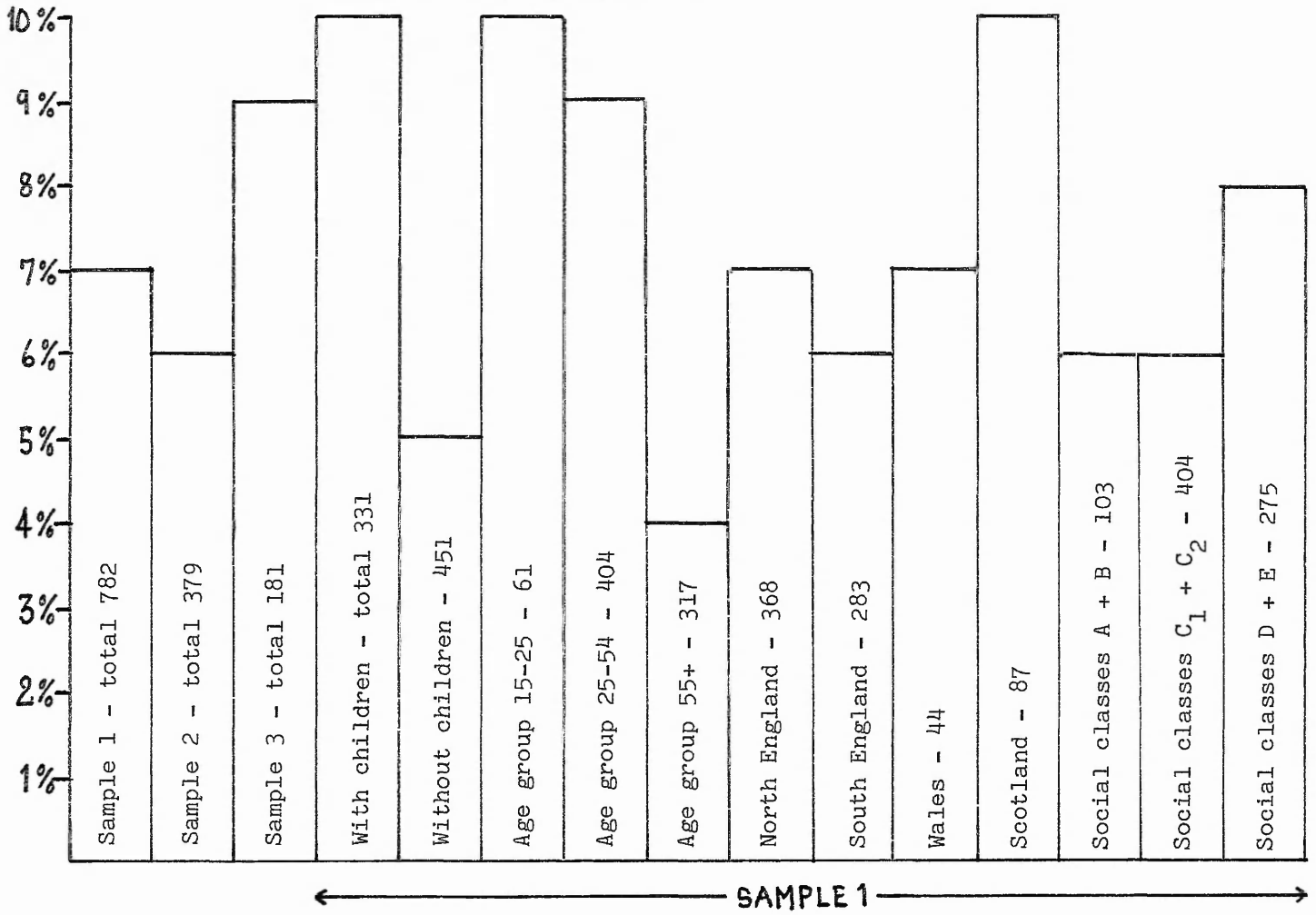


Chart 4 : Next most important consideration when buying bread - percentages choosing price to nearest 1% with 0.5 rounded upwards



Only 5 per cent of housewives with children chose price as their most important consideration (against 2 per cent of those without children).

Age, area and social class breakdowns indicated no significant differences and even in Scotland only 8 per cent of respondents admitted to price being of major importance when buying bread! (although this was proportionately twice as many as English respondents).

Price was only marginally more the choice as the next most important consideration, namely between 6 and 9 per cent (depending upon sample) of all respondents, as indicated by Chart 4.

Again there were no significant demographic variations and the highest proportion reached was 10 per cent on the breakdowns into children/no children, age, area and social class sub-groups.

Availability was ranked even lower than price as the most important and next most important consideration - see Charts 1 and 2. This reason accounted for no more than 3 per cent of respondents' votes for the most important consideration on any of the three samples and clearly is of relative insignificance in terms of buying motives. Even as the next most important consideration (Chart 2) there was a maximum of only 6 per cent (consumer group members), opting for availability.

Since "some other reason" than those offered, did not score more than 3 per cent as the most important consideration and also achieved less than 5 per cent of the vote for the next most important consideration in any of the three samples, this choice (reason (g)), together with the price choice (reason (a)) and the availability choice (reason (c)) already discussed, were excluded from further formal analysis.

The following tables (tables 8 to 17) cover the top four most important considerations and the top four next most important considerations when buying bread and break these down by demographic variables as well as showing the rank order. The most striking feature of these tables is that the top four reasons can be seen to cover about 90 per cent of the respondents' votes in all demographic breakdowns for the most important consideration and about 80 per cent in all breakdowns of the next most important consideration, as far as sample 1 (average housewives) is concerned. Another striking feature is that the rank order of first = reason (f), second = reason (e), third = reason (b), and fourth = reason (d), holds good remarkably consistently for the most important consideration and this feature applies to all three samples.

The rank orders of second = reason (e), and third = reason (b), are reversed for Scotland and Wales and for social class D & E, indicating that convenience takes precedence over nutritious-health considerations for these groups.

Most Important Considerations when Buying Bread - Percentages and Rankings

Table 8 : Children v No Children Sample 1

	Considerations				
	F	E	B	D	Total
With children, percentage choosing	55	15	12	9	91
Without children, percentage choosing	48	19	14	11	92
With children, rank order	1	2	3	4	-
Without children, rank order	1	2	3	4	-

Table 9 : Age, Sample 1

	Considerations				
	F	E	B	D	Total
Age 15-24, percentage choosing	67	13	12	3	95
Age 25-54, percentage choosing	53	16	13	9	91
Age 55 or more, percentage choosing	46	20	13	13	92
Age 15-24, rank order	1	2	3	4	-
Age 25-54, rank order	1	2	3	4	-
Age 55 or more, rank order	1	2	3	3	-

Table 11 : Social Class, Sample 1

	Considerations				
	F	E	B	D	Total
Class A + B, percentage choosing	40	32	15	10	97
Class C_1 + C_2, percentage choosing	55	17	12	10	94
Class D + E, percentage choosing	50	13	14	12	89
Class A + B, rank order	1	2	3	4	-
Class C_1 + C_2, rank order	1	2	3	4	-
Class D + E, rank order	1	2	3	4	-

Most Important Considerations when Buying Bread - Percentages and Rankings

Table 10 : Area, Sample 1

	Considerations				
	F	E	B	D	Total
North England, percentage choosing	55	16	12	9	92
South England, percentage choosing	45	21	13	13	92
Wales, percentage choosing	59	11	14	7	91
Scotland, percentage choosing	49	14	18	8	89
North England, rank order	1	2	3	4	-
South England, rank order	1	2	3	3	-
Wales, rank order	1	3	2	4	-
Scotland, rank order	1	3	2	4	-

Table 12, Samples 1, 2 and 3

	Considerations				
	F	E	B	D	Total
Sample 1, percentage choosing	51	17	13	10	91
Sample 2, percentage choosing	42	31	8	7	88
Sample 3, percentage choosing	53	21	8	6	88
Sample 1, rank order	1	2	3	4	-
Sample 2, rank order	1	2	3	4	-
Sample 3, rank order	1	2	3	4	-

Next Most Important Consideration when Buying Bread - Percentages and Rankings

Table 13 : Children v No Children Sample 1

	Considerations				
	F	E	B	D	Total
With children, percentage choosing	26	22	12	17	77
Without children, percentage choosing	24	20	14	26	84
With children, rank order	1	2	4	3	-
Without children, rank order	2	3	4	1	-

Table 14 : Age, Sample 1

	Considerations				
	F	E	B	D	Total
Age 15-24, percentage choosing	18	28	10	23	79
Age 25-54, percentage choosing	28	21	13	17	79
Age 55 or more, percentage choosing	23	19	14	29	85
Age 15-24, rank order	3	1	4	2	-
Age 25-54, rank order	1	2	4	3	-
Age 55 or over, rank order	2	3	4	1	-

Table 16: Samples 1, 2 and 3

	Considerations				
	F	E	B	D	Total
Class A + B, percentage choosing	29	27	9	19	84
Class C_1+C_2, percentage choosing	25	21	13	24	83
Class D + E, percentage choosing	25	19	16	22	82
Class A + B, rank order	1	2	4	3	-
Class C_1 + C_2, rank order	1	3	4	2	-
Class D + E, rank order	1	3	4	3	-

NEXT MOST IMPORTANT CONSIDERATION WHEN BUYING BREAD, PERCENTAGES AND RANKINGS

TABLE 15 : AREA, SAMPLE 1

	CONSIDERATIONS				
	F	E	B	D	TOTAL
North England, percentage choosing	21	20	17	23	81
South England, percentage choosing	31	24	7	21	83
Wales, percentage choosing	18	16	18	25	77
Scotland, percentage choosing	26	18	15	22	81
North England, rank order	2	3	4	1	-
South England, rank order	1	2	4	3	-
Wales, rank order	2	4	2	1	-
Scotland, rank order	1	3	4	2	-

TABLE 17 : SAMPLES 1, 2 AND 3

	CONSIDERATIONS				
	F	E	B	D	TOTAL
Sample 1, percentage choosing	25	21	13	22	81
Sample 2, percentage choosing	31	23	8	20	82
Sample 3, percentage choosing	22	22	8	18	70
Sample 1, rank order	1	2	4	3	-
Sample 2, rank order	1	2	4	3	-
Sample 3, rank order	1	1	4	3	-

CHILDREN/NO CHILDREN - Slightly higher percentages of housewives with children opted for taste/freshness as the most important consideration and surprisingly a lower proportion of women with children chose nutritious/health than those without progeny.

AGE - Taste/freshness was relatively more important for the younger housewives and keeping qualities become slightly more important with increasing age.

REGION - The South stood out as being the region with the lowest proportion opting for taste or freshness as the most important buying factor (45 per cent) and the highest proportion (21 per cent) of all regions opting for nutritious/health considerations.

SOCIAL CLASS - Nutritious/health considerations proved to be relatively more important for social classes A & B at 32 per cent, dwindling to 13 per cent for classes D & E.

Understandably the position is not so clear when examining the choice of the next most important consideration. The differences between the reasons chosen in terms of the proportions of respondents are in most cases much smaller than those for the most important consideration. Although the taste/freshness reason is still the top ranking choice as the next most important reason for all three samples and nutritious/health also still ranks second, reasons number (b) and (d) now have their rank order reversed.

In fact although there is very little difference in all three samples in the proportions electing reasons number (f), (e), (d), reason (b) (wrapped and sliced, right size and shape for sandwiches and toast) is clearly the minority choice for the next most important consideration.

In noting that for sample 3 (teachers or wives of teachers) these top four reasons drop to account for 70 per cent of all respondents when choosing their next most important consideration (table 10), this is explained by reason (a) (price) rising to 9 per cent and 'don't knows' to 12 per cent. Further changes in rank order are shown when examining the next most important consideration split into demographic sub-groups as follows:-

CHILDREN/NO CHILDREN - Reason (d) (keeping qualities) becomes the first choice for housewives without children.

AGE - Nutritious/health considerations become the number one choice for younger housewives and keeping qualities the first choice for older housewives.

REGION - Keeping qualities emerge as the top choice for housewives in the North and Wales and the second ranking choice for Scotland.

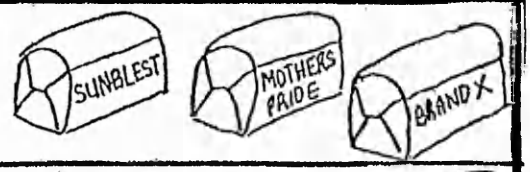
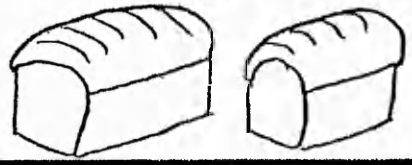
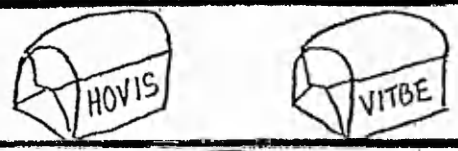
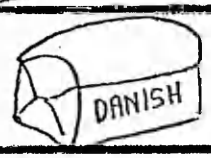
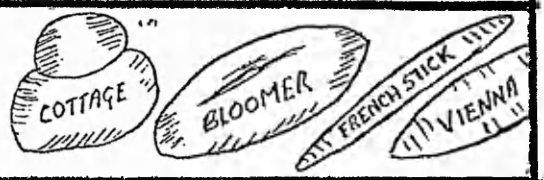
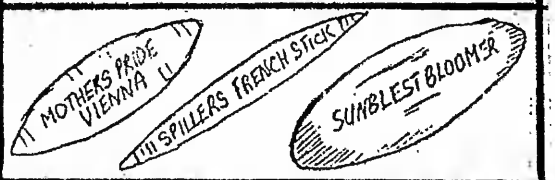
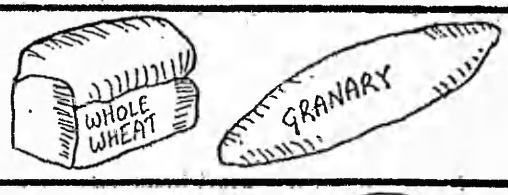
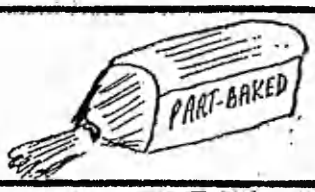
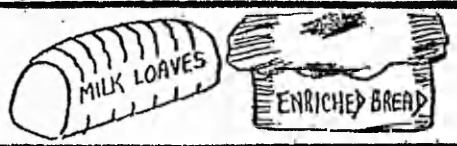
SOCIAL CLASS - No clear differences are apparent.

6.2.2 QUESTION TWO - EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS)

Respondents were asked from which groups of bread illustrated and described on a card[1] they could remember having actually bought or tasted a loaf at any time. The question was designed to elicit an experience factor against which to weigh attitudes, preferences and buying habits. To the best of this researcher's knowledge this question had not been asked in any previous studies. Whilst it would normally be expected that food preferences would be dictated by personal experience, in this case it was felt that a housewife might be unusually influenced by other people's experience and opinions particularly those of her parents and/or children. It was also suspected that younger housewives accustomed to shopping almost exclusively at a nearby supermarket may never have been exposed to the experience of buying for her family or personally

1 See appendix and exhibit 1, page 171a.

EXHIBIT 1 : EXAMPLE OF CARD SHOWN TO RESPONDENTS

GRP	DESCRIPTION	ILLUSTRATION
1	STANDARD WHITE WRAPPED AND AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND, ANY SLICE THICKNESS (including 'Big T' and Farmhouse)	
2	STANDARD BROWN WRAPPED AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND EXCEPT HOVIS OR VITBE	
3	STANDARD WHITE UNWRAPPED AND UNSLICED LOAVES, LARGE OR SMALL	
4	HOVIS OR VITBE ONLY, WRAPPED OR UNWRAPPED, SLICED OR UNSLICED, LARGE OR SMALL	
5	DANISH "LIGHTER" BREAD, WHITE OR BROWN, WRAPPED AND SLICED, ANY BRAND	
6	SLIMMING BREAD, WHITE/BROWN, WRAPPED AND SLICED, ANY SIZE, ANY BRAND	
7	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, UNSLICED AND BAKED ON THE PREMISES	
8	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, BRANDED AND WRAPPED AND NOT BAKED ON THE PREMISES	
9	SPECIAL UNSLICED WHOLEWHEAT OR WHOLEMEAL BROWN BREAD, ANY TYPE SIZE, SHAPE OR BRAND	
10	PART-BAKED BREAD, EG. HOMEBAKE, TAKE 'N' BAKE, ETC - ANY BRAND	
11	MILK LOAVES OR ENRICHED BREAD OF ANY SIZE, TYPE OR BRAND	
12	ANY OTHER BREAD NOT DESCRIBED OR COVERED BY ANY OF THE ABOVE 11 GROUPS	

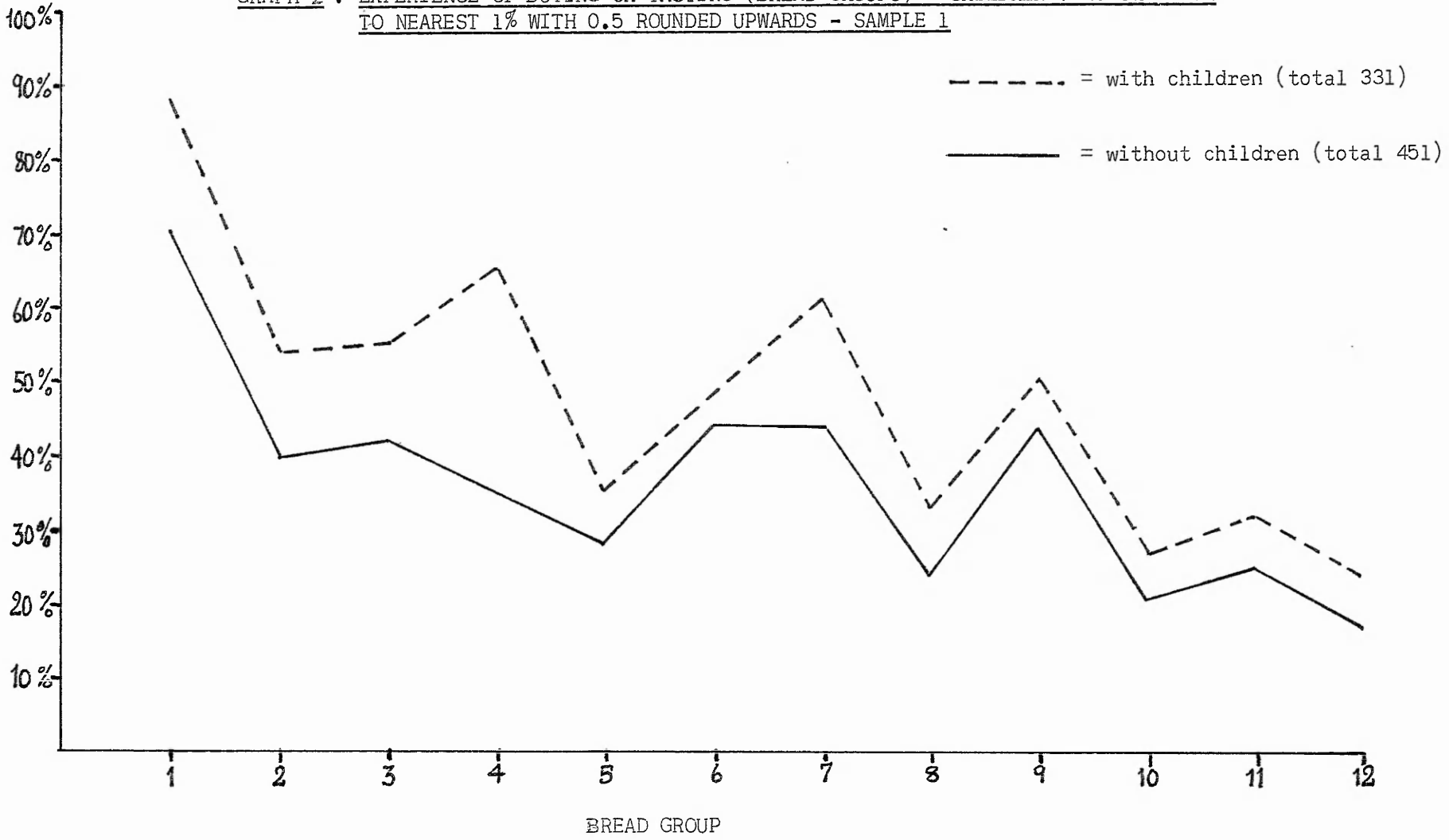
tasting loaves such as wholemeal or wholewheat. Whilst it was appreciated that the answers would be contingent upon memory it was thought that a natural tendency not to admit lack of experience of the full range of bread would if anything bias results towards a greater experience factor than that in the actual case.

Graphs 1 to 5 contain the results which overall indicate a surprising lack of experience across the spectrum of all twelve groups. As far as the representative sample of the population is concerned only three out of the twelve groups had been experienced by more than half the housewives. One in five respondents had never personally experienced buying or tasting standard white wrapped and sliced bread, a somewhat incredible figure only partially explained by the existence of non-bread eaters, own bread bakers and devotees of other bread groups perhaps brought up in the belief that standard bread is harmful.

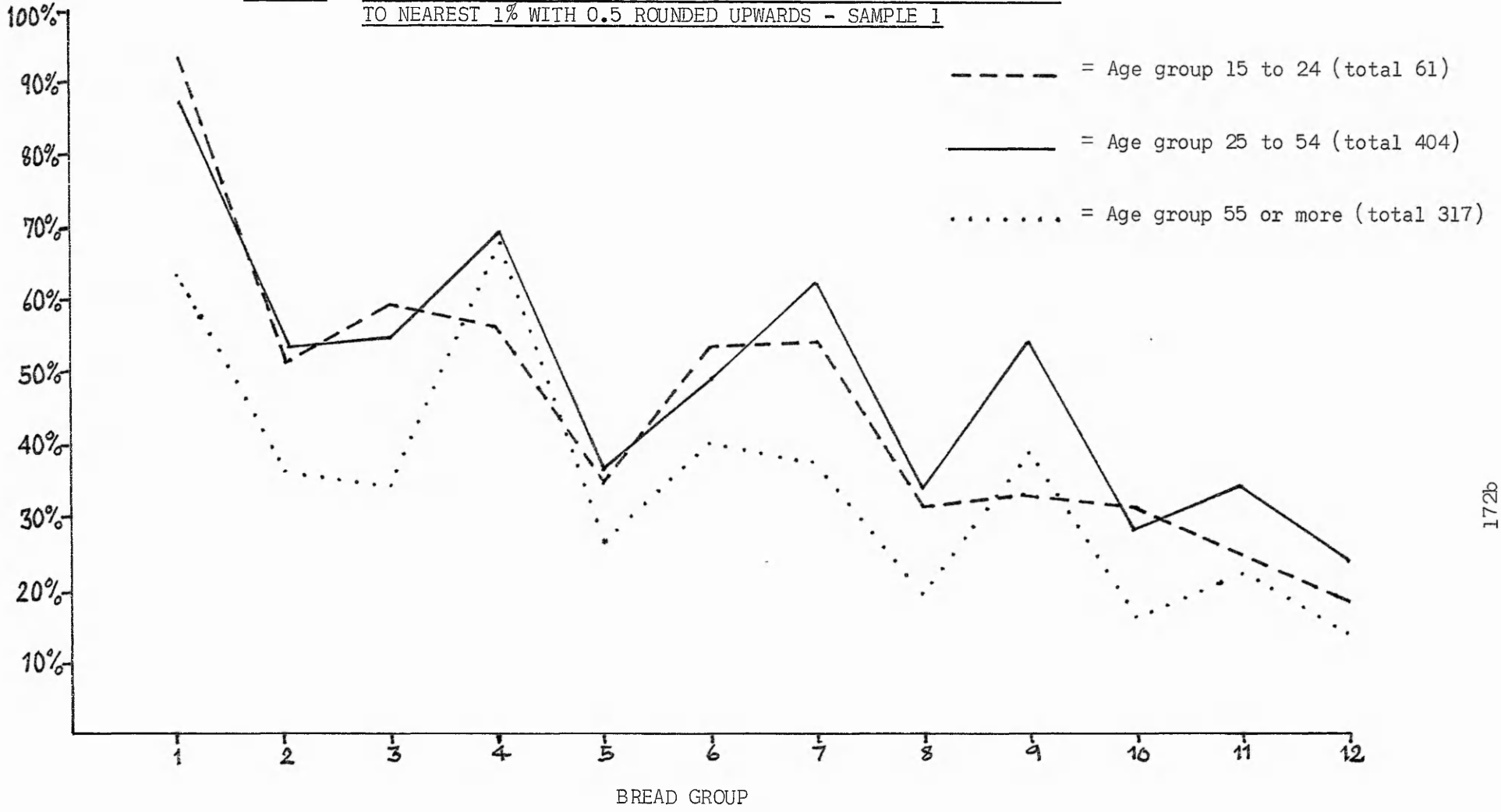
CHILDREN/NO CHILDREN - Graph 1 suggests that housewives with children are generally more experienced in having bought or tasted loaves across the twelve group spectrum used, than housewives without children.

AGE - Graph 2 shows clearly that the over 55 age group has significantly less experience across the range than younger age groups (although the reverse might have been expected), the only two exceptions being Hovis/Vitbe (Group 4) and wholemeal/wholewheat (Group 9). A considerable proportion of the one in five respondents not having experienced standard bread belong to the over 55 age group, evidenced by the fact that only about three in every five in this age group had experience of Group 1 bread. The younger age group (15 to 24) was found to be only marginally less experienced than the 25 to 54 age group with the notable exceptions of Hovis/Vitbe, wholemeal/wholewheat and to a lesser extent crusty breads baked on the premises. (Group 7)

GRAPH 1 : EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) - CHILDREN v NO CHILDREN
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

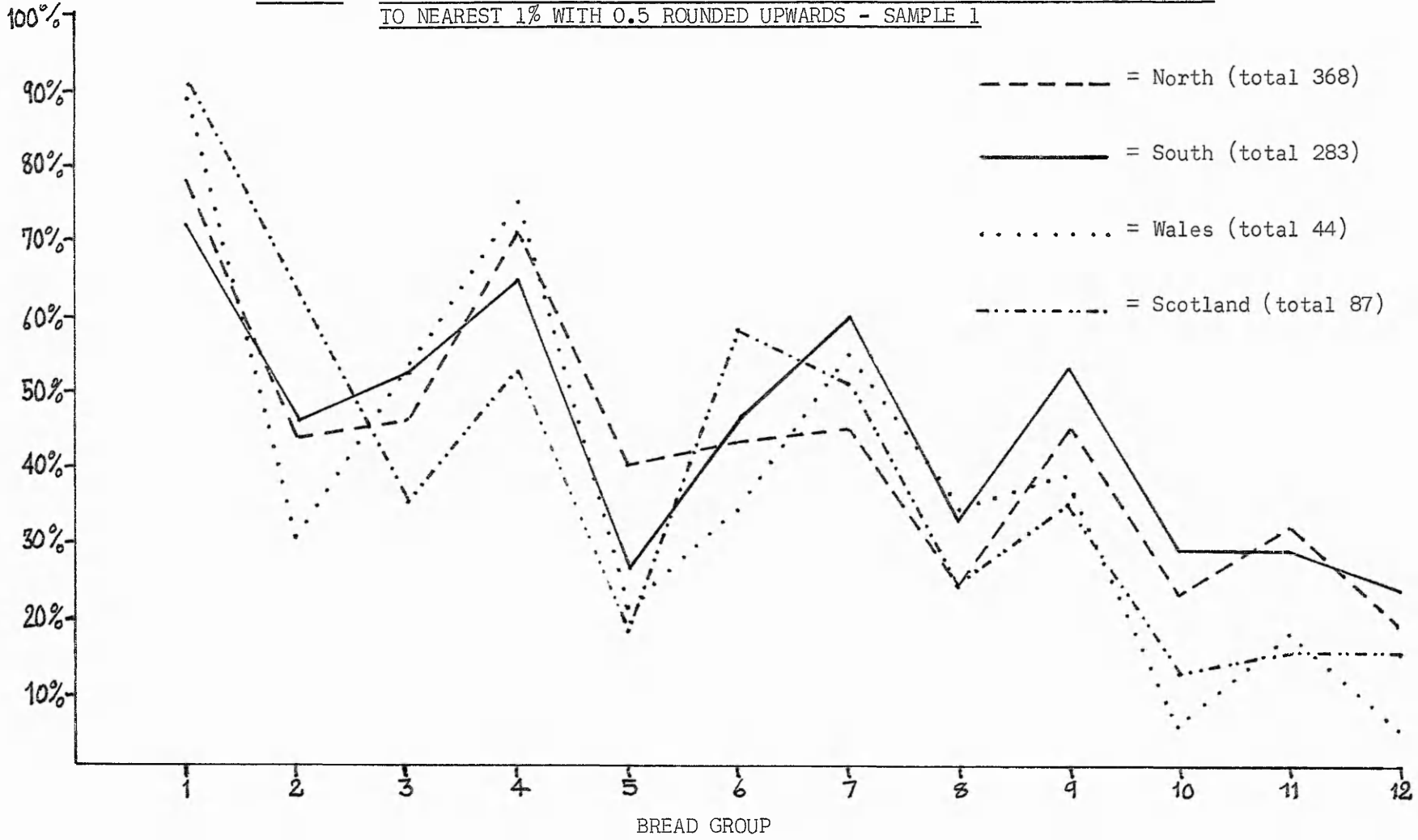


GRAPH 2 : EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) v AGE GROUPS
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

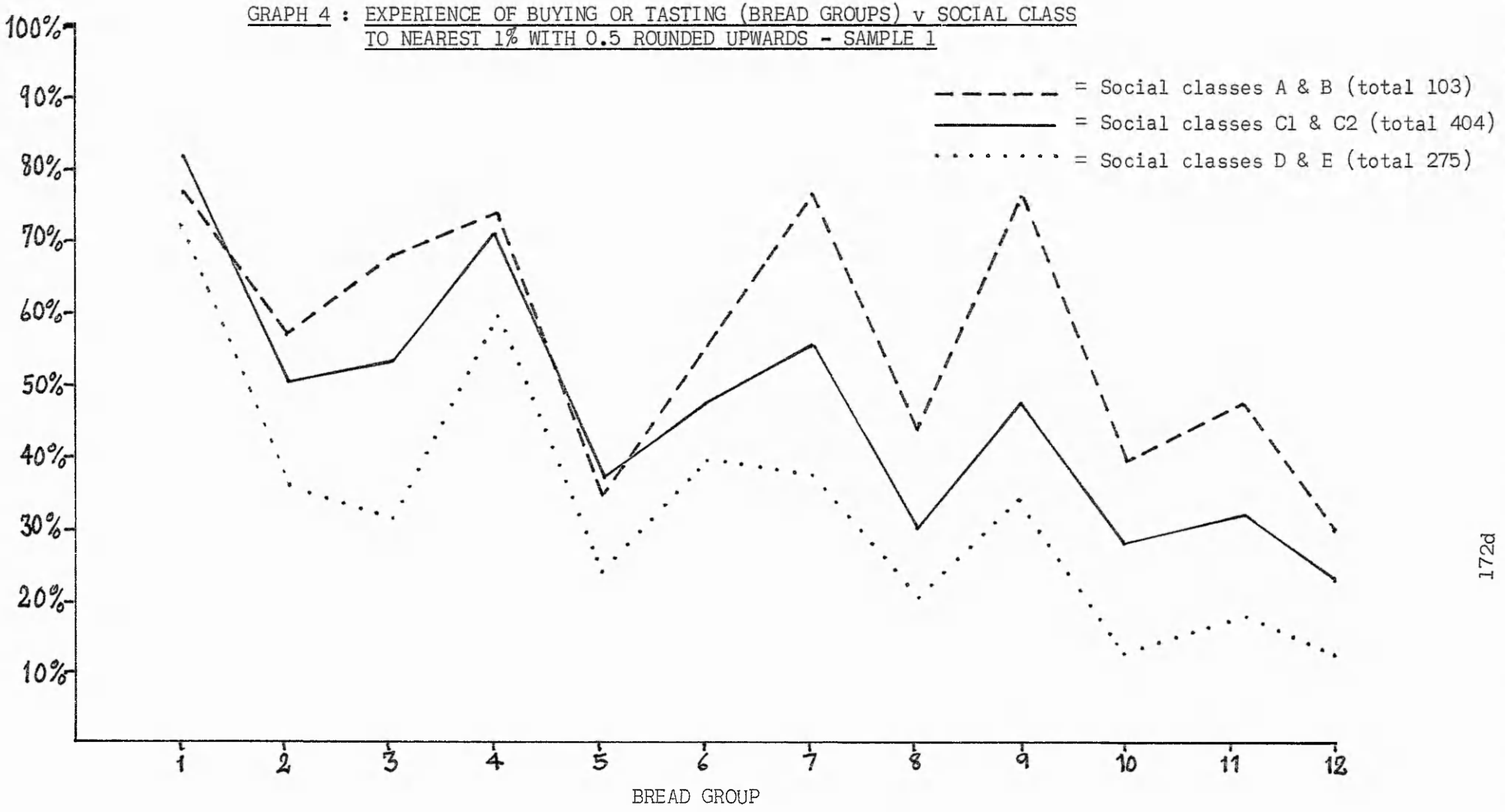


172b

GRAPH 3 : EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) v GEOGRAPHICAL REGION TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

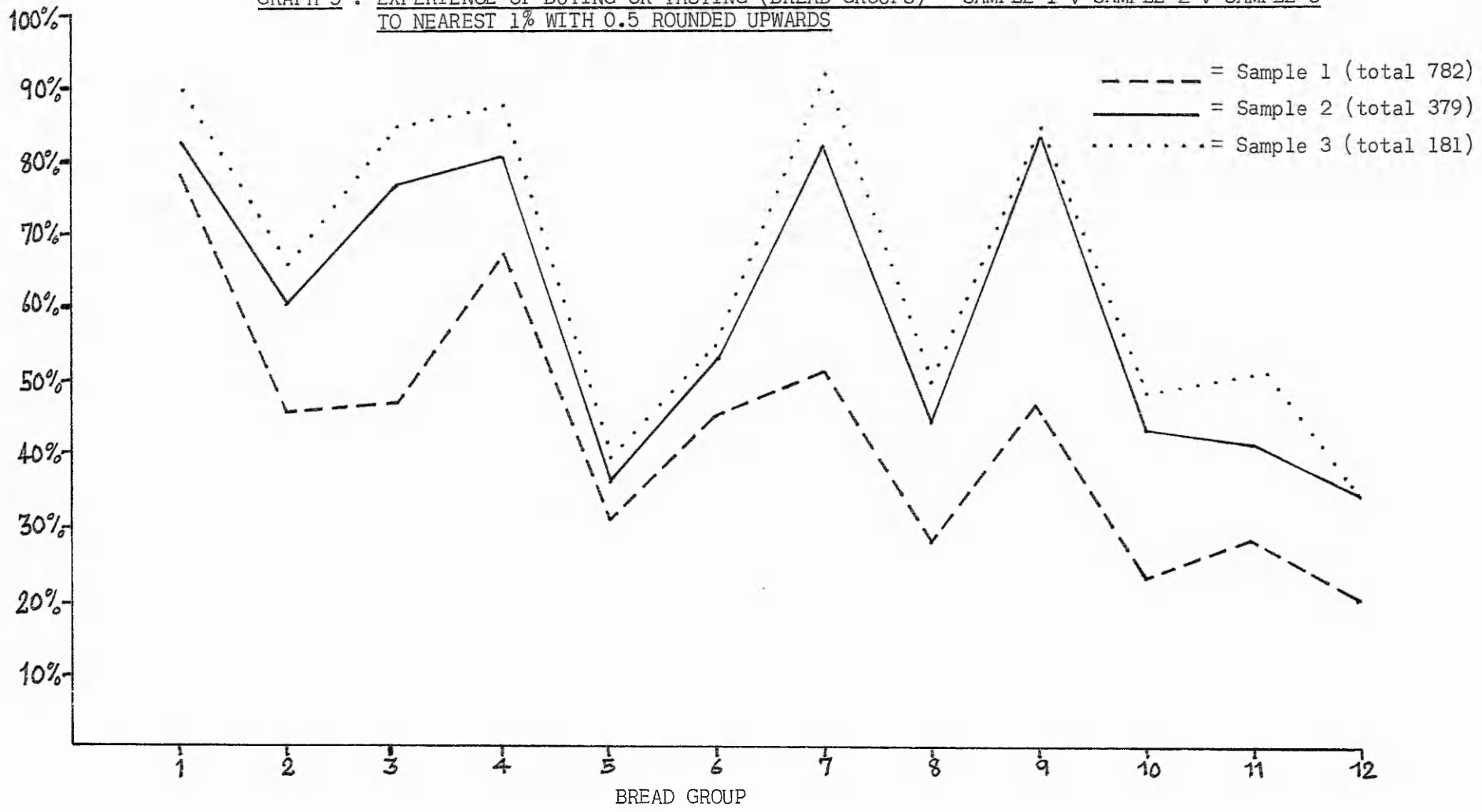


GRAPH 4 : EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) v SOCIAL CLASS
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1



172d

GRAPH 5 : EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) - SAMPLE 1 v SAMPLE 2 v SAMPLE 3
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS



REGION - Significant differences in experience across the variety of breads according to geographic region is evidenced by Graph 3 with average experience factors (in terms of the percentage of the 12 groups actually bought from or tasted) being 37.9 and 38.9 per cent for Wales and Scotland against 43.4 and 44.5 per cent for northern and southern parts of England. Wales and Scotland have relatively high experience of standard (Group 1) bread, Wales has relatively high experience of Hovis and Vitbe (Group 4) and Scotland relatively high experience of slimming breads (Group 6). Notably the southern part of England has the highest experience of crusty breads baked on the premises (Group 7) and wholemeal/wholewheat breads (Group 9). The two relatively recent varieties of Danish (Group 5) and part-baked bread (Group 10) are particularly poorly known in Wales and Scotland.

SOCIAL CLASS - Highly significant variations in experience of breads across the range occur in the social class breakdown shown on Graph 4. A striking feature is that experience lowers significantly down the class groups. Hovis/Vitbe, (Group 4), crusty breads baked on the premises (Group 7) and wholemeal/ wholewheat, (Group 9) are almost as well experienced as standard bread in the A and B social class group. Only standard bread (Group 1) and Hovis/Vitbe (Group 4) breads have been experienced by more than 40 per cent of the D & E social group.

SAMPLE DIFFERENCES - Graph 5 highlights highly significant differences in the experience levels of the three samples. Teachers (Sample 3) have the most experience of all the three samples with members of consumer groups (Sample 2) a close second. In the case of both samples 2 and 3 experience levels of bread groups 1 (standard bread), 4 (Hovis/Vitbe), 7 (crusty breads baked on the premises) and 9 (Wholemeal/Wholewheat) all lay above 80 per cent.

6.2.3 QUESTION THREE - REASONS FOR NOT BUYING BREAD

About 5 per cent of the main sample (sample 1) did not regularly buy from any of the bread groups described but unfortunately the money constraint precluded attempts to isolate the reasons. However, in the postal questionnaire (samples 2 and 3) the opportunity was taken to ask those respondents not buying bread at least once per week, which of the following reasons was the main cause:-

a) Do not normally eat bread
b) Usually bake my own from flour and yeast
c) Usually bake my own using branded bread mix
d) Usually eat out
e) Usually buy cobs or rolls instead of loaves
f) Some other reason

It was hoped to relate results to those of earlier researches to discover whether more people were not eating bread. If so then this could be an indicator of disatisfaction with the offerings of plant bakers, with some bearing on the hypothesis.

Other interesting speculations hinged upon the possibilities of whether "opinion leaders" such as teachers and consumer activists possessed a higher proportion of non-buyers of bread i.e. disatisfaction with the manufactured products than the general population; whether the availability of branded bread mixes was creating a new breed of housewives preferring this method of baking their own bread to both the traditional method and to buying loaves already baked - again an indicator of some dissatisfaction with bread on the market; whether increasing numbers of young people and particularly students were preferring bread in the form of cobs and rolls (classified by plant bakers as morning goods i.e. non-bread) to loaves.

In sample number 2 (members of consumer groups) some 10 per cent (37 out of 379) of the respondents did not buy bread at least once a week.

In sample number 3 (teachers or teachers' wives) some 12 per cent (22 out of 181) did not regularly purchase bread as defined.

The breakdown of reasons given was as follows:-

TABLE 18 - REASONS FOR NOT BUYING BREAD

Reason	Sample 2	Sample 3
a) Do not eat	2%	3%
b) Bake my own from flour+yeast	6%	7%
c) Bake my own from branded mix	-	-
d) Usually eat out	-	-
e) Usually buy cobs/rolls	-	-
f) Some other reason	2%	2%
	10%	12%

Unfortunately, the sample sizes together with the relatively small proportions of these samples not regularly buying bread made it impossible to categorise these non-buyers by demographic variables in a meaningful way.

6.2.4 QUESTION FOUR - THE CURRENT BREAD MARKET AND ITS SEGMENTATION

This question asked respondents firstly from which of twelve bread groups they regularly bought each week and then the quantity of large and small loaves which they bought weekly on average.

The question had been designed to:-

a) Establish the bread market by segment for comparison with that established by earlier researchers and if possible with that established in government statistics.

b) To act as a quantified base from which deviations could be measured when posing the hypothetical question five, so as to establish the degree of dissatisfaction if any with existing market products.

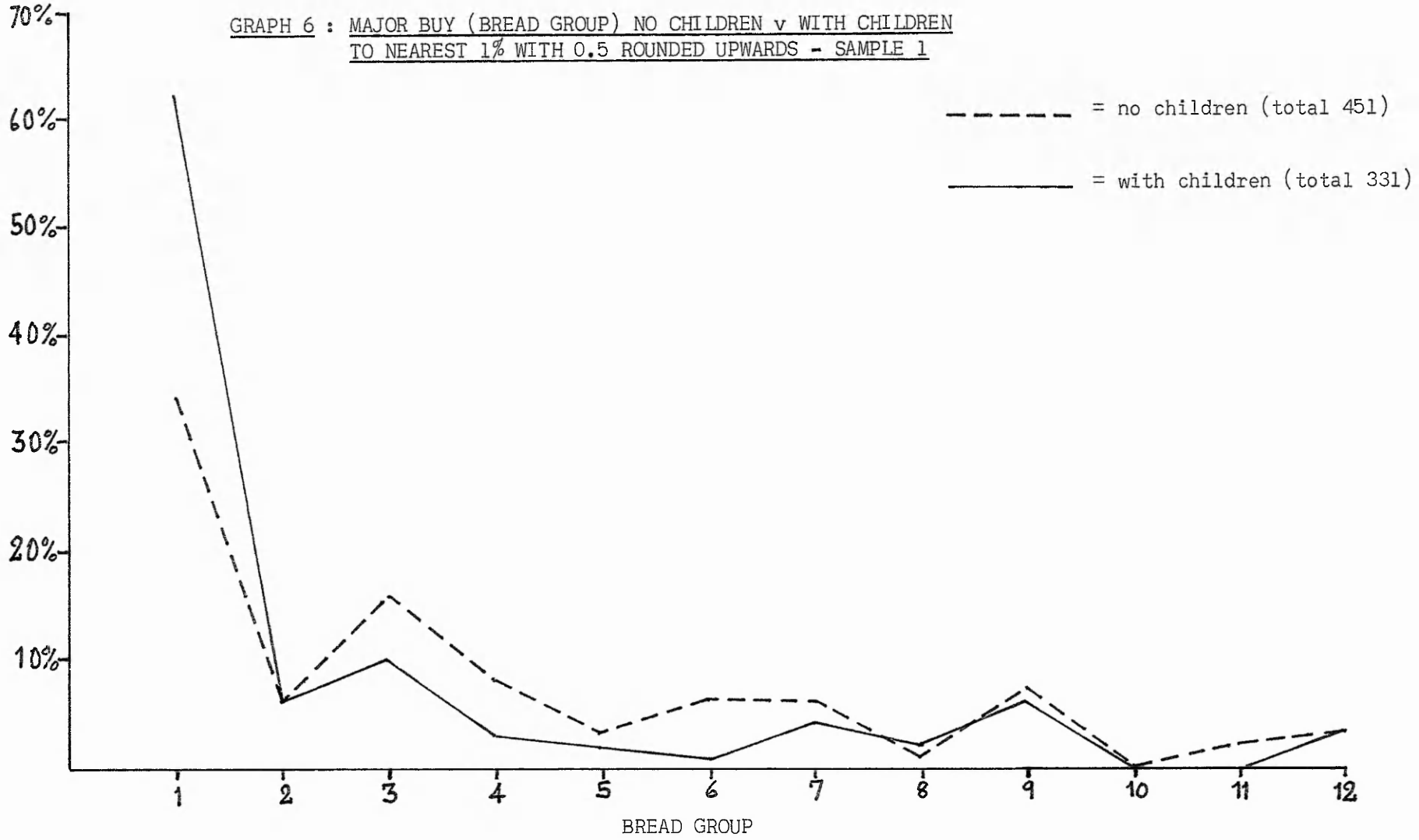
c) To enable differences in actual buying habits rather than mere attitudes between the average housewive and postulated opinion leaders to be determined.

All the above points it was thought, would go a long way towards categorically proving or disproving the hypothesis.

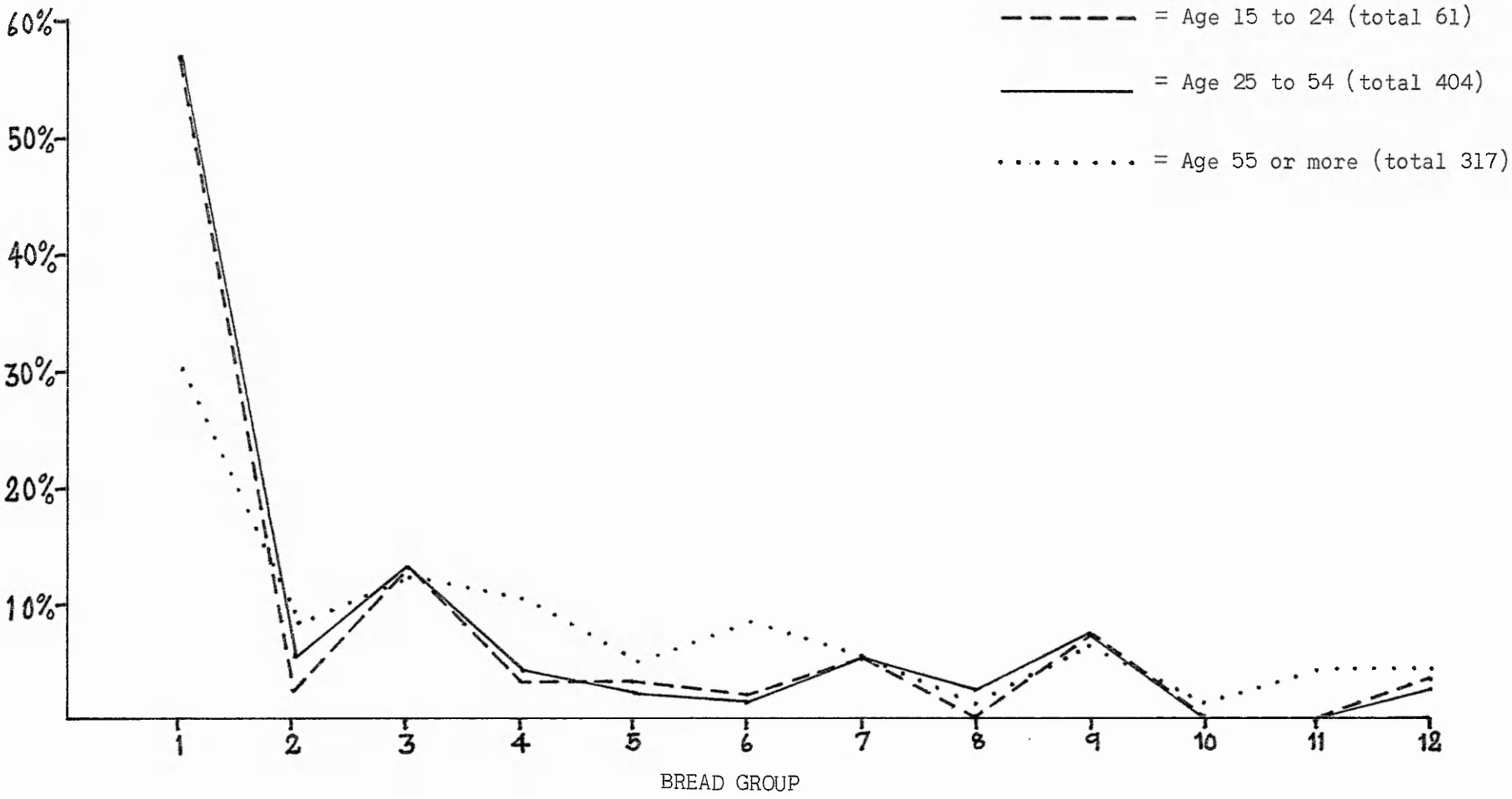
However, once again the financial constraints precluded a complete repeat of question four (really two questions in one) in the hypothetical situation outlined in question five, as in practice this question occupied the greatest proportion of the interviewer's time. Question five therefore had to be restricted to the main buy only. For this reason the major actual buy was computer-selected from the data in response to question four for subsequent comparison with the major theoretical buy elicited in question five.

Graphs 6 to 9 which follow show respondents major buy by bread group and indicate quite clearly that all four demographic variables used (children/no children, age, geographic region and social class) are highly significant in determining the bread group most heavily purchased from each week.

GRAPH 6 : MAJOR BUY (BREAD GROUP) NO CHILDREN v WITH CHILDREN
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

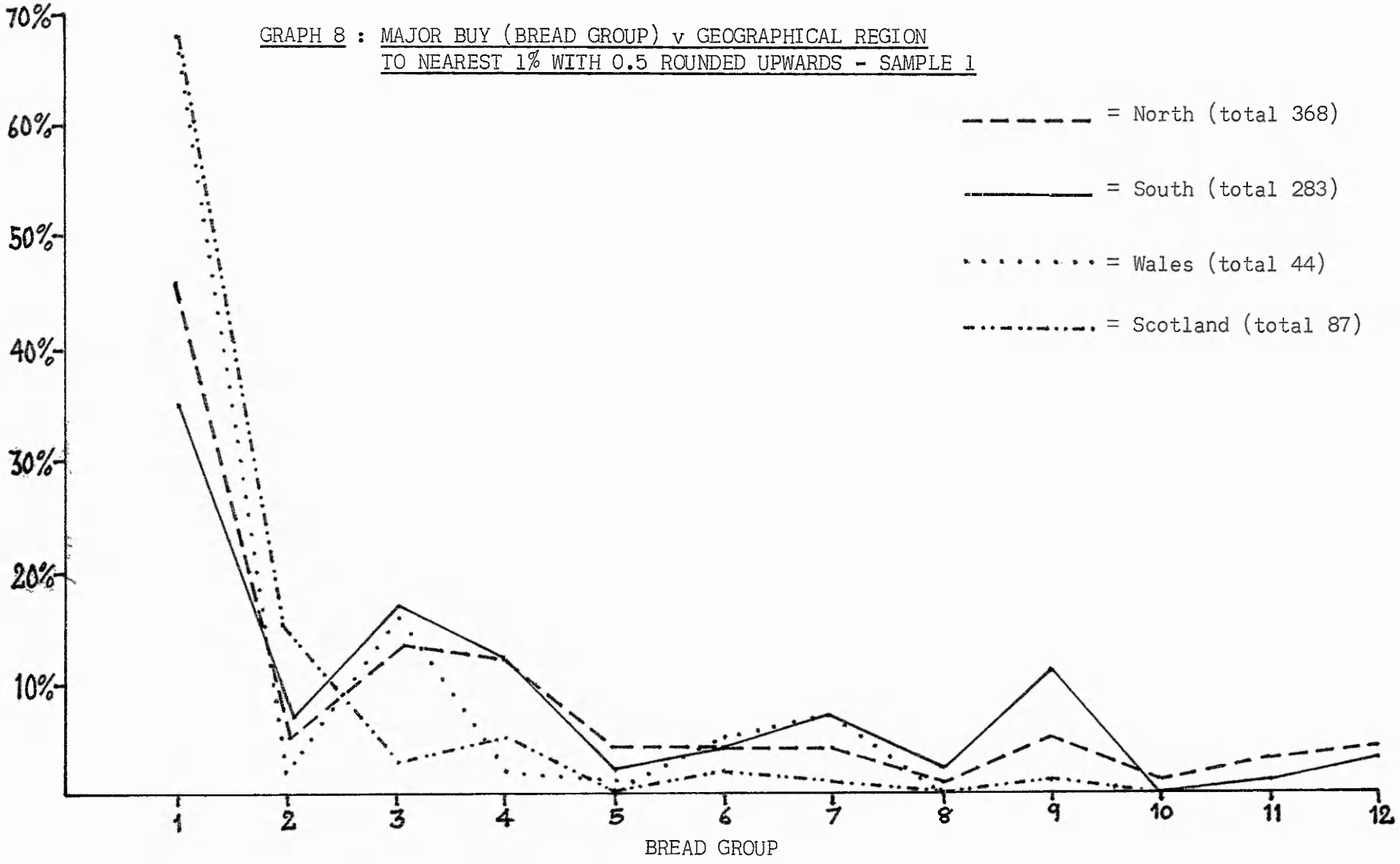


GRAPH 7 : MAJOR BUY (BREAD GROUP) v AGE, TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

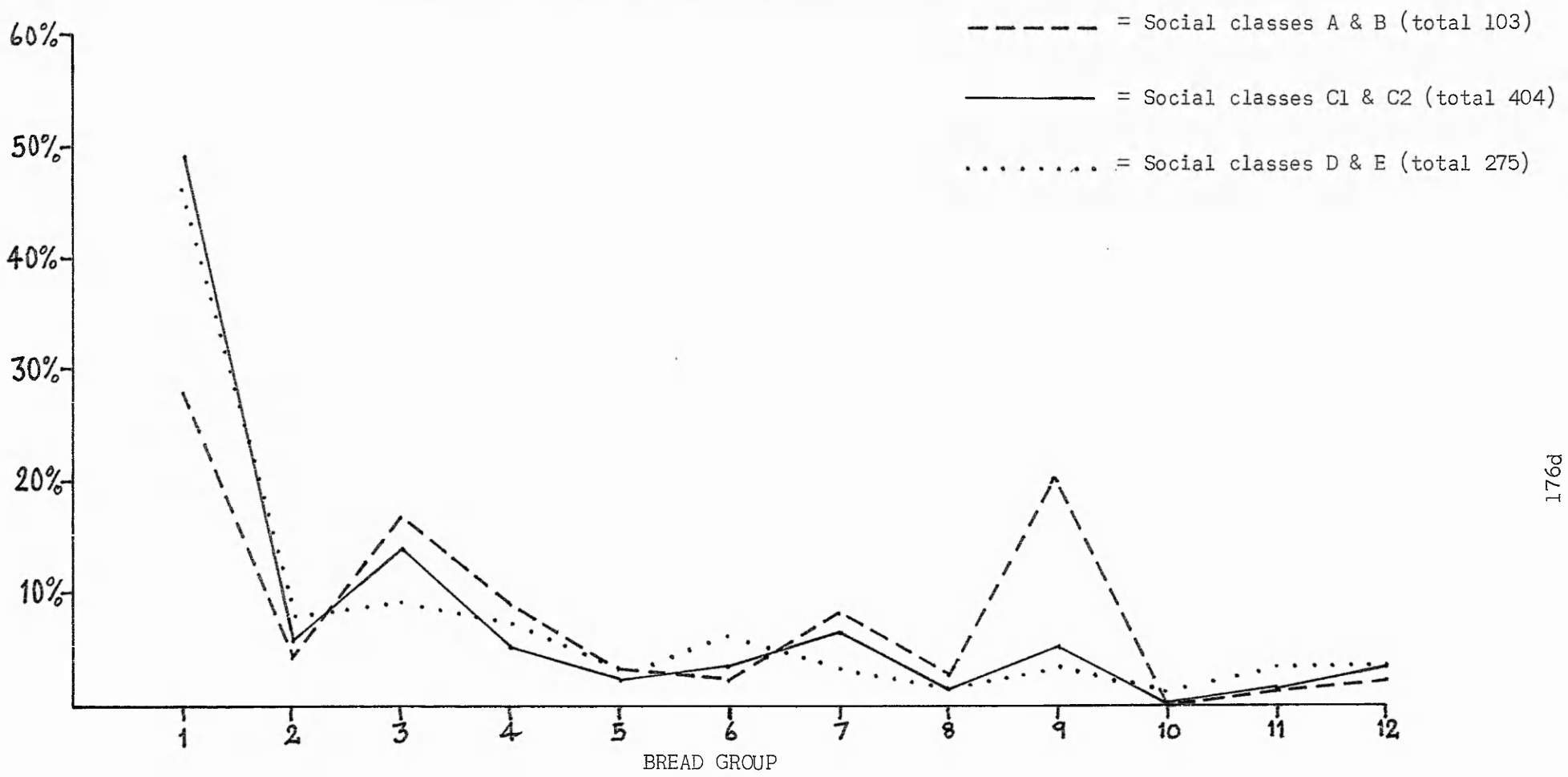


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GRAPH 8 : MAJOR BUY (BREAD GROUP) v GEOGRAPHICAL REGION
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1



GRAPH 9 : MAJOR BUY (BREAD GROUP) v SOCIAL CLASS
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1



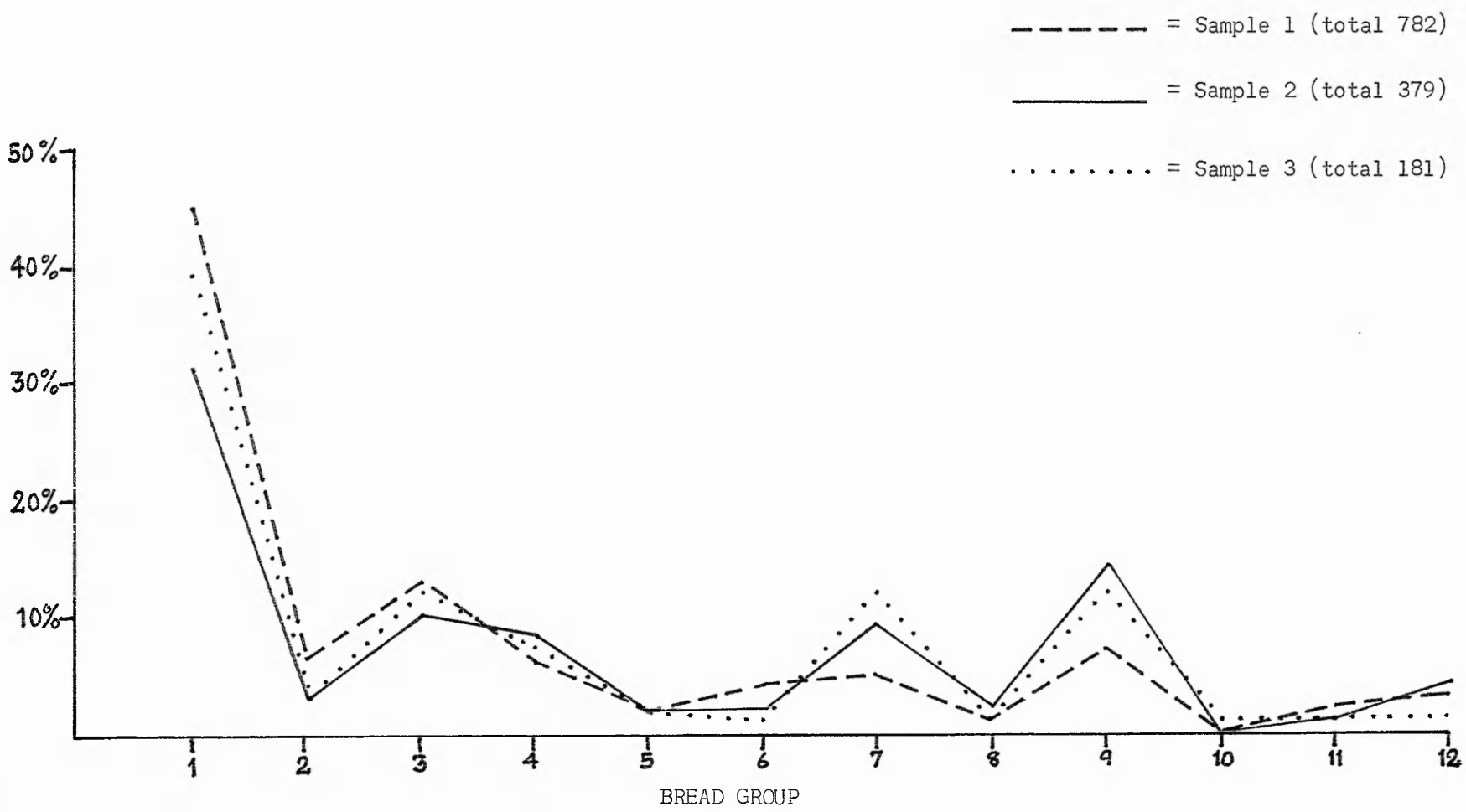
CHILDREN/NO CHILDREN - Differences between housewives with children as opposed to without children with regard to their bread group buying habits are highly significant. Graph 6 not surprisingly indicates that housewives with children are almost twice as likely as housewives without children to have Group 1 (standard white wrapped and sliced) bread as their main buy. Group 3 (unwrapped, unsliced standard bread), Group 6 (slimming breads) and Group 4 (Hovis-Vitbe) are slightly (but not significantly) less popular among housewives with children than those without.

AGE - Graph 7 demonstrates that the over 55 age group is almost half as likely as other age groups to purchase standard bread but are relatively important regular buyers of Group 4 (Hovis-Vitbe) and more surprisingly - slimming breads (Group 6). There is no significant difference between age groups 15 to 24 and 25 to 54, but a highly significant difference exists between the age group 55 or more and the other two age groups.

REGION - Graph 8 shows that standard (Group 1) bread is relatively much more popular in Wales and Scotland and least popular in the south of England, where Group 9 (wholemeal-wholewheat-Granary) is proportionately more popular as a major buy than in other parts of the country. The differences between areas were highly significant.

SOCIAL CLASS - Graph 9 identifies social classes A and B as proportionately the highest in terms of numbers buying mainly from Group 9 (wholemeal-wholewheat-Granary) and the lowest with regard to standard bread (Group 1) than the other social classes. Group 3 bread (standard white unwrapped, unsliced) is rather less popular with social classes D and E. Social class differences were highly significant with the major contribution to chi-squared coming from social classes A and B.

GRAPH 10 : MAJOR BUY (BREAD GROUP) - SAMPLE 1 v SAMPLE 2 v SAMPLE 3
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS



SAMPLE DIFFERENCES - Graph 10 shows that highly significant differences exist between the bread buying habits of the general population of housewives (Sample 1) and those of consumer group members (Sample 2) and those of teachers or wives of teachers (Sample 3).

The greatest variances between the three samples exists with reference to standard white wrapped and sliced bread (Group 1), white crusty bread baked on the premises (Group 7) and wholemeal/ wholewheat bread (Group 9).

Relatively small differences between all three samples can be observed with regard to bread groups 4 (Hovis, Vitbe) 5 (Danish), 8 (branded crusty breads not baked on the premises), 10 (part-baked bread) and 11 (milk loaves or enriched bread).

MARKET SHARES

There were arrived at by computing the numbers of large loaves and the numbers of small loaves notified as being regularly bought each week on average for each group, converting to weight totals allowing twenty eight ounces for each large loaf and fourteen ounces for each small loaf, then dividing the total ounces for each group by the grand total for all groups. It should here be pointed out that a certain amount of buying regularly from more than one group was evident. For sample 1, housewives bought from an average of 1.3 groups, sample 2 from an average of 1.5 groups and for sample 3 from an average of 1.6 groups.

It was felt that the market shares resulting from the above computations for sample 1 (the representative sample of housewives) should be compared with the other known data for the period under review, referred to in section 5.1. As pointed out in that

section, despite its limitations and the fact that it is at best only an estimate, Table 4 of Business Monitor PQ212 constitutes the best officially published source of data for comparison purposes.

TCA data is for wrapped bread only but is useful for comparisons on Hovis/Vitbe and slimming breads.

It also needs to be pointed out that this check on validity of the market share figures is at best a rough one bearing in mind that sample 1 data is for one week only, compared with thirteen weeks for the Business Monitor and four weeks for TCA and also that certain somewhat arbitrary amalgamations of bread groups are made within sample 1 for comparison purposes.

However, the resulting comparisons expressed in the following table do indicate a degree of agreement in broad terms:-

TABLE 19 - COMPARISON OF SAMPLE 1 MARKET SHARES WITH BUSINESS MONITOR AND TCA

Bread Type	Business Monitor	Sample 1
White wrapped and sliced	56%	54%
White unwrapped and unsliced	24%	19% (groups 3, 7, 8, 11)
Brown bread	9%	13% (groups 2,
Wholemeal/Wholewheat	2%	6%
Other	9%	8% (groups 5, 6, 12)
TOTAL	100%	100%
	TCA	Sample 1
Hovis/Vitbe	5%	7%
Nimble/Procea/Slimcea	3%	3%

Some explanation of the discrepancy on wholemeal/wholewheat bread is afforded by the fact that Granary is included in the sample 1

figures and that confusion exists with regard to definitions of wholemeal/wholewheat. It seems likely that bakers employing more than twenty five persons in the bakery (the data source for the Business Monitor) would correctly define wholemeal/wholewheat bread as that made from flour containing the whole of the wheat grain. By law it must contain all of the products from the milling of cleaned wheat.

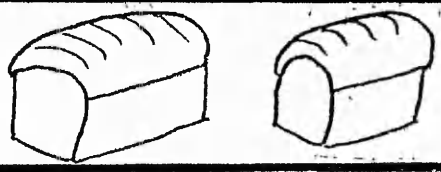
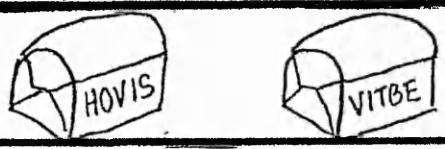
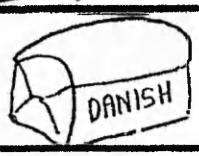
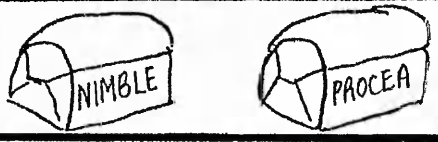
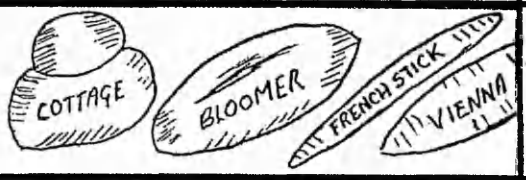
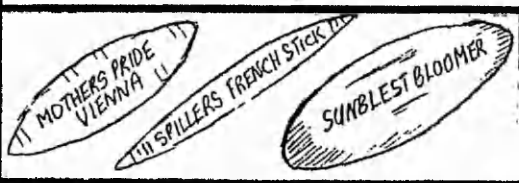
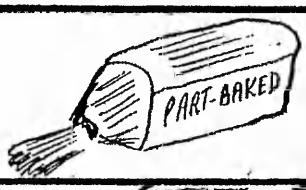
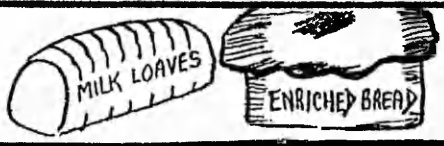
However, when the analyst working for the TACC investigators[1] examined thirty two loaves sold as wholemeal only five came within the legal definition and claims were made that even shop assistants were unaware of the difference between wholemeal and wheatmeal (containing 80 to 90 per cent of the original wheat grain).

Table 20 which follows shows marked differences between the figures for market shares held by the various bread groups and the figures for the major regular purchase featured in Graph 10. For example bread Group 1 accounts for a greater proportion of total consumption than its "regular buy" figure would indicate. This is because its (Group 1) regular buyers bought more loaves per week than regular buyers of other groups. Additionally the purchase of Group 1 bread were more strongly biased towards large loaves whereas the buyers of Hovis/Vitbe almost always bought the small loaf.

Table 20 also shows that members of consumer groups and teachers or wives of teachers buy significantly less standard (Group 1) bread than the average housewife and between 2 and 4 times as much special white crusty breads (Groups 7 and 8) and wholewheat or wholemeal breads (Group 9) on an ounces per household per week basis

1 See page 26.

TABLE 20 : BREAD MARKET SHARES

GRP	DESCRIPTION	ILLUSTRATION	SAMPLE 1	2	3
1	STANDARD WHITE WRAPPED AND AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND, ANY SLICE THICKNESS (including 'Big T' and Farmhouse)		54	35	36
2	STANDARD BROWN WRAPPED AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND EXCEPT HOVIS OR VITBE		6	6	4
3	STANDARD WHITE UNWRAPPED AND UNSLICED LOAVES, LARGE OR SMALL		11	12	11
4	HOVIS OR VITBE ONLY, WRAPPED OR UNWRAPPED, SLICED OR UNSLICED, LARGE OR SMALL		7	8	9
5	DANISH "LIGHTER" BREAD, WHITE OR BROWN, WRAPPED AND SLICED, ANY BRAND		2	2	4
6	SLIMMING BREAD, WHITE/BROWN, WRAPPED AND SLICED, ANY SIZE, ANY BRAND		3	2	1
7	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, UNSLICED AND BAKED ON THE PREMISES		6	12	14
8	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, BRANDED AND WRAPPED AND NOT BAKED ON THE PREMISES		1	4	2
9	SPECIAL UNSLICED WHOLEWHEAT OR WHOLEMEAL BROWN BREAD, ANY TYPE SIZE, SHAPE OR BRAND		6	15	18
10	PART-BAKED BREAD, EG. HOMEBAKE, TAKE 'N' BAKE, ETC - ANY BRAND		0	0	0
11	MILK LOAVES OR ENRICHED BREAD OF ANY SIZE, TYPE OR BRAND		1	0	1
12	ANY OTHER BREAD NOT DESCRIBED OR COVERED BY ANY OF THE ABOVE 11 GROUPS		3	4	0

Also that part-baked bread (Group 10) (once tipped as the bread most likely to oust standard bread as the bread group market leader) has dwindled to an insignificant market share, although according to informed sources it sells well before long public holidays, particularly Christmas, owing to its relatively good keeping (storage) qualities.

Milk loaves or enriched bread (Group 11) also occupies only about one per cent of the total weight of bread purchased.

Group 8 - special fancy white crusty breads or soft white cob loaves, branded and wrapped and not baked on the premises - (the majority of which emanate from plant bakers) are relatively much less popular than the equivalent loaves baked on the premises by small bakers or in in-store bakeries (Group 9).

Slimming breads (Group 6) are surprisingly unimportant in market share terms although it has to be remembered that market demand for this type of bread increases dramatically in the Spring and early Summer in response to television advertising.

6.2.5 QUESTION FIVE - NEW MAJOR BUY 'IF'

This question followed on from question 4, that is after respondents had been asked from which group or groups they regularly bought each week and the quantity of large and small loaves bought weekly on average, they were then asked from which group, assuming all types of bread were equally priced and equally available, they would mainly buy. Respondents were only allowed one choice and were deliberately not asked directly whether they would change their regular buy as it was thought this would lead to bias.

When designing this question it had been assumed that the majority of housewives would have chosen price and availability as either their most important or their next most important consideration when buying bread. The reason for this assumption was that it was known that standard bread was the market leader and that standard bread was both the cheapest and the most readily available bread. If this was the case then it was reasoned that other "less important" considerations such as taste freshness, nutritious health etc., were overidden by the price and availability factors, thus dissatisfaction with other factors would be hidden but would come to light when the overiding factors of price and availability were removed. Hence this hypothetical question was created, with the added bonus that the amount of desertion of standard bread could be measured and this could be regarded as demonstrating the degree of dissatisfaction, allowing some categorical pronunciation to be made regarding the hypothesis.

Graph 11 compares the proportions of respondents currently buying from a given group as their main purchase with the new proportions which would obtain if all types of bread had equal price and equal availability.

It can be seen that remarkably little change occurs confirming the relative unimportance of the price and availability factors elicited from question one. The next most significant points to emerge are a loss of 8 percentage points from Group 1 (standard bread) and a gain of 9 percentage points for Group 9 (wholemeal, wholewheat and Granary). Groups 7 and 8 (white crusty breads and cob loaves, produced on or off the premises) <u>together</u> gain 3 percentage points. Other groups remain relatively stable.

Table 21 compares the old major buy with the new major buy in terms of numbers of respondents and then breaks down the two most significant variances (namely the number of deserters of Group 1 and the number of gains for Group 9) by the four demographic variables.

GRAPH 11 : MAJOR BUY v NEW MAJOR BUY "IF"-TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1

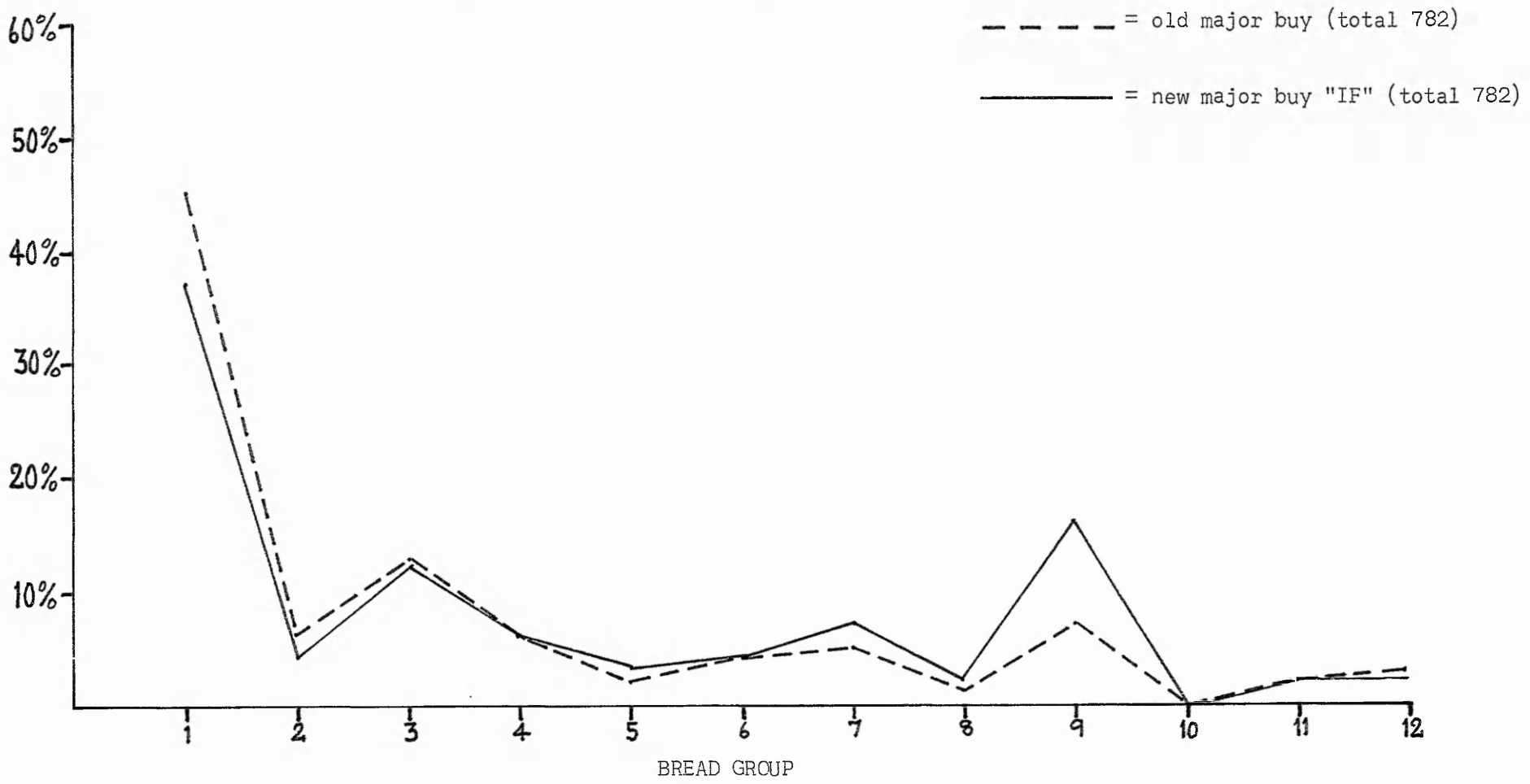


TABLE 21 : OLD MAJOR BUY v NEW MAJOR BUY "IF" - BREAD GROUP GAINS AND LOSSES - SAMPLE 1

Bread Group	Old Major buy	New major buy "IF"	Old + OR New -
0	45	44	-1
1	355	288	-67
2	47	29	-18
3	103	92	-11
4	49	48	-1
5	19	26	+7
6	29	28	-1
7	40	58	+18
8	9	13	+4
9	51	124	+73
10	2	1	-1
11	12	12	0
12	21	19	-2
Total	782	782	+ 102 - = 13%

ANALYSIS OF DESERTIONS $\frac{67}{355}$ = 20%

No children $\frac{28}{151}$ = 19%, children $\frac{39}{204}$ = 17%

North England $\frac{31}{168}$ = 19%, Wales $\frac{5}{30}$ = 17%
South England $\frac{27}{99}$ = 27%, Scotland $\frac{4}{58}$ = 7%

Social Classes A + B $\frac{12}{29}$ = 41%, C1 + C2 $\frac{36}{199}$ = 19%, D + E $\frac{19}{127}$ = 15%

Age 15 to 24 $\frac{5}{35}$ = 14%, 25 to 54 $\frac{46}{225}$ = 20%, 55 + $\frac{16}{95}$ = 17%

ANALYSIS OF GAINS 73 = 100%

No children = 43 = 59%, children = 30 = 41%

North England = 38 = 52%, Wales = 6 = 8%
South England = 23 = 32%, Scotland = 6 = 8%

Social Classes A + B = 18 = 25%, C1 + C2 = 37 = 51%, D + E = 18 = 25%

Age 15 to 24 = 2 = 3%, 25 to 54 = 42 = 58%, 55 + = 29 = 40%

The total number of deserters of Group 1 (standard bread) equivalent to 8 per cent of the total number of respondents compares with 5 per cent choosing price and availability as their most important considerations and 11 per cent choosing these two reasons as their next most important considerations.

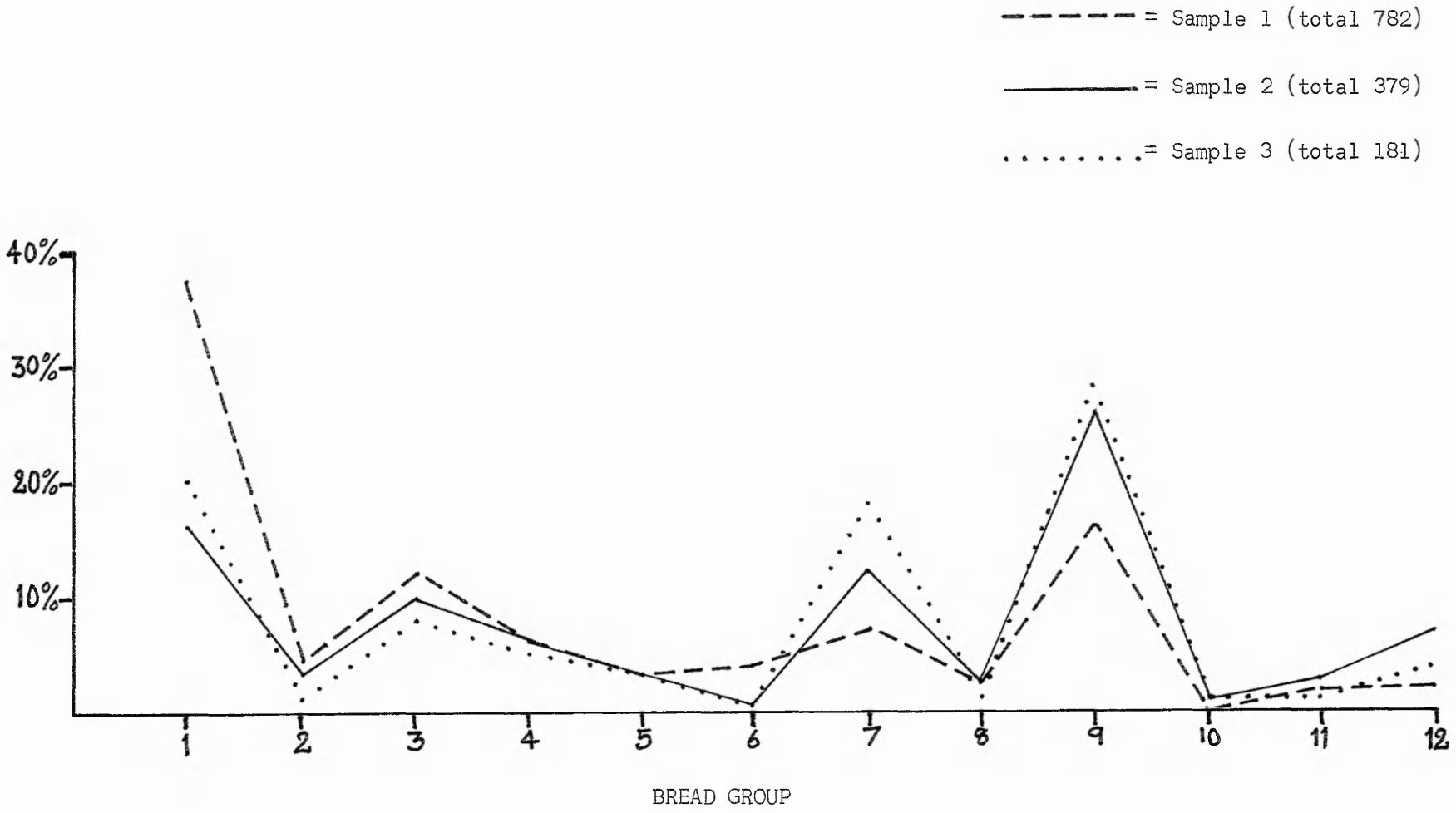
Some 20 per cent of the total number of housewives currently adopting Group 1 (standard bread) as their major buy would however desert this group if all bread was given equal price and availability.

The demographic analysis of gains and losses for each group of bread under the hypothetical situation - apart from indicating that Group 1 losses would in the main be Group 9 gains and that Group 1 deserters are slightly more likley to be from social classes A and B and living in the south - adds little of consequence to the general picture of market segmentation.

SAMPLE DIFFERENCES - Graph 12 shows the new major buy for each sample and can be compared with Graph 10 showing the old major buy for each sample to demonstrate that the highly significant differences which exist between the bread buying habits of the general population of housewives (sample 1) and those of consumer group members (sample 2) and those of teachers or teachers' wives (sample 3) would become even more acute should all bread groups be sold at an equivalent price and be equally available in the shops.

Differences between the samples with respect to bread groups 1 (standard bread), 7 (crusty breads baked on the premises) and 9 (wholemeal, wholewheat, Granary) would increase rather than diminish under the hypothetical situation.

GRAPH 12 : NEW MAJOR BUY (BREAD GROUP) "IF" - SAMPLE 1 v SAMPLE 2 v SAMPLE 3
TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS



The relatively close agreement between all three samples with regard to bread groups 4 (Hovis, Vitbe), 5 (Danish), 8 (branded crusty breads not baked on the premises), 10 (part-baked bread) and 11 (milk loaves or enriched bread) on a current major buy basis would hardly be disturbed given equal price and availability.

Some 51 per cent of teachers or teachers' wives and 52 per cent of consumer group members would desert Group 1 (standard bread) as their major buy in the event of equal price and availability compared with 20 per cent for the population as a whole. Both teachers/wives of teachers and consumerists would then have wholemeal/wholewheat bread as their most popular choice. Bread Group 7 (crusty breads baked on the premises) would gain 3 per cent in the cases of the total population and the consumerists, 6 per cent in the case of the teachers or teachers' wives.

CHAPTER 7

CONCLUSIONS

7.1 CONCLUSIONS - These are presented question by question, cross relating as necessary and leading to an overall discussion around the hypotheses.

7.1.1 QUESTION ONE - BUYING MOTIVES - One is led inevitably to the conclusion that either price and ease of availability are relatively unimportant considerations for the average housewife when buying bread for everyday family use or that she will not admit to the importance of these considerations when questioned, albeit by a stranger. Cross relating with Question 5, it would seem that when given a free choice under hypothetical conditions of equal price and availability,only 20 per cent of the current buyers would desert standard (cheap and readily available) bread in favour of some other bread as their majority purchase - again indicating that these are not the main reasons why standard bread is the most popular choice of its buyers.

Furthermore since this 20 per cent desertion is equivalent to 8 per cent of total respondents and this corresponds reasonably well with the total of 5 per cent of all respnndents choosing price or ease of availability as their most important consideration and the 11 per cent choosing one of these reasons as their next most important consideration - it would appear that these two considerations really are not the most important buying motives for most people. This conclusion applies almost equally well to the four demographic sub-groups investigated. Nevertheless some evidence that price and/or availability are important to a higher proportion of housewives than were prepared to admit these reasons is afforded by cross relating the results of question 1 with those of question 4 and question 5.

TABLE 22: DISSONANCE BETWEEN BUYING MOTIVES AND BUYING BEHAVIOUR

		Sample 1	Sample 2	Sample 3
1	Percentage of total sample giving either price or availability as the most important consideration	5	6	8
2	Percentage of total sample buying standard (cheapest and most available) bread as major purchase	45	31	39
3	Percentage of current buyers of standard bread who would discontinue buying it as a major purchase given equal price and availability for all types of bread	20	52	51
4	Number of "deserters" (from 3) as a percentage of total sample	8	15	19

The most important consideration when buying bread for everyday family use is clearly shown to be taste or freshness and it has to be assumed that the housewife takes her family's opinions into account when declaring this overidingly important buying motive. However, relatively fewer housewives who are members of consumer groups choose taste or freshness as their primary consideration and relatively more of this group and (to a lesser extent) relatively more teachers or teachers' wives elect health or nutritious considerations as their most important bread buying motive.

Other reasons less important than taste or freshness but more important than price or ease of availability are of course health or nutritious considerations, followed by convenience and keeping qualities.

Respondents in the older age groups (who tend to be without children in the home) seem to be relatively more interested in keeping qualities whilst the "higher" social classes were significantly more interested in the health and nutrition aspects.

Cross analysis of Question 1 by Question 4 reveals relationships between the emphases put upon the various factors and the types of bread most frequently purchased. Taste was given as the most important factor by buyers of white wrapped and sliced bread, white unwrapped bread, white fancy unwrapped bread and Hovis, whilst health-nutrition was the most important consideration for buyers of wholemeal/wholewheat: Buyers of white wrapped and sliced bread put above average emphasis on convenience and were relatively uninterested in health-nutrition as the most important consideration: Buyers of white unwrapped were more interested in taste or freshness and less interested in convenience as the most important factor: Regular buyers of white fancy unwrapped showed no particular bias among their most important factors whilst Hovis buyers took a slightly above average interest in health-nutrition. The pattern for the next most important consideration was broadly similar to that for the most important, in these respects.

7.1.2 QUESTION TWO - EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS)

The conclusion from the results is that there is very little experience across the spectrum of all twelve groups. Since in the representative sample only three out of the twelve groups had been experienced by more than half the housewives it could be

alleged that the average housewife is in no real position to judge which type of bread she really prefers. It would seem that the majority of housewives decide which types of bread they dislike or rather prefer not to buy, on hearsay rather than actual remembered experience. It could be further concluded that given more experience across the available range of breads by more housewives, the bread market might be different in its breakdown by segment.

The alternatives to these conclusions are that the question was misunderstood or that actual experience was far greater than that remembered.

Since members of consumer groups and teachers or teachers' wives possessed highly significantly more experience across the range than the average housewife, it could be concluded that these possibly more aware and more informed housewives are in a better position to judge the relative merits of the various types of bread.

This theme of greater experience among housewives likely to be better informed is continued when examining the experience levels amongst the social classes. Social classes A and B have more experience of the total range of bread than social classes C1 and C2, who have more experience than social classes D and E.

Housewives living in the south had greater experience of white fancy breads baked upon the premises and of wholemeal-wholewheat-Granary than any other region and this corresponds with heavier emphases on taste-freshness and health-nutritious considerations as the most important buying factors and corresponds again with heavier actual levels of purchasing for these two bread groups in terms of major buy. This would seem to confirm that experience influences attitudes which influence buying behaviour and therefore

that experience is a key factor in determining the market share mix of the various types of bread.

The apparently poor experience of the two relatively recent varieties of Danish and part-baked bread in Wales and Scotland might have been due to differences in distribution intensities by the plant bakers.

The age group 25 to 54 was found to be relatively more adventurous in trying different types of bread than older or younger housewives as revealed by noticeably more experience of white fancy breads, wholemeal-wholewheat-Granary and milk loaves or enriched bread. The over 55 group had relatively less experience of standard bread. Housewives with children were seen to have a generally higher level of trial than those without children.

Standard bread, Hovis-Vitbe, Danish and slimming breads were overall the four groups showing the least differentiation in terms of experience measured by sample type and demographic sub-groups. These were therefore the most homogenous varieties in terms of propensity to try.

7.1.3 QUESTION THREE - REASONS FOR NOT BUYING BREAD - Whilst this question was not asked of the main sample for reasons previously explained, it can be seen from other research that some five per cent of total housewives as a maximum, always bake their own bread. The Mintel survey in July 1976 of 1,000 housewives showed that six per cent had used flour to bake bread in the last week and thirteen per cent in the last three months but a report issued by Spillers (1978) indicated that most home-bakers supplement their supplies with bought ready-sliced bread which they consider more suitable for toast and sandwiches.

7.1.4 QUESTION FOUR - THE CURRENT BREAD MARKET AND ITS SEGMENTATION There are significant differences between the social classes and highly significant differences between geographical regions

as well as between the average housewife and members of consumer groups and teachers or wives of teachers - in their actual major purchase of types of bread. Furthermore it can clearly be seen that housewives who live in the south of England; who belong to social classes A or B; who are members of consumer groups or teachers or wives of teachers are much more likely to buy wholemeal/wholewheat/Granary bread (and to a slightly less extent - fancy white crusty breads baked on the premises) and much less likely to buy standard white wrapped and sliced bread as their major purchase, than the average housewife. This statement has extremely important implications pertinent to the hypotheses which have been reserved for the overall conclusions. Whilst unfortunately no demographic breakdown of the total purchases was possible, there are similar highly significant differences between the three samples with regard to the total market purchases to those outlined above for the major buy.

Another conclusion important to the hypotheses is that housewives who are members of consumer groups buy from more bread groups than the average housewife and teachers or teachers' wives are even more likely to purchase a greater variety of bread each week.

Some distortion between market segment sizes in terms of actual weight of bread and between numbers of buyers in those segments is evident and is caused by differences in the size of purchase. For example housewives buying standard bread purchase a larger quantity of loaves (or larger weight) than housewives buying other varieties.

7.1.5 QUESTION FIVE - NEW MAJOR BUY 'IF' - Given equal price and ease of availability for all types of bread the majority of housewives would not change from their current major buy and the overall outline of the existing market segments would remain largely the same.

Standard white wrapped and sliced bread would still be the clear market leader. The market shares occupied by Hovis/ Vitbe, slimming breads,part-baked bread, milk loaves and enriched breads (4 of the 12 groups) would remain virtually unchanged.

Slightly less people would continue with their major buys of standard brown wrapped and sliced loaves, standard white unwrapped unsliced loaves and "any other bread."

Slightly more people would then buy Danish, and special white crusty breads. The other two of the original twelve groups would be the most affected. Standard white wrapped and sliced bread would be the group sustaining the heaviest loss of market share with wholemeal/wholewheat and Granary being the group gaining the highest increase in market share. In fact this latter group would more than double its current market share (in terms of major buy) to become the second most popular choice of the average housewife.

The people deserting standard white wrapped and sliced and the people changing to wholemeal/wholewheat and Granary are slightly more likely to be from social classes A and B and living in the south of England, adding to the evidence of strong demographic identification of wholemeal bread devotees. Significantly high proportions of housewives belonging to consumer groups or being teachers or wives of teachers would desert standard white wrapped and sliced bread as their major purchase in the event of equal price and availability. Wholemeal/wholewheat and Granary would gain proportionately more from members of consumer groups and teachers or teachers' wives than from the average housewife.

This evidence corroborates that under 7.1.4 with regard to identifying the type of people most likely to buy the "more nutritious" bread and least likely to buy standard white wrapped and sliced bread both under existing conditions and under hypothetical conditions of equal price and ease of availability.

7.2 MISMATCHES BETWEEN BREAD VARIETY DEMAND AND BREAD VARIETY SUPPLY

Since there are no accurate ongoing figures obtainable for bread production broken down by a number of the more significant varieties, it is difficult to accurately quantify distortions between supply in these terms and demand as elicited from the consumer research. The only (wholly unsatisfactory) comparison currently possible is that between sales of production establishments given on Table 1 of Business Monitor PQ212 for the third quarter of 1976 for white bread and "other", with the market for these two types as determined by this consumer research at the end of September 1976.

Classifying consumer research bread groups 1, 3, 5, 6, 7, 8, 10, 11 and 12 as white (the majority demand for Danish, Nimble and Procea is for the white variety), the proportionate demand for all white is 84 per cent and for "other" 16 per cent. This compares with Business Monitor proportions of sales of production establishments of 89 per cent for white and 11 per cent for "other". On the face of it there would appear to be an oversupply of white and by implication an undersupply of brown bread but it should be remembered that the Business Monitor figures omit all bakery establishments employing less than 25 persons. Thus the production of some 5,000 Master Bakers plus retail companies with in-store bakeries are exluded - the very establishments most likely to produce a higher proportion of brown bread than the larger bakers.

The conclusion has to be that there is insufficient data on production by bread variety to enable meaningful comparisons with consumer demand for these bread varieties to be made and therefore that there is no hard evidence in this respect to indicate severe mismatches between bread variety supply and bread variety demand.

Nevertheless personal observations at a variety of stores during the last half of 1976 led to a suspicion of oversupply of white varieties at the expense of brown. The very nature of the major method of modern bread distribution (through the self-service outlets of national multiple grocers) and commercial considerations (brown breads generally having a shorter shelf life than white) would tend to lead to a concentration on the white breads particularly standard bread and some neglect of those brown breads subject to relatively insignificant demand.

7.3 TRENDS OF CONSUMPTION - It is well known that the long term trend of overall bread consumption in terms of ounces per capita is downwards but contrary to the pronouncements of some commentators, this cannot necessarily be said to indicate consumer dissatisfaction with standard plant-produced white wrapped and sliced bread. It could be considered natural that with increasing affluence peoples' tastes in food should move away from a basic and possibly dull "belly filler" such as bread. However, if within this overall declining market, the share occupied by standard bread declined whilst the share occupied by fancy breads baked on the premises increased, then this could be interpreted as symptomatic of public disatisfaction with the plant-produced loaf.

However, once again the official statistics are insufficiently detailed to reveal any such tendencies. The main source namely the National Food Survey (table 4 of Business Monitor PQ212) gives estimated bread consumption (oz per capita per week) in only five basic groups:

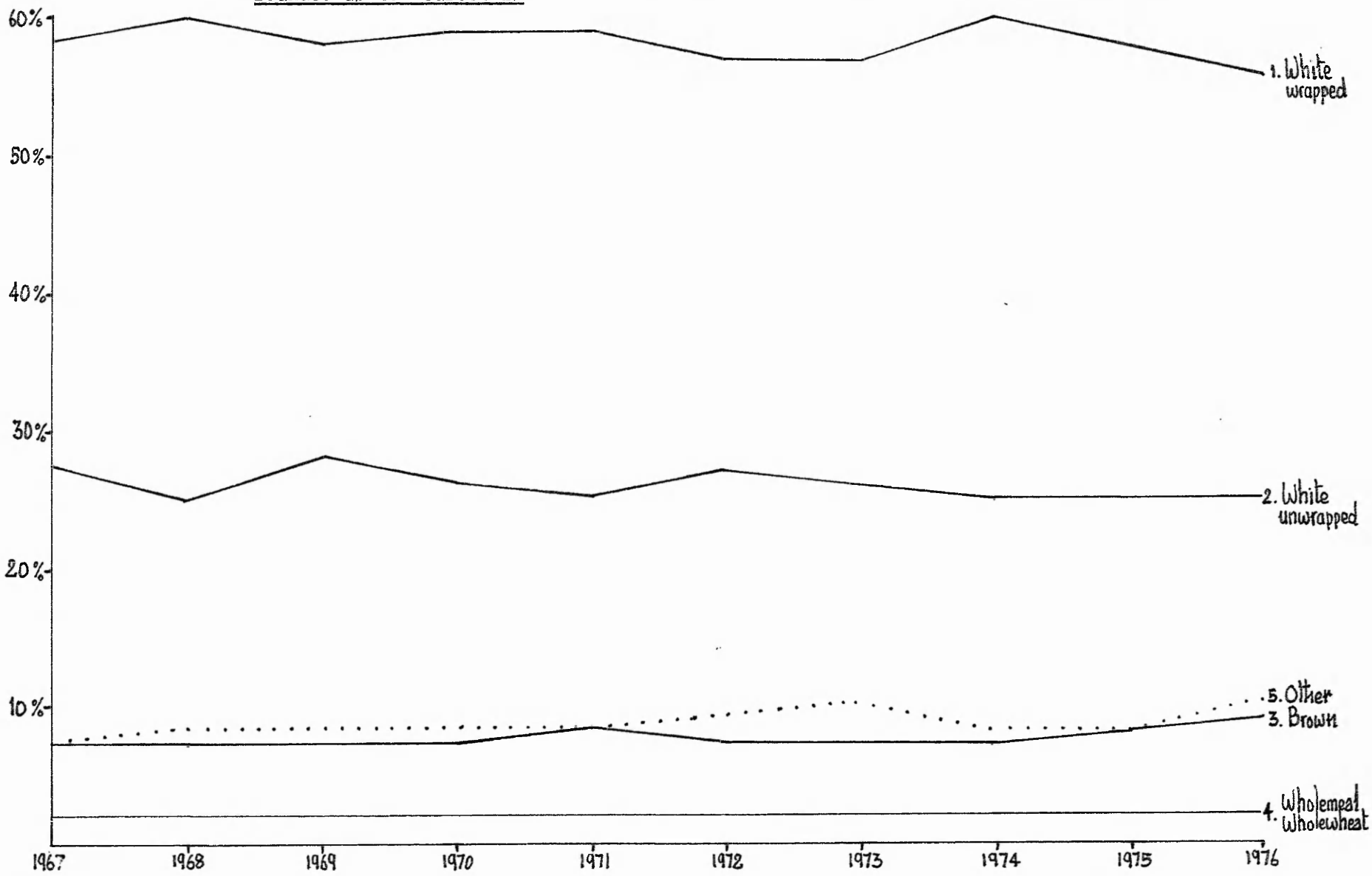
1 Large or small white wrapped and sliced bread
2 Large or small white unwrapped and unsliced bread
3 Brown bread (excluding wholemeal/wholewheat)
4 Wholemeal/wholewheat loaves
5 Other

These figures are shown in Graph 13 which follows, covering the ten years 1967 to 1976 and which shows no strong tendencies towards variety share changes over this period. The share of total consumption held by white wrapped and sliced bread is seen to vary between 57 and 60 per cent, that of white unwrapped and unsliced between 25 and 28 per cent,brown bread between 7 and 9 per cent, wholemeal/wholewheat stays constant at 2 per cent and other bread varies between about 7 and 10 per cent, over the ten year period.

Again the conclusion must be that there is no firm statistical evidence which indicates general dissatisfaction with standard bread produced by plant bakers or strong propensities for other varieties such as brown or wholemeal/wholewheat.

7.4 DISTRIBUTION OUTLETS - If plant-produced standard bread is really not what most people want and if their real preference is for fancy, crusty or wholemeal breads baked upon the premises of the retail outlet, then these preferences could be expected to manifest themselves in greater patronage of Master Bakers. The laws of supply and demand should eventually and gradually result in an increase of bakers shops or other outlets baking bread upon the premises over a prolonged period. Furthermore, those outlets relying entirely upon self-service and, therefore, more remote from their customers could be expected to have a declining share of the bread market whilst small, independent counter-service grocers well positioned to deal with small local bakers and ideally placed to know their customers wants would be expected to increase their share of the bread market. This would be particularly the case where price and ease of availability were the least important buying considerations and where convenience factors in use also rated relatively low in the hierarchy of buying motives, as indicated by this study. Information with regard to the proportions of total bread sales sold through the different segments of the universe of outlets, over a long period is not available and so it is not possible to conduct comparisons, establish trends and arrive at a firm conclusion.

GRAPH 13: Proportions of total bread consumption occupied by major varieties 1967 to 1976 rounded up to nearest 1%



Source: Business Monitor PQ212, Table 4

A further difficulty is that the Census of Distribution has changed form since its last issue of data for 1971 and some of the bases of the data have been redefined.

Nevertheless there are some indications that changes have taken place and in particular that the trend established during the period 1961 to 1971 changed direction between 1971 and 1976.

The following table shows a decline in the number of independent bread outlets and the number of specialist bakers which operates against the assertion of increased patronage of outlets selling non-plant produced bread and better placed to know and react to consumers' real wants -

TABLE 23 : NUMBERS OF BREAD OUTLETS IN THE UK, 1961 AND 1971

Outlet type	1961		1971	
	No	%	No	%
Co-operatives	14,310	9.6	8,092	8.7
Multiples	26,317	17.8	18,124	19.4
Independents	107,603	72.6	67,038	71.8
Total	148,230	100.0	93,254	100.0
of which: specialist bakers	14,510	9.8	13,000	13.9

Source: Census of Distribution 1971.

Table 9A of Business Monitor SD10 breaks down the above 13,000 specialist bakers outlets into 295 Co-operatives, 5,803 Multiples and 6,902 Independents.

However, Business Monitor SDA 25, 1976 Table 1 gives a figure of 13,884 for the number of bread and flour confectionery outlets owned by 7,362 businesses, 6,025 of which were single

outlet retailers, 1,207 small multiple retailers with between 2 and 9 outlets, and 130 large multiple retailers with over 10 outlets.

In May 1974 Mintel (Market Intelligence) commissioned British Market Research Bureau Ltd (BMRB) to investigate where housewives were buying their bread with the following results compared with a National Opinion Poll survey in 1972.

TABLE 24 : SOURCE OF BREAD PURCHASE 1972, 1974

	Bakers roundsmen	Bakers shop	Grocer	Milkman	Other
NOP 1972	21%	32%	40%	2%	5%
BMRB 1974	12%	30%	50%	2%	6%

Business Monitor SDA 25, 1976 gives figures for 'Bakery Products' which would include bread but also other items as follows.

TABLE 25 : BAKERY PRODUCTS, SOURCE OF PURCHASE, RETAIL OUTLETS 1976

Grocers and General Food Retailers	Grocers	Large General Food Retailers	Other Food Retailers
32.5%	8.9%	23.6%	43.6%

Breakdown of Other Food Retailers -

Dairymen	Butchers	Greengrocers	Bread and Flour Confectioners	Off-Licences	Total
1.1%	0.8%	0.1%	41.4%	0.2%	43.6%

Figures were published by the Monopolies and Mergers Commission in 1977 which gave the estimated shares of the markets for standard and non-standard bread held by various baker groupings -

TABLE 26 : ESTIMATED SHARES OF BREAD MARKETS, PLANT v MASTER BAKERS

Bakery Groupings	% of Total Bread Market	% of Standard Bread Market	Share as % of total bread market	
			Standard bread	Non-standard bread
The Big Three Groups	62	84	53.7	8.3
Independent plant bakers	11	15	9.6	1.4
Master Bakers	27	1	0.6	26.4
Total	100	100	63.9	36.1

Source: Federation of Bakers

There is some further evidence which suggests that independent bakers have increased their sales (cakes and bread and others) to a greater degree than the multiple bakers or Co-operatives' bakers since 1971 viz:-

TABLE 27 : SHARES OF BAKING PRODUCT SALES, MULTIPLES-CO-OPS-INDEPENDENTS

1971 = 100

Year	Independents	Multiples	Co-operatives
1973	120	119	115
1974	148	138	135
1975	174	157	155
1976	196	170	177

Source: Estimates based on D.O.I. indices.
E.I.U. multi-client study "Retail Distribution in Britain"

There is also evidence of considerable increase in the number of instore bakeries to the extent that almost every large grocery outlet currently being built or planned will incorporate an in situ baking facility. At the end of 1976 Tesco had 28 instore bakeries and the instore baking concept was to be employed in all new stores in their 1977 expansion programme, according to chairman Leslie Porter.

John Beaumont, Director of Research, Institute of Grocery Distribution revealed that in 1975/6 some two-thirds of the 24 new grocery stories over 25,000 square feet built, recorded instore baking facilities.

7.5 TRENDS IN HOME BAKING - Various claims have been made with regard to increases in the incidence of bread baked in the home which if true might be taken to indicate housewives' dissatisfaction with bought bread and perhaps by inference, with standard bread.

Unfortunately most of the claims have been made by manufacturers with vested interests in either flour or bread mixes. The Grocer October 23, 1976 carried the claim that baking mix sales would reach £20 million by the end of the year and Peter Ross of Romix Foods who produce Granny Smith's mixes claimed the market had expanded ten times from the 1974 figure of £200,000. McDougalls' advertisements in November 1976 claimed that 'almost five million housewives are baking their own bread these days'.

A Spillers' report mentioned in the Grocer August 19, 1978 stated that more of the flour bought was being used for bread baking although the majority use remained in baking cakes, tarts etc. This same report, based on T.N.A. and N.F.S. figures suggests that the increased flour consumption by 25 to 34 year olds was thought to be due to an increase in home bread-baking by households with young families. The weekly flour consumption in ounces per person increased from 5.15 in 1975 to 6.02 in 1976, (although this could have been influenced by the existence of a subsidy on flour prices.)

A less biased source is the BMRB/Mintel report of October 1976 based on a survey of 1,000 housewives in July 1976. Six per cent had used flour for baking bread in the past week and thirteen per cent during the past three months. The following demographic breakdown indicates a slight bias towards higher social classes, under thirty-five year olds and the Midlands region.

TABLE 28 : DEMOGRAPHIC BREAKDOWN OF HOUSEWIVES BAKING THEIR OWN BREAD

All	ABC_1	C2	DE	<35	>35	South	Midlands	North
6%	7%	7%	5%	7%	6%	6%	8%	6%

Source: Mintel

There is no evidence to suggest any really notable increase in the incidence of home-baked bread, despite the introduction of convenient, success-guaranteed, packaged bread mixes and the even more convenient "fail-safe", part-baked bread. In fact the latter innovation initially hailed as the ideal answer to the critics of standard bread and which enjoyed a high novelty trial, has dwindled to an insignificant less than one per cent market share.

7.6 LAUNCHES OF NEW VARIETIES - If it were true that the big three plant bakers were overproducing standard bread and underproducing other breads as a deliberate policy contrary to consumer demand, then it could be expected that very little product development would take place. However, the reverse situation can be seen from the facts. Faced with a continually declining total brand market the then big three plant bakers made strong efforts to find new varieties to increase their market share. Furthermore, whenever a new variety launched by one of the big three gained any success however small, it was immediately copied by the other two - hardly the behaviour of companies alleged to be pursuing a policy of enforcing the choice of standard bread. This

was particularly the case with the advent of part-baked bread which was a positive reaction of the big three bakers to the critics of standard plant-produced bread. No loaf could be said to be further from the large white wrapped and sliced loaf than this new part-baked variety which was small, unsliced, bagged rather than wax paper wrapped and not even fully baked. It was even subsequently offered in a brown variety but after euphoria in the media and an extremely high initial trial by housewives this loaf dwindled in popularity as most housewives reverted to the purchase of standard bread. Other new varieties launched by the big three during the period under review include various slimming breads, cryovac-wrapped crusties (an attempt to get bloomers, french sticks, coburgs etc into mass distribution through multiple outlets), various fruit loaves, new shapes and sizes such as 'Big T', 'Dinkum', Picnic and the more successful 'Danish' which seems to have established itself nationally. It is also felt to be significant that almost without exception, new product development has been confined to the big three plant bakers perversely the bakers most strongly criticised. Hardly any new bread products of note can be seen to have been launched by the small plant bakers or the Master Bakers.

7.7 OVERALL CONCLUSIONS - It has not been possible to identify differences between the proportions of each type of bread produced and the proportions of each type of bread preferred, the latter elicited from a consumer research. The reason for this failure is a total lack of accurate bread production figures, let alone by type. In the period before the abolition of 'sale or return' by Shirley Williams an indication of the degree of oversupply if any of each type of loaf was theoretically obtainable by a detailed, continuous and systematic analysis of all returns from the market place to all bakeries on a national and regional basis. However pronouncements as to which degrees of oversupply constituted a

severe distortment between demand and supply would be subjective unless comparisons were made.with other segments of the food market. The question of undersupply presents less problems and this can be elicited from consumer research with suitable questions. Nonetheless, some degree of mismatch between supply and demand can be expected to occur in any market both intermittently due to human error and to some extent continuously, due to communication barriers between consumer, producer and distributor.

However, taking the main hypothesis (that public dissatisfaction with plant-produced standard bread will be revealed by a substantial proportion of housewives preferring othertypes of bread under conditions of equal price and availability) it is found that some eight per cent of all housewives buying bread are dissatisfied with standard bread. They only buy it on grounds of economy in price and/or ease in obtaining and would buy other types of bread if they were as cheap or available as standard bread. Since the measure of theoretical desertion is twenty per cent of housewives currently buying standard bread as their major purchase, it has to be asserted that there are a substantial number of housewives who are dissatisfied with it on grounds of taste or freshness, nutritious or health considerations and in this respect the hypothesis is proven.

With regard to sub-hypothesis 1 (that evidence of public dissatisfaction with plant-produced standard bread will be found in a marked increase in demand for bread baked upon the premises) it was found that at the time the research was conducted there was no firm evidence to suggest that significant and sustained changes in patronage away from those outlets distributing mainly plant-produced bread and towards those outlets selling bread baked upon the premises, were taking place. In this respect the lack of sustained

migration could be taken as evidence of an underlying general satisfaction with standard bread, particularly since Master Bakers appeared to enjoy only temporary increases in patronage during periods of shortage of plant-produced bread caused by strikes.

Sub-hypothesis 2 (that a high proportion of housewives will be found not to have a wide experience of the total range of bread types available for purchase. Particular inexperience will be found concerning non-standard bread) was found true. By virtue of not having tasted certain types of bread, housewives will be unable to judge for themselves real differences other than in price or shape. In this respect, they will be stating imagined or hearsay differences rather than real (based upon actual trial) preferences. It could therefore be postulated that a greater degree of dissatisfaction with standard bread might be discovered if a higher proportion of housewives could be persuaded to try all bread types within the available range. A corollary of this postulate is that the majority of housewives are relatively unadventurous in actual purchase, amongst bread types previously experienced, evidenced by the fact that they buy from an average of 1.3 bread groups. This corroborates earlier work by other researchers indicating a certain apathy towards bread and that habit dominates the bread buying behaviour of most housewives, who give little attention to the buying decision compared with other foods.

Sub-hypothesis 3 (that evidence of dissatisfaction with plant-produced bread will be found to be general and not to be confined to relatively small numbers of "opinion leaders") was found to be untrue. Firstly some eighty per cent of housewives buying standard bread as their major purchase at the time of the survey would not change their buying habits even under conditions of equal price and availability for all types of bread. This is clear evidence of satisfaction

with the existing product for the majority of its current buyers. What dissatisfaction does exist cannot be said to be general, for standard bread would still be the most popular choice for all housewives (not just those currently buying it) given equal price and availability for all types of bread.

It is also submitted that the evidence is extremely clear that patrons of wholemeal/wholewheat/Granary breads and fancy breads baked upon the premises are highly significantly associated with the A and B social classes, the south of England and are more likely to be members of consumer groups, teachers or wives of teachers than average housewives. Furthermore, this same consumer profile applies to the would-be deserters amongst current purchasers of standard bread and again to the proportion of all housewives who bake their own bread. It is further suggested that these housewives are likely to be critics of standard bread and to be more articulate than average housewives and to have greater access to the media.

It should however be noted that significantly more experience was evident in the higher social classes and amongst housewives who are member of consumer groups, teachers or wives of teachers and that they currently buy from a higher number of bread groups than the average housewife. It might be said therefore that these more experienced housewives are better qualified to judge between the various types of bread available and should perhaps have more right to express opinions through the media.

The overview of the above conclusions on the hypotheses is that overall, much of the sustained attack by the media upon the standard loaf and consequently upon plant bakers, ostensibly on behalf of the average housewife, was unjustified and not based upon the available facts, at the time of the study.

CHAPTER 8

COMPARISON OF RESULTS AND CONCLUSIONS WITH EARLIER STUDIES

8.1 MARKET ADVISORY SERVICES LTD. 1962 - This in-depth study was carried out with the objectives of determining:-

i) The factors affecting the purchase of bread

ii) The factors which have caused a decline in per capita consumption of bread

iii) Attitudes to branded bread, particularly in regard to Sunblest

Six factors were abstracted from their responses on the repertory grid which affected the purchase of bread and these are ranked below and compared with the results from this researcher's study:-

TABLE 29 : COMPARISON OF BREAD BUYING MOTIVES, M.A.S. 1962 WITH 1976

M.A.S. SURVEY (1962)	RANK	THIS RESEARCH (1976)
Crusty, appearance, flavour for guests	1	Taste or freshness
Convenient, good for toast/ sandwiches	2	Nutritious or health considerations
Healthy, nutritious etc	3	Wrapped/sliced, right size/ shape for toast/sandwiches
Diet/brown/non-starchy/light bread	4	Keeping qualities
Good keeping qualities	5	Price
Satisfying; man's food	6	Readily available

Since in fact rankings 3 and 4 in the MAS survey were equal and could be said to form part of the overall construct, the only difference in the first four rank orders between the two studies is that in the later study nutritious and health considerations usurp convenience for second place. Certainly price and availability were found to be relatively unimportant in 1976 as indeed they were in 1962.

The 1976 study agrees with the 1962 MAS survey in that the decline in per capita consumption cannot be necessarily blamed on plant-produced standard bread and that bread in general was considered to be an unexciting food. Other probable reasons advanced in the 1962 study for the decline in consumption included, the ability to buy more expensive foods; decline in sandwich meals due to increased works/school canteen facilities; the availability and popularity of frozen foods for childrens' teas; reduced calorie consumption in general e.g. the passing of the English breakfast.

8.2 MARKET INVESTIGATIONS LTD. 1963 - The objectives of this study based upon some 2,500 personal interviews were concerned with identifying the image of plant bread and the factors which inhibited or encouraged bread consumption.

In the 1963 survey 27 per cent of housewives did not buy plant bread as typified by the sliced loaf which compares with 28 per cent buying unsliced bread or 'other' in the 1976 survey. Non-buyers of sliced bread in 1963 were found in greater than average proportions among middle class housewives over the age of 54. There was no clear evidence to suggest that public criticism of plant bread had inhibited consumption of the product. 19 per cent of all housewives were aware of the criticism but only 2 per cent said that this had made a difference to their bread buying habits.

A comparison of main buying criteria gives the following results:

TABLE 30 : COMPARISON OF BREAD BUYING MOTIVES, MIS 1962 WITH 1976

M.I.S. SURVEY 1963	RANK	THIS RESEARCH 1976
Freshness	1	Taste or freshness
Hygiene	2	Nutritious or health considerations
Taste	3	Wrapped/sliced, right size/ shape for toast/sandwiches
Nourishment	4	Keeping qualities
Lack of doughiness	5	Price
Availability	6	Availability
Consistent quality	7	Other

Bearing in mind that the MIS survey gave hygiene and taste equal ranking there is again a great deal of agreement with the 1976 rankings and factors. Although not specifically listed above the 1963 survey did find that 88 per cent of housewives thought the sliced loaf easy to use and 49 per cent considered this an important attribute. In 1963 only 23 per cent of housewives considered bread baked upon the shop premises to be easily obtainable.

With regard to experience of buying or tasting comparisons, 94 per cent of 1963 respondents claimed to have experienced standard sliced bread against 79 per cent in 1976. The 1963 survey also found a greater propotion of A and B class housewives not purchasing standard sliced bread.

Only 1 per cent of the 1963 respondents claimed that they only used bread which they had baked themselves.

Some 5 per cent of the 1963 respondents confined their purchases to brown or wholemeal whereas the 1976 survey found wholemeal/ wholewheat/Granary breads had a 6 per cent market share.

In the 1963 survey, housewives were asked whether they were buying less bread and of those replying in the affirmative, 26 per cent said this was because they disliked sliced bread. Whilst this represented only some 6 per cent of the total population the MIS researchers thought it obviously of sufficient size to be worthy of note as indicating a measure of dissatisfaction with this type of bread. This compares with 8 per cent of the total population thought to be dissatisfied with standard bread in the 1976 survey, measured by the amount of people saying they would buy other than standard bread given equal price and availability for all breads.

Only one third of 1963 respondents were prepared to agree that factory bread had no goodness in it and this compares extremely

well with some 67 per cent (estimated factory bread market share less some 8 per cent would-be deserters) of 1976 respondents buying plant-produced bread apparently on grounds of taste/freshness or health/nutritious considerations. 'Upper class' women in 1963 were more inclined to criticise sliced bread on grounds of lack of goodness. The 1963 survey found repeatedly in its study that the heavy consumer of bread was much more favourably disposed towards the sliced loaf than the light consumer.

8.3 WILLIAM SCHLACKMAN LTD. 1967 - This was an extremely wide ranging survey of 2500 housewives, using a diary plus interview technique. There was also an availability survey based on 191 retail outlets and 570 housewives. Objectives included the ascertaining of consumer attitudes to bread, criticisms and reasons for decline and the effectiveness of distribution. The Schlackman study agrees with the findings of this researcher's 1976 study in that in terms of variety, consumers were generally well served by the outlets at which they normally bought their bread. Only 5 per cent of respondents complained that there was any type of bread that they would like which they could not get at their normal outlet and at least one fifth of such complaints were invalid. A further 2 per cent of the 5 per cent complaints were in respect of bread rolls and malt/fruit/currant loaves.

The claim was made that approximately half of all housewives in 1967 were not aware of the price of bread they bought.

There is therefore agreement between the two studies in that price and availability are relatively unimportant buying motives.

One major point of dissention however is revealed in the following statement from Schlackman:

> There is also a fair measure of agreement with the view that wrapped bread is not nearly so nice as the crusty oven-baked type. This accords with all other indications that the attraction of sliced and wrapped

> bread is its convenience and that all other things being equal, housewives would prefer the traditional oven-baked product. What is needed is a bridge product which combines the convenience of the sliced and wrapped loaf with the taste and textural advantages of the oven-baked product.

It could well have been this statement of Schlackman that gave support to the development of part-baked bread subsequently launched by the big three plant bakers.

Certainly the 1976 survey did not find that all things being equal, housewives would prefer the traditional oven baked product or that convenience of standard bread was its prime attraction, but another finding of the 1967 study does intimate a possible causative factor of this difference namely:

> Similarly, it may be seen that there is a fair measure of agreement with the view that bread is not as good as it used to be. It is evident, however, that the strength with which this view is held varies very considerably with age and it is probable that in the years to come, when there are fewer people who can recall the era prior to the advent of plant bread, it will diminish still further.

Another area of agreement between the 1976 and the 1967 studies exists with regard to the special position of higher income groups. The 1967 study found that a relatively high (57 per cent) of the highest income group patronised specialist bakers, attributing this to its greater mobility and fastidiousness. Housewives in the higher income groups displayed a higher level of awareness of all types of speciality bread than lower income groups, in both the studies.

An interesting finding of the Schlackman study was that irrespective of age and social class, the large majority of respondents (83 per cent) wanted a white loaf - indeed not merely white, but as white as possible.

Agreement in some measure also exists between the 1967 and 1976 surveys with regard to a proportion of respondents being dissatisfied with standard bread. In reply to an open-ended question in the 1967 study some 14 per cent took exception to the standard loaf on grounds of taste, texture, crust attributes or keeping qualities. This compares with 8 per cent of the 1976 respondents apparently being dissatisfied on these grounds and only buying it because of price or availability considerations.

Some 46 per cent of respondents in the Schackman study 1967 claimed to have bought speciality loaves compared to 51 per cent in 1976, both studies finding higher percentages amongst the higher income groups.

The 1967 study found little inclination amongst housewives to bake their own bread. Although 40 per cent of all housewives had made bread at some time, only 1 per cent baked more than once a week and only 11 per cent currently did so at all. There was general agreement that the quality of the do-it-yourself product did not justify the effort expended. The large majority of dormant bread bakers complained that it was too much trouble and for 13 per cent of respondents who claimed that their bread was better than the manufactured product, there were 5 per cent who admitted that it was worse.

There were 35 per cent of the 1967 respondents buying their bread from specialist bakers' shops.

In 1967 although general availability was good there was a relatively poor supply of small speciality loaves weighing not more than ten ounces. Some 25 per cent of respondents were not able to buy such loaves at their normal outlet (and at supermarkets, grocers and general stores in particular). French sticks were available to only 45 per cent of respondents.

8.4 OFFICE OF POPULATION CENSUSES AND SURVEYS 1970 - This survey entitled "Shopping Habits and Attitudes to Shop Hours in Great Britain" achieved a total sample of 2747 respondents and represents a totally unbiased source of confirmation of the general ease of availability of bread. In fact bread was found to be the most convenient item next to newspapers as shown in the following table:

TABLE 31 : CONVENIENCE OF OBTAINING GOODS/SERVICES OR GETTING TO SUPPLIERS (PERCENTAGES)

ITEM	VERY CONVENIENT	VERY/FAIRLY CONVENIENT	NOT VERY CONVENIENT OR VERY INCONVENIENT
Newspapers	83	91	5
Bread	79	94	4
Groceries	69	94	6
Meat	67	91	9
(Post Office)	67	90	9
Greengroceries	67	88	8
(Chemists)	57	81	18
Ironmongery	47	78	16
Fish	47	71	22
(Bank)	38	65	21
Shoes	38	74	25
Clothing	32	68	29
(Town Hall)	23	58	31

The survey also found that some 23 per cent of respondents had their bread delivered.

8.5 N.O.P. MARKET RESEARCH LTD. 1972 - Some fieldwork carried out in September and October 1972 by this company confirms once again that in the main housewives do not have any trouble in obtaining bread of their choice. In response to the question 'Do you normally

have difficulties in buying bread?' some 93 per cent said that they had no difficulty. The seven per cent who experienced difficulty selected the following reasons:-

TABLE 32 : REASONS FOR DIFFICULTY IN OBTAINING BREAD

Shops open at the wrong time	0.1%
Shops shut too early/open too late	0.4%
Shops sell out of bread too quickly	3.1%
Little choice/insufficient variety	1.9%
Other	1.3%
Don't know	0.6%
TOTAL	7.4%

Some 875 housewife respondents were also asked the question 'Thinking about bread in general, all the different kinds that are made, are there any types you would like to buy quite often but find you can't really get in the shops?', with the following results:

TABLE 33 : TYPES OF BREAD DIFFICULT TO OBTAIN

Replies	All	AB	C1	C2	DE
No/None	72	64	67	74	79
Home made	2	4	2	1	2
Old type of oven baked bread	2	2	4	2	2
French loaves	4	7	4	4	4
Milk loaves	1	-	2	1	1
Cottage loaves	2	-	4	3	1
Wholemeal	2	6	2	1	1
Brown rolls	1	-	2	1	1
Other answers	10	14	15	10	6
Don't know	3	5	2	3	4
TOTAL PERCENTAGES (rounded)	99%	102	104	100	101

It is interesting to note that the number of frustrated housewives (in the sense of not being able to get the bread types really wanted) increases with ascending levels of social class and the particular emphasis on wholemeal bread and French loaves by the AB social classes. The writer's own survey in 1976 found the AB social classes much more likely to buy these types of bread than the average housewife and relatively more experienced in having bought or tasted breads across the range of available types. The N.O.P. study found that a significantly lower proportion (64 per cent) of 'young single/young married without children' women found that all types of bread they wanted were available in the shops.

The N.O.P. survey investigated both who bought the bread and who made the buying decision and that part of the investigation agrees with the writer's own feeling that housewives would be influenced in their choice of bread by the opinions of members of her family. Quoting from the findings of the N.O.P. study - WHO BUYS BREAD?

(i) 50% of the 1924 informants said that they themselves usually bought the bread and 42% said their wife or mother usually bought it. 91% of the housewives said they usually bought, 16% of the men and 17% of the non-housewife females

(ii) 55% of those informants who did not usually buy the bread said they sometimes bought it and about 60% of these decided what to buy on some occasions

(iii) In all, 94% of housewives, 56% of males and 33% of non-housewife females ever buy bread or make the buying decision. 6% of housewives, 44% of males and 67% of non-housewife females never do either of these things. Thus, although the housewife is the most important person in the buying situation, other people too play a part.

8.6 OVERVIEW

This concludes the review of the results and conclusions of earlier studies in comparison with the writer's own work. The review has been limited to those few studies of sufficient depth to enable valid comparisons to be made.

Other reports felt to be biased, not based upon empirical research and lacking in detail have been ignored for the purpose of making comparisons although they have of course been referred to in previous chapters.

The total of six studies between 1962 and 1976 can be seen to agree to a considerable extent with regard to bread buying motives and their hierarchy.

Also evident is a reasonable measure of agreement with regard to attitudes towards and experience concerning standard sliced bread and its general availability.

Interesting insights are afforded into the effects of demographic variables upon buying motives and buying behaviours particularly those of age and social class, by the six studies taken as a group.

Finally, the N.O.P. study of 1972 makes a useful and somewhat unique enquiry into exactly who buys bread and hints at the importance of other influencers in the housewife's buying decision, which point is covered in some greater depth in the next chapter.

CHAPTER 9

CONTRIBUTION TO CHOICE BEHAVIOUR THEORY

9.1 RATIONALE

It seems reasonable to suggest that most empirical research which involves some attempt to examine relationships between buying motives and actual buying habits has a contribution to make to choice behaviour theory in either supporting or modifying its hypotheses. It is further suggested that a considerable body of former marketing research has neglected this aspect and perhaps ought to be re-examined as a potential source of relatively objective data which might help in refining the theory.

In the case of bread buying motives and habits described in previous chapters, somewhat disturbing discrepancies were discovered between the attributes which housewives stated as being of prime importance, and their actual buying behaviour. It was recognised that this phenomenon was similar to that described by the American Professor of Psychology, Leon Festinger in his theory of cognitive dissonance (1962). When taking into account the work of earlier researchers into the British bread market it was felt that this dissonance could be claimed to be long standing and in this respect provided evidence which appeared to operate against the theory.

It was for this reason that it was felt important to examine the field of choice behaviour theory, and within this the cognitive school of which Festinger's theory is part, with a view to some pronouncement as to whether empirical research into bread buying behaviour could be regarded as supporting or refuting evidence.

9.2 BACKGROUND AND RELATIONSHIP TO SURVEY QUESTION 1

Most of the post-1969 definitions of Marketing reviewed in Crosier's (1975) paper on the subject include some reference to a process of finding out what people want in the way of goods and services, as a starting point.

However, in the honest endeavour to do this marketers have encountered several difficulties. Firstly, in some instances it has been found that people do not always know what they want. Then, even if they do know, they are not always prepared or able to communicate these wants effectively. Thirdly anomalies have been found between what people say they want and what they actually buy.

These difficulties have caused marketers to become increasingly involved in research in the field of behavioural science. In her paper on the state of the art, Jennifer Drayton (1976) refers to the contemporary consumer no longer being seen as the predictable reactionist in the stimulus-response-reinforcement theory within the cognitive school of psychology but rather as a modifier and manipulator of stimuli, as well as a receiver.

The sequential stages leading up to actual purchase are seen as:

Perception : Exposure to, reception of and comprehension of information

Attitude : Agreement or disagreement with what information is comprehended

Learning : Retention of the attitudes and their use in information search and retrieval processes

Choice : Deciding among available options.

Complexities occur when examining each of the above four stages in greater detail. There are for example different levels of and different types of perception.

When framing her attitudes towards bread the housewife will be guided not only by her own exposure to, reception of and comprehension of information communicated to her by the media, but also by her exposure to, reception of and comprehension of information communicated to her by shop assistants, friends and family. Bearing in mind that the majority of bread is bought for family use the market researcher is faced with the problem of whether to seek to establish attitudes of the housewife as an individual or those conditioned by the act of buying for the family. It is suggested that it would be wrong to assume that both sets of attitudes are identical and that it is perhaps in this area that social psychology lacks definition. As Jennifer Drayton points out, notwithstanding the fact that attitude research is the largest single body of research in social psychology, 'one of the scandals of social psychology is the low correlation between attitudes and actions'.

Referring back to Kelly (1955), it is possible to conceive different sets of constructs being invoked to form attitudes according to the background within which the stimulus is received. In the case in point, the background would be seen as whether the housewife is buying bread for herself or for others and in the latter case whether for everyday use or for a special occasion. These backgrounds would act as modifiers to the stimulus and the mesh of constructs searched for information on which to base a response to the stimulus, would be different, resulting in different types of bread being purchased according to the background situation.

Block and Roering (1979) point out that decisions regarding the purchase of goods are often made by a family through the interaction of its members. Ferber's (1973) framework of family decision making separates behaviour according to whether decisions are financial or non-financial, suggesting that the former are influenced by resources and the latter by objectives.

Sheth's (1974) model of family buying behaviour is perhaps the most comprehensive and includes point of sale display as a third source of information to add to those of the media and word of mouth. It also shows information search processes as preceding perception and substitutes buying motives/evaluative beliefs for attitudes, which then pre-dispose individual family members towards a decision, after which the process becomes inter-active.

Hise, Gillett and Ryans (1979) draw attention to various studies which show that whilst one person in the family may act as the family's purchasing agent, that person is not necessarily the family's decision maker. In fact the decision maker can vary according to the nature of the product/service under consideration and may depend upon complex social interactions amongst several family members.

The following two exhibits modified from Loudon and Della Bitta (1979) illustrate firstly some of the results of a Belgian study by Davies and Rigaux (1974) on the relative importance of husbands and wives for twenty-five representative products categorised into- i. Husband dominant, ii. Wife dominant iii. Autonomic ie equal number made by each spouse, iv. Syncratic ie made jointly by husband and wife as a pair of equals-types of decisions.

Secondly, the results of an American study of 108 different products and services by Haley, Overholster and Associates (1975) where influence on the purchase between spouses is categorised as direct where consciously recalled and indirect where consideration of the wants/preferences of each spouse was given by the purchaser.

DIAGRAM 3 : MARITAL ROLES IN PURCHASING DECISIONS, BELGIAN STUDY

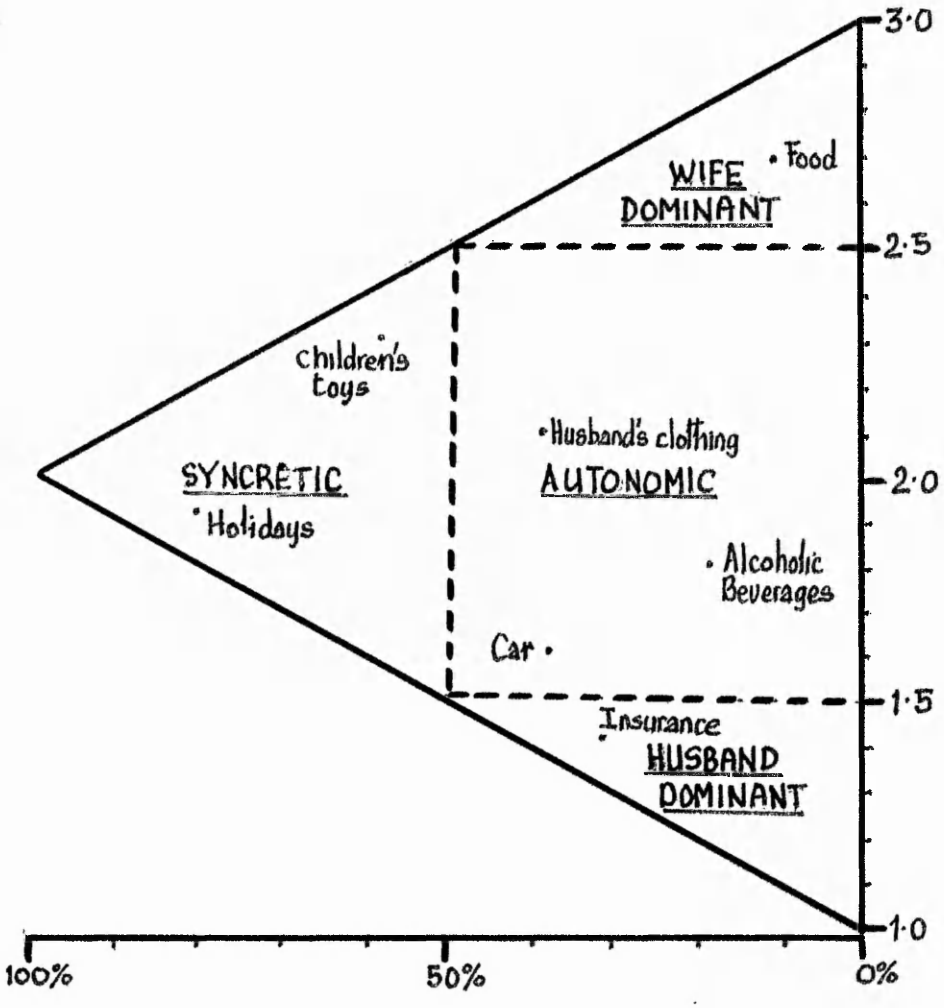


TABLE 34 : RELATIVE PURCHASE INFLUENCE: HUSBANDS AND WIVES, AMERICAN STUDY

Product	Percentages of influence Purchased by		Direct Influence		Indirect Influence	
	W	H	W	H	W	H
Cereals (hot)	84	16	67	33	63	37
Scotch Whisky	35	65	18	82	22	78
Catfood	66	34	75	25	80	20
Dog food	76	24	60	40	60	40
Coffee (ground)	74	26	65	35	58	42

As Sheth's model indicates it is not at all easy for the market researcher to distinguish clearly between attitudes, buying motives and evaluative beliefs, when framing questions and it is often found pragmatic to resort to what Luck and Ferrell (1979) term "Benefit Analysis" in the diagnosis of markets. Benefit segmentation focusses on those benefits associated with the product or service and is often used to pinpoint why consumers are purchasing same. In the case of bread, benefits can be seen as price, convenience, taste, nutritional merit and so on. Obviously it is important to the marketer to endeavour to discover to what degree is each attitude (or benefit) a determinant of product patronage or at least the relative importance of product benefits and to what extent the family influences choice.

9.3 RELATIONSHIP TO SURVEY QUESTION 2

It is felt that Sheth's model lacks a loop back from the last stage of family consumption to information sources in that certainly in the case of food, actual tasting and consumption of the product adds information to the existing knowledge gained from media, display and word of mouth. Dislike of taste or after-effects of eating on the part of either the family's purchasing agent or other members of the family is likely to act as a modifying factor on future buying decisions.

Again there are dangers in assuming that experience necessarily has to be at a personal level. In the case of the housewife, she may have had experience of buying certain types of bread for certain members of the family without actually having tasted a given type herself. Pre-dispositions towards certain types of bread can be based upon hearsay but still be real in their effects upon actual buying behaviour.

Differences detected in the nature of food products during trial can be imagined rather than real but still have real effects upon market segments. The work of Hardy (1969)

referred to earlier,[1] concerning the inability of human taste buds to discriminate between types of coffee has been supported by other work, for example on consumers' inability to discriminate between blends of whisky in Scotland.

Joyce (1963) said that by consenting to use the term 'brand image' people engaged in selling products have recognised that the impressions of a brand held by its consumers do not necessarily correspond to reality, so that the success or otherwise of a product is only partially dictated by its personal characteristics.

In the writer's own experience, the same bread placed in different wrappers can be construed as having different tastes and other qualities and certain consumers taking part in tests have stoutly defended the existence of these differences even when confronted with the truth.

Foxall's (1976) paper "Extending Sociology's contribution to consumer research" refers to debate over the suitability of psychographic variables as criteria for segmenting markets and concludes that although socio-economic variables are safer criteria, there is room for inter-relationship between the two sets.

Katona (1960) refers to experience in the following manner:

> How we perceive changes in the environment depends to some extent on us, that is on subjective or intervening variables. The most important function of intervening variables is to organise. What fits in or what is consistent with our predispositions has the best chance of influencing us. All intervening variables are learned through experience but some are relatively permanent as, for instance, socio-cultural norms, well-ingrained motives and personality traits acquired early in childhood. Stability over fairly long periods also characterises a variety of habits developed and sustained over many years.

1 Page 95

Whilst it is difficult to agree with Katona that all intervening variables leading to perceptual changes are learned through experience, assuming Katona means actual personal experience, it is possible that some attitudes towards certain bread varieties are acquired early in childhood through information received from parents, which become relatively permanent and which then tend to prohibit actual personal trial of these bread varieties and inhibit purchase for actual trial by other members of the family.

It this were true then it would help to explain the relatively low trial of the different bread varieties available, by the average housewife revealed by the results of survey question 2.

Hughes (1976) did some interesting work on meat which has some parallels with bread, and found a most significant state of ignorance on the behalf of housewives concerning meat and meat cuts. Repertory grid techniques were utilised but disappointingly Hughes' question A(4) asked, after showing photographs 'Can you tell me the name of those cuts that you know?', thus failing to distinguish between recognition (information knowledge) and actual experience of tasting or buying.

Much of what has so far been written on aspects of consumer behaviour with regard to information search and information eavaluation leading to trial or non-trial seems to be refuted by the case of bread. Most authors suggest that trial will take place where units are small with low risk, but this does not appear to happen with regard to varieties of bread and possibly other factors such as ingrained attitudes lead to rejection of the merits, claimed for other varieties by information inputs.

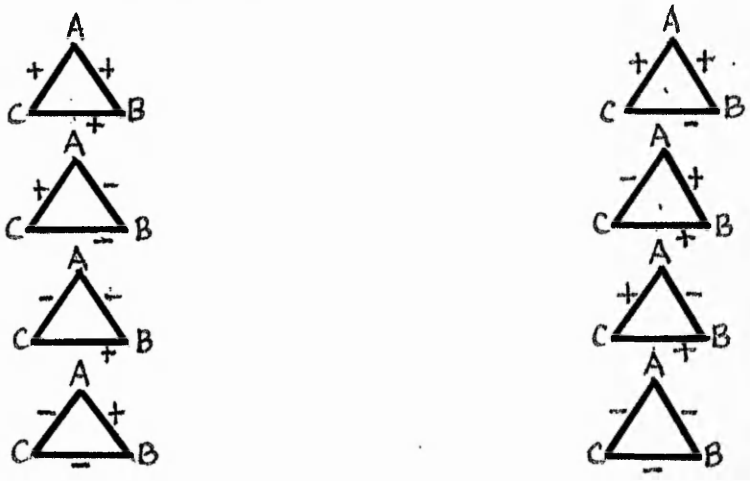
9.4 DISSONANCE THEORY - RELATIONSHIP TO SURVEY QUESTIONS 4 AND 5

Loudon and Bitta (1979) provide a section describing attitude models and theories which are stated to be simple in essence although they can appear quite complicated. Three of the more popular viewpoints embrace the general principle 'that the human mind strives to maintain harmony or consistency among currently perceived attitudes' - namely congruity theory, balance theory and cognitive dissonance. The section then goes on to claim that marketers in recent years have begun to question these uni-attribute theories and turn increasingly towards multi-attribute models particularly favouring the Fishbein (1966) model as a basis for assessing attitudes.

Examining the above in a little more detail, if a consumer notes that a person he or she likes very much praises a product that he or she dislikes, a state of incongruity occurs producing uncomfortable tension which then acts to remove the discomfort. The congruity model would predict a reduction in the liking of the person and a decrease in the disliking of the product.

Balance theory based upon the work of Heider (1946), states that a person perceives his or her environment in the form of triads. These triads contain the elements of i) people ii) ideas iii) things, all three having either a positive (favoured, liked) or a negative (disliked) relationship with each other to give a total permutation of eight states as follows:

DIAGRAM 4 : BALANCE THEORY, EIGHT POSSIBLE STATES



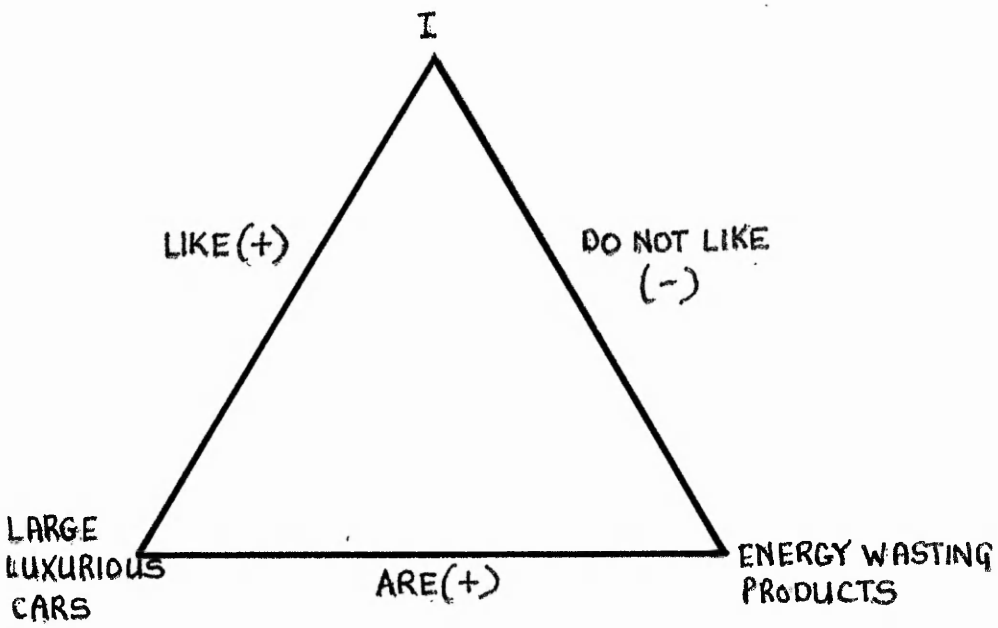
BALANCE STATES

UNBALANCED STATES

The diagram shows four balanced states because the multiplicative relationships are all positive and four unbalanced states because their multiplicative relationships are all negative.

Three statements - a) "I (concept) like (relationship) large, luxurious cars" (concept) b) "I dislike energy wasting products" c) "I believe large, luxurious cars waste energy" would provide an unbalanced state as follows:

DIAGRAM 5 : EXAMPLE OF IMBALANCE (CARS)



Whilst it may be possible for a person to accept the above im/balance, if sufficient tension is generated then at least one element in the triad will change to restore balance, says the theory.

Festinger's 1962 paper entitled "Cognitive dissonance" states that if someone knows that some things are not psychologically consistent with one another then that person will, in a variety of ways, try to make them more consistent. 'The word "cognitive" simply emphasizes that the theory deals with relations among items of information'

Where opinion and behaviour are dissonant a person can change his/her opinion or his/her behaviour or can distort perception and information. 'Changes in items of information are referred to as dissonance - reducing changes'

Fishbein's model states that a consumer's attitude towards a brand is equal to the sum of the products of attribute weighting multiplied by the evaluation score, as illustrated below. This suggests that consumers' evaluation of different attributes can actually offset each other and it is this reason which causes the model to sometimes be referred to as a compensatory model.

TABLE 35 : FISHBEIN'S MODEL APPLIED TO ATTITUDES TOWARDS STANDARD BREAD

Attributes	Importance Weight	Evaluation Score	Product
Taste	3	1	3
Freshness	2	3	6
Nutritious	2	4	8
Low price	1	5	5
Availability	1	5	5
Convenient	2	5	10
		ATTITUDE - SCORE	37

Source: Illustrative only

The data generated by a multiattribute model such as Fishbein's enables marketers to discover which attributes are most important and the degree to which the consumer evaluates the product according to those attributes.

A significant number of studies have been conducted using a further development of the above model by Fishbein the "A-act model" to predict consumer behaviour.

Referring back to dissonance theory, Tuck (1976) states that although 'attitude' is undoubtedly a learned predisposition 'we must remain uncertain of what it predisposes' and proceeds to examine the suggestions of a group of attitude theorists known as the cognitive dissonance school, where experiments showed that at least in certain cases attitudes would change over time to fit behaviour dissonant with the original attitudes.

Table 22[1] of this study cross-relates survey questions 1, 4 and 5 to indicate that a considerable degree of dissonance occurs between bread buying behaviour and attitudes expressed in terms of attributes. Most housewives whilst ranking price, availability and inconvenience as unimportant attributes relative to others such as taste-freshness and health-nutritious, actually buy standard bread which is observably the most available, convenient and cheapest variety of bread on the market.

Even allowing for distortion in perception, as postulated by Festinger, a considerable proportion of housewives would discontinue purchasing standard bread as their major buy if all types of bread were equally available and of equal price, emphasising the importance of the very attributes they had previously stated to be unimportant.

Furthermore as Graph 13 and previous research (Chapter 8) indicate, this state of dissonance has existed for at least ten years with very little sign of change in either behaviour or attitudes.

1 See page 186

In this respect the history of the British bread market can be seen to operate against the findings of the consistency theorists in general and the cognitive dissonance school in particular.

Whilst it has to be pointed out that Festinger himself states that sometimes there are circumstances in which appreciable dissonance may persist for long periods, the length of the period is left to the reader to assume and from the examples given ten years would constitute more than ample time for changes towards consonance to take place. The bread market as has been seen, poses no particular problems in price or availability for less dissonant varieties of bread to be purchased.

Tuck herself says that dissonance theorists assert that men cannot stand finding themselves inconsistent, that they are motivated to remove the dissonance and 'since they cannot undo an act, they simply change an attitude'. She also states that:

> Dissonance theory has many lacunae and fails in the end (for me, at any rate), to carry conviction. Of late, researchers are finding it more and more difficult to replicate the results in any consistent way . . . .

Ehrenberg's 1966 paper refers to laws in marketing and states that:

> To establish generalized laws, we therefore have the basic law of scientific methodology:
>
> THE BASIC LAW OF METHODOLOGY: "If in doubt, find out"
> COROLLARY: "If you don't, you won't"

Ehrenberg feels that the apparent simplicity of many of the scientific laws is the result of all the empirical work which rules out all the complicating circumstances under which the simple result does not hold good.

Perhaps the theories of the dissonant school hold good for men but not for women. Cowell and Octon (1979) refer to work by Bartos (1978) and Douglas (1975) which criticize the way in which women are identified as a market segment and many previous assumptions about women. Douglas concludes that working and non-working women may have different buying behaviours, whilst Bartos suggests that women change with the life cycle and are influenced in their attitudes and behaviour by the presence of a husband and/or children.

9.5 OPINION LEADERSHIP AND THE BREAD MARKET

Since this writer's study found that members of consumer groups and teachers or wives of teachers were significantly different from the average housewife in their attitudes towards bread and bread buying behaviour and also suggested that these two groups might be construed as opinion leaders, it is felt that some reference to work on the role of opinion leaders should be made.

Foxall (1979) defended research into this aspect as follows:

> Some of the criticisms of opinion leader research undoubtedly apply to some research studies but by no means invalidate the concept generally. This is because patterns of interpersonal influence are far more complex than is usually admitted by researchers, theorists or critics. All three often make sweeping generalisations about the nature and role of opinion leaders, basing their remarks on single cases.

Bell (1979) states that several interesting studies have been made on the subject and defines opinion leaders as 'individuals more communicative than others' whose ideas, attitudes and behaviour spread quickly. He also states that the studies suggest that directing marketing efforts toward opinion leaders constitutes sound marketing practice.

Zaltman and Wallendorf (1979) state that opinion leadership 'is the ability to informally influence others' attitudes'. They also postulate that awareness of this ability may lead to frequent, deliberate attempts to exercise this influence. Taking up this point it has already been suggested earlier in this study that members of consumer groups have as one of their group objectives, the seeking of media publicity to forward their aims and (by virtue of their attitudes and buying behaviour as revealed by the research) are more likely than the average housewife to be anti-standard bread, anti-plant bakers.

Whatever the supposed role of opinion leaders is in other markets such as fashion - clothing and however successful opinion leaders might have been in securing media publicity criticizing standard bread and plant bakers (witness section 2.5), the evidence is that in the bread market at least they have not succeeded in quickly spreading their attitudes and behaviour.

PART FOUR

SEQUEL, CRITIQUE, RECOMMENDATIONS, APPENDICES

CHAPTER 10

SEQUEL, CRITIQUE, RECOMMENDATIONS

10.1 SEQUEL

Bearing in mind the time which has elapsed between conducting the original surveys and submitting this thesis, it was felt to be necessary to review events occurring during this interim (1977-80) period, with a view to commenting on whether the conclusions reached earlier remain valid.

It was also felt expedient to acquaint the reader with the latest information available at the time of writing particularly since some of this can be seen to be highly pertinent to the study.

The sequel has for convenience been arranged into sections although these sections are not mutually exclusive and need to overlap in parts.

10.1.1 CONTINUED CRITICISM OF STANDARD BREAD AND PLANT BAKERS

At the time of writing, indications are that the campaign attacking British standard white wrapped and sliced bread continues unabated and that the cumulative effect of unfavourable publicity is beginning to have some real impact upon the proportions of total bread consumption occupied by the main varieties as well as generating changes in distribution.

In 1977 for example, Elizabeth David's excellent book carried the following opening statement in the flyleaf:

> Today, over 80 per cent of the bread sold in Britain is produced in factories. It's soft and white and wrapped. All but about 5 per cent of the rest is made with the same characterless flour, supplied by the milling monopolies which control our bread industry. So wherever it comes from, it all tastes much the same.

> A revolt against this dismal standardisation is now gathering momentum. All over the country people are again making their own bread. Mrs David has been doing this for about fifteen years. Like many of her readers, she will not accept the British shop loaf.

In her own introduction Elizabeth David's feelings are made quite clear viz:

> "Wherefore do you spend money for that which is not bread?" demands the Prophet Isaiah. I doubt if I could ever convey my feelings about shop bread quite so devastatingly.

and later:

> What is utterly dismaying is the mess our milling and baking concerns succeed in making with the dearly bought wheat that goes into their grist. Quite simply it is wasted on a nation which cares so little about the quality of its bread that it has allowed itself to be mesmerized into buying the equivalent of eight and a quarter million large white factory-made loaves every day of the year.

It would seem that whilst deploring the fact, Elizabeth David has accepted that the majority of British people are reasonably content with standard bread. The allegation of mesmerism is perhaps best ignored.

Some interesting points are made by Elizabeth David under her headings of "Have We a Choice?" and "What is Choice and Who Makes It?" She makes the quite valid point that whilst legally, wholewheat bread bought from a baker must contain 95 to 100 per cent of the grain, there are very few bakers offering the genuine article and that what is sold as

'wholemeal' or 'brown' bread can quite legally be a loaf, made from white flour with 0.6 per cent fibre plus caramel colouring.[1] A more recent government report[2] also points out that:

> While consumers may purchase wholemeal bread in the belief that it contains no additives, it is in fact permitted to contain all the yeast stimulating preparations . . . . all these types of additives are used by some if not all bakers. Thus while consumers may rely on wholemeal flour to contain no additives, the same cannot be said for wholemeal bread

Elizabeth David concludes that the only way to be sure of eating bread made from 100 per cent wholemeal, or even 85 per cent wholemeal is to buy the flour and bake it yourself.

Less easy to accept in her statement to the effect that the "working man" who in former times envied the white bread of the "privileged", may very soon envy them their brown wholewheat bread. The inference here that the ability to locate and buy wholewheat flour and to bake bread from it is confined to a privileged rather than a working class, is not justified.

Elizabeth David also alleges that the major companies' market research is biased in that the reasons suggested to housewives for determining their choice of bread do not include 'because they actually like it' and that reasons which are included such as availability, convenience, hygiene - imply a bored indifference to the bread itself.

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1 The Bread and Flour Regulations; Statutory Instrument No 1345, 1963.

2 The Food Standards Committee Second Report on Bread and Flour: HMSO, 1974.

She goes on to state that what we really need to discover is what would happen were there freedom of choice uninhibited by considerations either of price or of availability and in these respects it can be said with some pride that the writer's research pre-empted her suggestions. The other criteria of choice unprejudiced by 'massive one-sided advertising campaigns' has to some extent already happened since the demise of Spillers French Baking Ltd and the almost total absence of national advertising by the remaining two giant baking concerns.

In September 1978 a report "Our Daily Bread" by the Agricapital Group (the working party of the British Society for Social Responsibility in Science) was widely publicised in the national press including the Times, Guardian and Morning Star. The report was made available in the form of a booklet priced at 60p for individuals, £5 for business and institutions, plus 15p post. It was described by the Federation of Bakers as 'a political diatribe put together from a mixture of misinformation, innuendo and unattributable conversation pieces'. Nevertheless the report was followed up by a leaflet incorporating a cartoon strip and purporting to give the general public the facts about bread. This leaflet (see appendixes) exhorts readers 'to bring it up in your Women's Institute meeting, your union meeting, in the pub or club . . . even write to your MP. Be prepared to seem a crank if necessary.' A tapeslide presentation entitled "The Story of Bread" was also made available for use free of charge.

The Institute of Economic Affairs published a seventy-page booklet by Reekie (1978) which was a critique of political intervention in the bread market and in effect a defence of the British bread industry.

Also in 1978, Dr Kenneth Barlow published a book "The Law and the Loaf" and stated categorically in his summary:

> The purpose of this book is simply to establish one fact. Bread made from wholewheat flour is more nutritious than bread made from white flour - whatever the chemists and the millers and the government may see fit to load into the white flour. White flour is a deprived flour. To speak of white flour to which chemical substances have been added as "enriched" or "fortified" flour, is in part deliberate deception and for the rest, plain nonsense.

In January 1980 The Sunday Times magazine column "Lifespan" launched a "Campaign for Real Bread" with the following aims:

LIST 2 : AIMS OF THE CAMPAIGN FOR REAL BREAD

1. To improve the variety of shop bread of all kinds
2. To encourage the trade to tell customers exactly what they are buying
3. To make wholemeal bread available everywhere
4. To collect and publish news of good small bakers
5. To find, test and publish the best bread recipes

The writers launching this campaign namely Caroline Conran and Oliver Gillie ask 'Why can't we have better bread? This year Lifespan will be fighting, on your behalf, for bread which is healthier, tastier and better value'.

Caroline Conran's contribution alleges that we are having to put up with second-rate loaves, that the big bakers argument that the British publish wants cheap bread is untrue and finishes with the statement 'It is our intention this year to prove that a vociferous minority is not so easily satisfied . . . .'

Oliver Gillie's contribution follows the well trodden path of arguments that bran containing dietary fibre is 'widely believed by doctors to prevent many of the diseases of civilisation' and should be eaten in the form of wholemeal bread.

Neither of the two articles seem to be based on extensive research. Conran's article refers to the Northern Ireland market for support and Gillie mentions the work of Professor J N Morris at the London School of Hygiene which found a relationship between the eating of cereal fibre and a lower incidence of coronary thrombosis in the case of civil servants and bus workers.

Certainly Conran's claim to be fighting 'on your behalf' is unsubstantiated if she means the entire readership of the Sunday Times magazine, although she later admits to campaigning on behalf of a 'vociferous minority'.

Jicnars' figures for the magazine for 1977-78 indicate that sixty-five per cent of its readers are in the A and B social classes and it has been seen that approximately twenty per cent of housewives in these social classes purchase wholemeal-wholewheat or Granary bread as their major buy.

The following week (27th January 1980) the Sunday Times Magazine stated 'In our Campaign for Real Bread we are criticising plant-baked bread - which is bought by 70 per cent of us' and published a letter defending plant-produced bread from the Director General of the Flour Milling and Baking Research Association ('the people who invented it'), Professor Brian Spencer which finished with the statement 'I think that what you printed was your opinion given as stated fact.'

At the time of writing the latest event in the continuing debate is the publishing a new booklet "Bread in Britain" by FAB. Launching the new booklet at a meeting of British millers in London in February 1980 to defend their bread against what they consider to be unfair criticism, FAB's executive director said:

> We think British bread is good and we deplore the present tendency to run it down. In spite of all the efforts of health enthusiasts and campaigns for wholemeal bread, the production of wholemeal flour for bread making still only represents 2.1 per cent of the total bread flour produced. We should probably be eating more fibre, but not to the extent of saying that white bread is bad for you . . . . All white bread contains dietary fibre. White has 2.7 per cent, brown or wheatmeal 5.1 per cent, wholemeal 8.5 per cent and brown enriched bread between 10 and 11 per cent. All of it is good healthy food.

10.1.2 MARKET CHANGES - SPILLERS WITHDRAWAL

In April 1978 Spillers-French Baking Ltd, one of the "big three" plant bakers repeatedly referred to in the earlier part of this study, withdrew completely from the market due to continued losses causing (according to Henderson Crosthwaite 1979) the closing down of some 23 bakeries representing about 10 per cent of the industry's capacity. Thirteen of Spillers' plants were taken over, 7 by Rank Hovis McDougall (RHM) and 6 under government pressure by Associated British Foods (ABF). Despite an assurance that these 13 plants would be kept open for at least a year, discussions in February between the Bakers' Union, the Federation of Bakers and the Advisory, Conciliation and Arbitration Servie revealed that RHM were intending to close 6 of their other plants and aimed to share out the market with ABF.[1] One month later ABF announced the impending closure of former Spillers plants at Cambridge and Swansea, which were claimed to have failed to recover from the damaging national strike in late 1978 and to be operating at a considerable loss.[2]

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1 The Grocer, page 6, February 3, 1979.

2 Marketfact, page 4, March 1979.

10.1.3 MARKET CHANGES - EFFECTS OF NATIONAL STRIKES

In September 1977 a ten-day bakery stoppage reduced total bread demand by 2 per cent, while the November and December 1978 six weeks dispute reduced the bread market by between 5 and 6 per cent judged by National Food Survey figures. According to Henderson Crosthwaite (members of the stock exchange) bakery stoppages aggravate already declining bread consumption per capita due to some buyers switching to alternative products and not switching back, some buyers starting to bake their own bread and maintaining this action and the remainder learning to waste less bread and thus causing a permanent cut in normal ordering levels. Apart from resulting in further declines in total bread consumption, strikes by plant bakery operatives are always exploited to the full by the increasing number of "hot bread shops" and instore bakeries as well as Master Bakers. All these suggestions are given credence by other trade and press reports, for example by press claims of growth in home bread baking supported by figures of increased flour consumption.

Two instances from the press are quoted as further supporting evidence

1. "Bread strike leads to major switching" was a headline in "The Grocer"[1] followed by claims from crispbread, pasta and other substitute products of sales many times normal levels.

2 "Independents helped by swing away from sliced bread" was the title of another article[2] in the trade press, involving Morris Zimmerman, director of the National Association of Master Bakers (NAMB) who was quoted as saying:

> Undoubtedly the two major bread strikes have been a stimulus to the independent trade, so much so that they have had a visible impact on the membership figures. The NAMB currently has

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1 The Grocer, page 5, November 11, 1978.

2 The Grocer, page 82, March 10, 1979.

> 3,726 members who account for some 85 per cent of the independent baking industry . . . higher than last year . . . . The typical member is a husband and wife partnership in which the husband does the baking and the wife does the selling. The average member enterprise does have 11 workers and some of the 40,000 employees will be union members . . . one of the more perceptible changes in the country's eating habits has been the swing away from the wrapped loaf to crusty bread. The trend is a real one which has undoubtedly benefited the independent baker but has also led to an increasing amount of supermarket shelf space being devoted to specialist breads and now, in the larger supermarkets, the in-store bakery

Henderson and Crosthwaite[1] also refer to reports of "Big Two" sales to Asda being well down and here as with other chains such as Marks and Spencer, it is thought that the independents - often offering discounts of up to 27½ per cent on sliced bread compared with the RHM/ABF maximum of 24.6 per cent - have taken the trade.

The effects of these factors are shown in the following figures which are based upon the Monopolies Commission Report of 1977 and trade sources:-

TABLE 36 : APPROXIMATE SHARES OF THE BREAD MARKET - PERCENTAGES

	1975	Spring 1978	Spring 1979
RHM	23	31	29
ABF	22	29	28
Spillers	17	-	-
Other Plant Bakers	11	12	13
Master Bakers	27	28	30
TOTAL	100	100	100

It can be seen that the "Big Two" have in fact lost trade to the other independent plant bakers who quickly responded to the Union's pay demand with settlements of 17 to 19 per cent

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1 Henderson and Crosthwaite op cit.

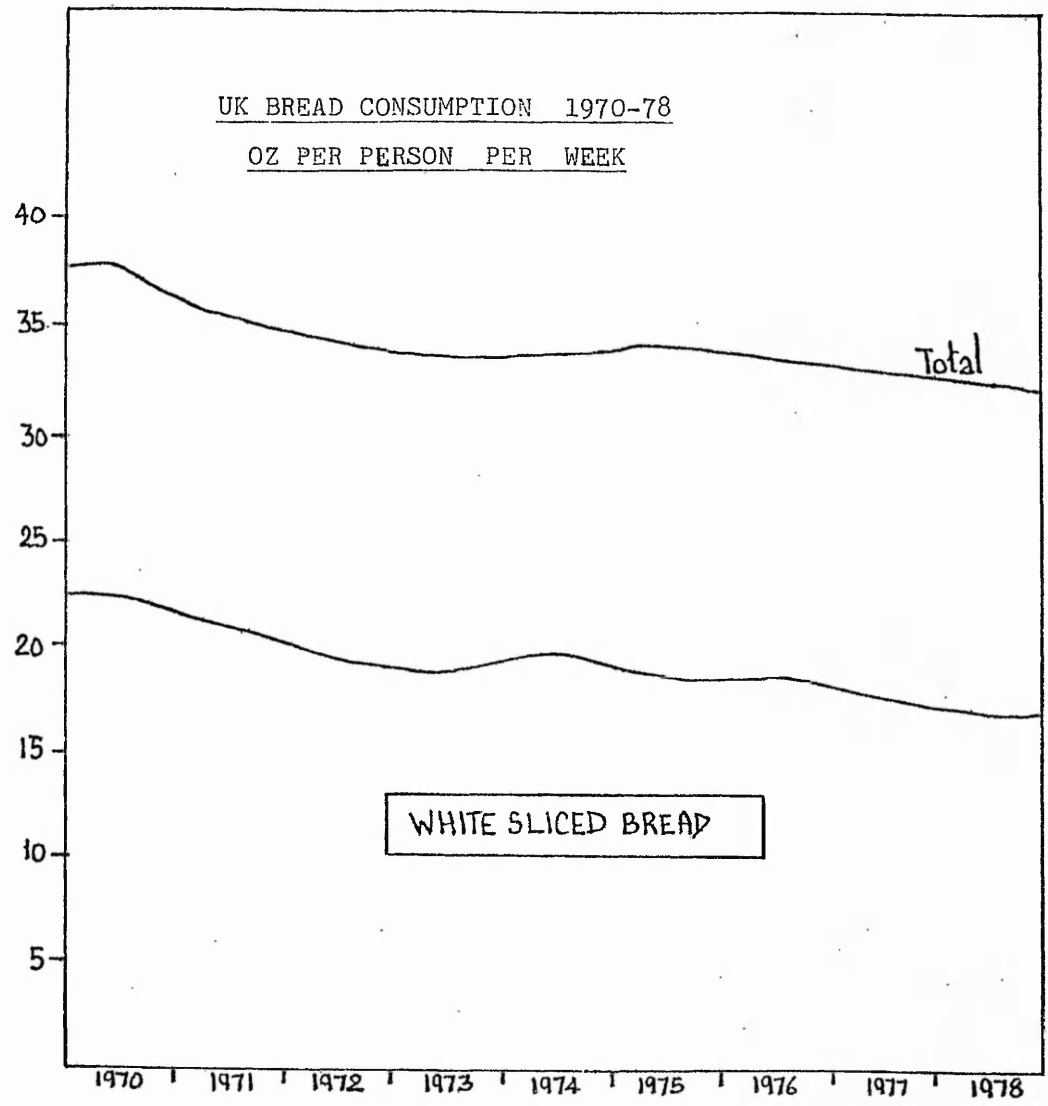
and increased their trade with the multiples some of whom were keen to encourage competition after the extinction of Spillers-French Baking Ltd. It is easier for the smaller independent plant-bakers to meet union demands since the majority of their workers are highly skilled craftsmen whose productivity and flexibility is such that premium rates of pay can be reflected in the prices which the products command.

The Master Bakers who have also gained considerable trade were of course unaffected by the strike and extra labour costs are in any event immediately recoupable, since the vast majority of their products fall outside the Bread Prices Order which governs the standard wrapped and sliced loaf.

ABF lost less trade than RHM possibly because they have over 300 "Bakers Ovens" and similar "hot bread" outlets in the "Master Baker" sector of the market.

After exposure to the bread varieties baked upon the premises, consumers are thought to be increasingly unwilling to return to buying the sliced and wrapped factory bread, albeit means paying a premium price and this affects the proportions of total bread consumption occupied by the main bread varieties. The following graph shows how white sliced bread consumption relates with decline in total bread consumption:

GRAPH 14 : WHITE SLICED BREADS DECLINING SHARE OF DECLINING MARKET



Source: National Food Survey

10.1.4 MARKET CHANGES - BREAD VARIETIES

Whilst the consumption of standard bread in ounces per capita has been declining, other varieties including brown and wholemeal bread have gained consumption as indicated in the following table. However, it should be noted that despite enthusiastic claims from brown wholemeal bread protagonists, this is still very much a minor variety.

TABLE 37 : CONSUMPTION PER CAPITA, MAJOR BREAD VARIETIES (OZ PER PERSON PER WEEK)

Bread Variety	1976	1977	1978
Large standard white	17.54	16.55	16.42
Small standard white	0.84	0.52	0.44
Large white unwrapped/ unsliced	6.07	6.78	6.31
Small white unwrapped/ unsliced	1.98	1.95	1.89
Brown	2.95	2.96	3.15
Wholemeal/wholewheat	0.65	0.74	0.69
Other	3.14	3.22	3.24
Check total	33.17	32.73	32.13

Source: Business Monitor Page 212 Table 4.

Slimming breads, malt bread and rolls have also registered volume gains since 1976 according to data published by Mintel[1] based on the market data of 50 major food manufacturers. However the slimming bread market in terms of wrapped loaves was said to have declined in 1975 by 9 per cent and a further 17 per cent in 1976 to 152 million loaves according to the Economist Intelligence Unit.[2] Crispbread consumption was about 0.3 ounces

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1 Mintel Publications Ltd, "Food Trends. Topic of the Month" 1978

2 The Grocer. Page 33. June 18, 1977.

per person per week in 1973 and 1974, dropped to 0.25 in 1975 but is estimated to expand from 1976 to 1980, according to the same source. Recently (May 1979) Findus have launched a French bread pizza from the company's Grimsby factory and the bread is being supplied from a bakery plant in that area (presumably RHM). Sales were believed to be capable of rising to £8 million by Christmas, 1979.

10.1.5 MARKET CHANGES - INDUSTRY VIEW

The Baking Industries Journal (BIJ) printed some extremely illuminating articles in late 1979 with regard to market changes.[1]

The first, in September refers to standard bread consumption falling whilst other types of bread have been increasing and to a recent survey by the journal which confirms the trend. According to companies questioned by BIJ, opinions as to the reason for this trend vary but some thought dissatisfaction with the standard loaf was responsible. Others pointed to a growing interest in nutrition or simply a desire for more flavour.

In the case of in-store bakeries run by Cater Bros, about 75-80 per cent of the business was in crusty bread lines and the total volume was rising. Nevertheless wrapped and sliced bread was still selling from the self-service shelves despite the impact made by crusty bread.

The second BIJ article in November concerned previous advertising of bread and plans for spending £1½ million a year on new campaigns starting 1980 by the Bread Advertising Group comprising RHM, Allied Mills and FAB. The aim of the campaigns is to convince people that the standard loaf is nutritious as well as convenient.

1. September, November and December, 1979.

The third article by BIJ in December was a personal appraisal of the current bread market and its future by Trevor Griffiths, Sales and Marketing Director of Granary Food Group (who market Granary bread) who refers to a 'recent large-sample survey of bread purchasing habits' which revealed that the emphasis is still on standard bread. The survey did however find that sixty per cent of the respondents purchase brown or wholemeal bread 'at one time or other'. There was also a tendency for standard bread to be bought more by "lower" and "lower-middle" classes, whilst brown and wholemeal were more favoured by the "middle" and "upper" classes.

10.1.6 LAUNCHES OF NEW BREAD PRODUCTS - EXAMPLES OF RECENT INITIATIVES

Presumably to combine the advantages of slimming bread with farmhouse and with wholemeal bread RHM launched "Nimble Farmstead" and "Nimble Granary" in 1978, and claim considerable success for both these new varieties. Earlier that year rivals ABF had launched "Sunblest Hi Bran" with '25 per cent more fibre than wholemeal bread'.

Even more recently (March 1979) "Old Fashioned" bread has been launched by ABF in the waxed wrapping paper of bygone days and in a market dominated by plastic bags. "Old Fashioned" is being baked in modern plant bakeries but using an old fermentation process which allows the bread to ferment in storage bins for up to sixteen hours. A premium price is being charged and widespread television advertising is planned.

BIJ's article in September 1979 refers to Allied Bakeries' launches of "Crusty Gold" and "Country Gold" as well as the other new varieties mentioned above.

The Grocer in an article January 1980 refer to Allied Bakeries claim to have one third of a bread market worth over £1,000

million per year, eighty-six per cent of which was in sales of white bread. Allied have however launched another new loaf called "Sun Bran" a sliced loaf made from white flour but containing ten per cent added bran. This large loaf is aimed at the white bread sector and intended for people who do not like or want to eat brown bread but who are becoming aware of the benefits of bran. This same article also refers to the success of Allied's "Vib Be" wheatgerm loaf and "Sunblest Hi Bran". John Cook, Allied's Market Development Manager referred to the Bran Advisory Service and other major companies launches of bran-enriched products of a non-bread nature and states:

> Many of our successes have been in the brown bread market and we have helped it to grow at around 10% a year for the last five years and by even more during the past year . . . . But the brown bread market is still only 16% of the total market.

10.1.7 LATEST TRENDS IN DISTRIBUTION

In February 1979, Tesco Stores (Holdings) Ltd's Chairman's Statement read:

> We now have 60 bakeries, all in-store establishments compared with only 25 only two years ago. They are proving to be extremely popular with the public. Once again, Tesco is reaping a pioneer's reward through having anticipated a major shift in public taste from plant-made bread back to traditional styles, ahead of its rivals. In a short space of time, baking has become an important part of our business and the provision of fresh bread baked on the premises is an integral part of all new developments.

Supermarketing[1] in July 1979 featured in-store bakeries as its lead article and postulated that they could be responsible for the 15-20 'white bread factories likely to close this year'.

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1 Supermarketing 'Stores take the Bake' No. 380 July 27, 1979 p.1.

Tesco were claimed to be selling three times as much own-baked bread as branded and Fine Fare although selling more branded bread (about sixty per cent) were experiencing increases in own-baked bread in the 16 out of 30 superstores having in-store bakeries. Key Markets with 24 in-store bakeries out of 120 stores were also selling own bread at the rate of 3 times proprietary brands and it too intended to install bakeries into new stores. Reference is also made to a Key Note Publication's report that independent bakers were gaining a larger share of the bread market by taking advantage of the trend towards brown and wholewheat loaves.

Table 38 (page 244a) supports the evidence of a small increase in the share of bakery products trade made by independent specialist retailers during 1979.

Tables 39 and 40 (page 244b) are taken from Melton's (1977) study of shopping centres and indicate the importance of specialist bread and confectionary outlets to the attractiveness of shopping centres in the North of England.

10.1.8 CONSUMERISM

In June 1979 the BIJ published an article 'Bowing to the Consumer'[1] which reviewed the 16th biennial congress of the International Plant Bakers' Association (AIBD) which met in Dublin in June 1979.

More than 100 delegates had gathered to confer on the state of plant baking in Western Europe and to discuss the centre theme, "The Consumer".

At this conference Wilf Hepworth, Deputy Sales Director of Allied Bakeries Ltd. reviewed consumer trends in the U.K. market to note how uniformity and limited choice were giving way to a return to traditional types of bread, prompted by an emerging interest in dietary matters.

He also noted a significant switch to brown breads and stated that 'no doubt the wholesome aspect of wholewheat, wheatgerm and bran breads appeal to the modern consumer'. Mr Hepworth said

1 Baking Industries Journal, 'Bowing to the Consumer', June 1979 pp 10-18

TABLE 38 : BAKERY PRODUCT OUTLETS' SHARES OF SALES AND DEMOGRAPHICS

	ALL	SOCIAL CLASS				AGE						REGIONS				
	%	AB	C1	C2	DE	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+	Scot-land	North	Mid-lands	Lond-on/SE	West/ Wales
Type of Establishment																
Departmental Stores	0.1	-	-	-	0.3	-	-	-	-	-	0.4	-	-	-	0.3	-
Variety Stores	1.9	-	2.7	2.8	1.0	-	3.3	2.3	1.7	2.8	0.4	1.0	2.2	1.0	2.4	2.3
Multiples	3.8	5.6	4.6	3.1	3.2	5.9	3.3	4.5	2.9	4.0	3.0	-	2.2	3.0	7.4	3.0
Local Chain Stores	3.4	4.8	3.7	2.8	3.2	2.0	3.8	3.4	4.1	0.6	4.8	2.0	4.3	4.9	2.7	1.5
Indep. Specialist Retailers	44.7	40.0	47.9	45.5	43.3	35.3	36.1	39.8	47.1	46.3	53.4	35.0	47.7	36.9	44.1	58.0
Supermarket	33.0	32.8	30.1	32.7	35.4	49.0	37.2	36.9	30.8	33.9	24.7	41.0	31.4	33.5	36.0	22.5
Discount Store	0.3	-	0.5	-	0.6	-	0.5	-	1.2	-	-		-	0.5	0.7	-
Mail Order	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hypermarket	1.0	0.8	0.9	0.6	1.6	2.0	1.1	1.7	0.6	1.7	0.0	1.0	-	4.4	-	-
Street Market	0.4	-	0.9	0.6	-	-	1.1	-	-	0.6	0.4	-	-	-	0.3	2.3
Co-op	7.7	7.2	6.4	8.5	8.0	5.9	6.6	6.8	7.6	6.8	10.4	14.0	9.4	9.9	2.0	9.6
Don't Buy	2.7	8.0	2.3	2.3	1.3	-	4.9	5.1	2.9	1.1	0.8	-	1.4	5.9	3.4	0.8
Blank	2.1	0.8	-	1.1	2.1	-	2.1	- 0.5	1.1	2.2	1.1	6.0	1.4	-	1.3	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Euromonitor Survey 1979

TABLE 39 : PROVISION OF SPECIALIST BREAD AND CONFECTIONERY OUTLETS IN SHOPPING CENTRES

Type of shop	Number of shops in:			
	Altrincham	Bolton	Salford	Manchester
Butchers	9	3	3	5
Bread and confectionery	10	12	3	6
Delicatessen	2	3	-	1
Fish and Poultry	3	2	-	2
Greengrocers	5	1	-	1

TABLE 40: IMPORTANCE OF SPECIALIST BREAD AND CONFECTIONERY OUTLETS IN SHOPPING CENTRES

Type of shop	Percentage of shopping population answering 'very important' or 'extremely important' to the presence of these type of shops in:			
	Altrincham	Bolton	Salford	Manchester
Butchers	92	94	90	83
Bread and confectionery	94	92	87	79
Delicatessen	47	46	27	52
Fish and Poultry	90	81	75	77
Greengrocers	98	87	94	79

that this comparatively recent trend showed how the consumer was beginning to influence the market and that now, 'after a period of diminishing choice, brown breads, hot bread shops and in-store bakeries were combining to change the scene.'

10.1.9 OVERVIEW

In looking back over the events of the past three years as described in this sequel, there seems little doubt that the impetus for changes in bread variety supply and bread variety demand is increasing. Decline of standard bread consumption, increases in the sales of other varieties, the number of new bread varieties launched and the increases in the number of in-store bakeries and "hot bread" shops all combine to support this view.

It does however seem that plant bakers cannot fairly be accused of deliberately distorting actual bread variety supply relative to real bread variety demand. The shifts in the supply-demand proportions for each variety, where they exist have so far taken place very gradually and the market appears to have adjusted accordingly.

The 'vociferous minority' referred to by Caroline Conran appears to be recruiting more followers and continuing to gain media publicity adverse to standard bread and plant bakers. However, judging from the advance publicity concerning future advertising campaigns planned by the plant-bakers, the battlelines are being drawn up and loyalties are about to be truly tested in the market place.

10.2 CRITIQUE

Whilst some small satisfaction is felt at the outcome of this study, its author is of the opinion that the limitations of any research should be exposed for the benefit of the reader and

other researchers seeking both truth and guidance.

There were two main areas of difficulty which should perhaps have been foreseen. One of these areas was in the gathering of production information broken down into the required categories of bread varieties. It had been wrongly assumed firstly that the information would be collected by government in the public interest as part of the continuing process of the former Census of Production and secondly that the data (if it existed in non-published form) would be made available to the bona fide researcher. It had also been wrongly assumed that the plant bakers or the Federation of Bakers would in their own interests have maintained records of production of each variety of bread. Although these records were most certainly maintained by the computer at Spillers-French Baking Ltd. and were indeed necessary as part of the budgeting procedures, the other "Big Two" plant bakers claimed not to do so. In any event the natural reticence of the plant bakers and their Federation not to disclose production figures by variety should have been pre-empted in light of the severe criticisms being made of the plant bakers publicised by the media over a long period.

The second area of difficulty arose from lack of sufficient appreciation of the ramifications of electronic data processing. Again there were two main errors of judgement. The first arose from a perhaps unreasonable ambition to achieve national samples of sufficient size from both a representative sample of the population and from what was thought to be an activist group within this population. In effect this meant sub-contracting the data collection for the representative sample. Unfortunately compatibility between the computer system employed by the sub-contractor and that of the researcher's own establishment was somewhat naively assumed when in fact severe incompatibility was found to be the case. Since the sub-contractors had utilised their own peculiar form of multi-punching, in the event translation

back into raw data proved necessary, followed by repunching to a standard format and a re-run on the home computer to enable meaningful comparisons with the activist group sample to be made. All this caused embarrassingly long delays in achieving computer printout results for analysis, compounded by the second major error - that of generating too much data for analysis. The latter fault eventually forced a radical condensing of the demographic variables into a smaller number of classes and a much greater discipline in data generation before final analysis could be commenced. There is also a natural tendency towards frustration arising from a lack of proper communication between researcher and programmer. The researcher grows impatient with the programmer who does not seem to understand what he is trying to do, whilst the programmer sees the researcher as unappreciative of the problems of conversion into programming language.

The end result of the years of effort to discover the truth is at best a somewhat blurred insight into the intricacies and the illogicality of consumer buying behaviour, due to the compounding of a number of what are individually, relatively minor compromises. It would have been most rewarding to have been able to generalise a theory that all food manufacturers strive continuously to balance supply and demand to the satisfaction of most consumers and that any apparent dissatisfaction is magnified by the media publicity given to extremely small but active and articulate minorities. However all that can be said is that this[15] apparently the case with bread, with the rider that 'education' of the silent majority by the vocal minority is apparently slowing winning supporters to the cause, but this might not and indeed is hardly likely to be true for the universe of all food manufacturers and consumers. The contribution to the general body of choice decision theory was to a large extent an unexpected bonus but really grew to be a quite interesting and rewarding part of the work. It was only whilst puzzling over the apparent contradiction between attitude and buying behaviour in the results of the surveys that some relationship with the theory of cognitive dissonance became apparent.

10.3 RECOMMENDATIONS

In making recommendations for future research it is felt necessary to separate these into two parts, namely that concerned with resolving the controversy surrounding British plant-produced bread and that concerned with the further evolution of choice decision theory, of which bread buying behaviour is merely illustrative. To firmly establish beyond all reasonable doubt whether British standard bread (plant produced) is what the majority of housewives really prefer as their regular buy, it would be necessary to adopt a methodology of altering prices in the retail outlet. The possibility of using this methodology was established by some work conducted by Gabor et al (1969 and 1973). If a representative proportion of the retail outlets nationally (modelled on the structured samples already established for retail audits) could be persuaded to stock a full range of bread varieties to be sold at the same price per ounce for a long enough period, then real preferences unmodified by price or availability considerations would become apparent. However, it is unreasonable to expect bakers to price all varieties of bread at a uniform unit value bearing in mind different labour and material costs for each variety and even more unreasonable to expect all retailers to sell at a uniform price in a competitive market. The model would therefore be unrealistic and such an experiment would be extremely costly and difficult to mount nationally.

Nevertheless a more practical if imperfect model for study does exist and is becoming increasingly representative of part of the national bread market, viz. the in-store bakery. Most new superstores and hypermarkets embody an in-store bakery with counter service whilst at the same time preserving a self-selection bakery section for standard plant-produced bread as part of the normal shelf fixtures. Here then are retail outlets where a

representative range of bread varieties are on sale and where in effect the average housewife is faced with a straight choice between British plant-produced standard bread on the one hand and what constitutes the essence of the offerings of the small baker's shop on the other hand. The model would therefore offer equal availability albeit at different prices, on a national scale. It would of course be necessary to persuade a representative sample of hypermarkets with in-store bakeries to co-operate by supplying a breakdown of sales by bread variety and also to allow the questioning of customers. It would be extremely interesting to find out whether the housewives buying bread at these outlets were indeed average, whether they in fact always bought the same variety of bread at the fixture or at the in-store bakery or whether they often changed variety and/or place of purchase and what were their attitudes towards bread and the reasons for purchasing given varieties. Hopefully it would be possible to also gain an insight into how far their bread buying behaviour and/or attitudes had been modified by media "exposées."

The question of further research into aspects of choice behaviour theory is more difficult, since it is felt that different relationships between beliefs, attitudes and buying behaviour could exist according to the nature of the product. If product was indeed a modifying variable then the amount of research would be vast and possibly only with the co-operation of many researchers.

Nevertheless despite these difficulties it is hoped that the limitations of the current research will inspire others to continue enquiries and expand the body of knowledge in this field.

APPENDIX 11.1.1 - FLOUR ADVISORY BUREAU'S REPLY TO TACC REPORT

FLOUR ADVISORY BUREAU MAY 1974

Background note

The TACC Report - "An assessment of the British bread industry"

The TACC Report "An assessment of the British bread industry" seeks to discredit the modern techniques employed by the industry, the industry's research effort into milling and baking problems, the government procedures for safeguarding food standards as they relate to bread and flour, the value of white bread as a contribution to a healthy diet and the economic performance of the baking industry.

The milling and baking industries have very carefully examined the TACC Report and cannot accept the authors' claim that their report is an authoritative study of the UK flour milling and bread baking industries. Despite the superficial plausibility and pseudo-scientific style, the TACC Report is really a very biased and exaggerated attack on the bread industry and flour milling.

The authors are quite open about their lack of objectivity and the 'unashamed bias' of their comments. But in addition the Report is full of factual errors on milling, baking, scientific and medical matters. None of the authors appears to have any medical qualifications at all and only one claims a nutritional qualification. Despite this, the Report contains lengthy discussions on medical and nutritional aspects of bread. Any medical hypothesis which is unfavourable to bread is embraced wholeheartedly and even pushed further than the doctors and scientists who support the hypothesis would themselves be prepared to go. At the same time, the Report casts rather childish aspersions on the integrity of nearly all the research work done by the industry as well as on the ability and authority of a number of the top independent medical authorities and scientists in the industry and Government.

Editors will no doubt be aware that the Government Food Standards Committee issued its Second Report on Bread and Flour (FSC/REP/61) on 7th May. This is an exhaustive examination of the medical and nutritional aspects of bread and flour by an independent Government Committee. It deals authoritatively with the medical and nutritional questions raised by the TACC authors. This note contains some cross references to the FSC Report.

On the economic side, the milling and baking industries have been subjected to the closest scrutiny over recent years. The Prices and Incomes Board reported several times:- Report No.3 (September 1965) - 'Prices of Bread and Flour'; Report No.9 (January 1966) - 'Wages in the Bakery Industry'; Report No.17 (June 1966) - 'Wages in the Bakery Industry'; Report No.55 (January 1968) - 'Flour Prices'; Report No.144 (April 1970) - 'Bread Prices and Pay in the Baking Industry'; Report No.151 (July 1970) - 'Bread Prices and Pay in the Baking Industry'.

More recently the industry has been scrutinised by the Price Commission and the new Department of Prices and Consumer Protection. The industry is currently being investigated by the Monopolies Commission.

The following section of this note gives a chapter by chapter analysis of the major inaccuracies and distortions in the Report. Despite its length it is not an exhaustive commentary.

Chapter 1 - Survival and technological bread

Chapter main argument: Bread today is very different to that eaten two generations ago.

FAB comment: Much of the Report is based on this premise. The term 'technological bread' is used widely to embrace the use of refined white flour, additives and improvers in bread as well as present day baking techniques. The authors particularly criticise the Chorleywood Bread Process. Food technology generally (canning, freezing, etc.) is also criticised (pp31, 32, 38).

In fact though the texture may be different, there is no substantial difference between bread today and white bread of 250 years ago. (The authors specifically include reference to the Industrial Revolution.) The historical survey is continued in Chapter 2 and (p16) acknowledges that white bread was in common use in this country by 1780. Bearing in mind that the quantity the consumed was greatly in excess of consumption today this goes a long way to undermining their arguments about the possible harmful effects of years of consuming white bread. If anything, the modern loaf is 'better' than that eaten by our grandfathers. It is higher in protein content (because of higher quality wheat) and contains more vitamins. However, it is still the product of the same centuries old basic process which takes advantage of the wonderful natural properties of wheat and yeast.

On the Chorleywood process - the FSC Report (para 20) states 'The Chorleywood process has little effect on the texture of newly baked bread or on its nutritional value apart from a reduction of about 0.4% in the protein content due to its allowing the use of lower protein flour and an increase in the moisture content of about 0.5%. The process has proved advantageous in that the bread stales rather more slowly than bread made by conventional means. Food additives are used in bread to control the volume and texture of the loaf, but have little effect on its flavour.'

Other points: p10: Note the admission of 'unashamed' bias.

p10: A pointer to the extent of the authors' nutritional knowledge occurs on page 10. In describing wheat they observe ...'It is highly nutritious, containing the protein, fat, carbohydrate ...' (our underlining). Wheat is an insignificant source of fat in human diet and is possibly the factor which least deserves mention on any nutritional score card. The assessment, incidentally, does not mention the important minerals which wheat contains.

p10: There is the observation ...'Throughout the world many peoples have based their diet on whole grain or wholemeal bread without apparent ill-effects.' We do not know of any authoritative work which would justify this bald statement.

p10: '... Most bread has been wholemeal. Only since the Industrial Revolution has 'refinement' become widespread.' There were guilds of white bread and brown bread bakers in Roman days. An Act of 1709 in Britain empowered magistrates to set aside the Assize of Bread of 1266, and limited the bread made to 'white', 'wheaten' 'household' the white bread being made of flour from which the major portion of the bran had been removed. (The FSC Report paras 5-13 give a comprehensive review.)

p11: A typical example of a sweeping and general assertion: 'Technological bread may place such a strain on our bodies that they cannot cope. A century is not long enough for radically new adaptive mechanisms to develop ...'

Chapter 2 - Eating the wheat grain

Chapter main argument: Because of the 'refinement' of flour, white bread is nutritionally unsatisfactory. 'Bread is not properly nutritious' (p18) and therefore the poverty groups are disadvantaged because of the importance of bread in their diet.

FAB comment: The argument is entirely specious. No-one, least of all the milling/baking industry has ever claimed that an all bread diet was adequate. Bread is an important part of a healthy diet but the diet must be properly balanced with other foods. The argument that poverty groups are disadvantaged is in no way substantiated. In several places in its report the FSC specifically rejects the TACC thesis. E.G. Appendix 5 para 2.2.5. Large low income households 'obtain, on the average, significantly more than the recommended requirements of protein, calcium, iron and of those vitamins considered in that Table, and would continue to obtain enough calcium and nicotinic acid equivalents even if the present fortification of flour ceased'.

Other points: pp15/16: The whole chapter demonstrates the popularity of white bread and its good food value in the 18th and 19th centuries e.g. from a 1776 issue of a London magazine - 'The ploughman, the shepherd, the hedger and the ditcher, all eat white bread as is commonly made in London'.

p16: An important misunderstanding of the economics of milling is the reference to exploitation of offals. The word 'exploit' is itself a distortion but the suggestion is that a miller obtains more for the by-products of milling, sold for animal foodstuffs, than for flour for human consumption. This is not so. Offals have to be disposed of often at a low price. If a miller ground all his flour as wholemeal he would obtain a higher price than that for white flour and wheatfeed combined. The miller produces white flour because people wish to eat white bread. (See also p20 for this error.)

p17: There is a typical carelessness in the statement: '49% of their diet was refined carbohydrate foods'. This is meant to mean '49% of the calories in their diet ...'

p15: A typical example of sweeping generalisation: 'The attractive appearance, texture and palatability of white bread enabled the poorer town folk to ... live more cheaply whilst satisfying their palates and their social aspirations. Such a diet may have contributed to vitamin deficiencies and other nutritional disorders'. (The authors advance no evidence that there were such disorders, even less that they were caused by eating bread.)

Chapter 3 - The way to the modern white loaf

Chapter main argument: The chapter examines 'refinement' of flour, additives, the Chorleywood bread process and industrial research in the industry to conclude that 'nutritional quality is subordinated to superficial appeal or technical and economic advantage. And among the causes is the misuse of scientific research for profits, and lack of effective government intervention in defence of the consumer'. (p29)

FAB comment: The allegations of bias in the industry's research and lack of integrity and incompetence on the part of the industry's scientists or the government's assessors are quite unsubstantiated. The Flour Milling and Baking Research Association has a worldwide reputation for its scientific research. Work is carried out for overseas interests and not merely for those of the UK. The Report itself is quite happy to quote FMBRA research (although it does not identify it) when convenient. (p22 reference 11

The FSC and Food Additives and Contaminants Committee are Government committees with members chosen for their scientific eminence.

The qualifications of the members of both committees are quite outstanding. The lists of members are included in the FSC Report.

The criticism of the Chorleywood bread process is unfounded. The process has substantial economic advantages which are passed on to the consumer and, not as suggested (p23) by the Report, retained by the industry. As a result the UK has the cheapest bread in Europe (Hansard 13.11.73 Facts About Bread p9).

Other points: p19: Additives to make bread palatable and visually attractive may have no nutritional value but palatability is a positive factor. The most nutritional food is worthless if it is not eaten but to refer to improvers as 'cosmetic features' is a gross distortion.

p20: Roller milling itself was not responsible for a finer flour though it did lead to advantages of increased production. The finest flour had been available for centuries. It is nonsense to suggest that flour enrichment was introduced by legislation at the same time as roller milling. Flour enrichment was introduced during the Second World War. (See FSC Report Appendix 5A).

p21: Agene - there is no evidence that agene has a harmful effect on humans. It was the FMBRA which identified the toxic agent and the milling industry voluntarily ceased using agene.

p22: Phytic acid - there is a contradiction with p34 where it is stated that phytic acid is present in brown bread. If so, it is illogical to criticise the Chorleywood process for failing to destroy its presence in white bread.

p24: TACC condemns 'defensive research' but in the FMBRA report the word is used in a purely technical sense. The object of such research is to examine the scientific basis of criticisms, usually made without supporting data. It accounts for only a small percentage of the annual budget e.g. the work on pesticides referred to came to about 0.5% of the annual budget for that year.

p25: The list is of permitted additives - they are not all used at once.

p26: POEMS - the delay was a legislative one. The industry has never used a prohibited improver or additive.

p26: Another typical sweeping assertion; 'Although FACC's membership includes qualified scientists, these scientists are forced to work outside the limits of their expertise'. (The limits of the authors' expertise are far from clear yet in their conclusions (p80) the authors urge that the FACC should contain 'public participation'.)

Chapter 4 - Brown vs white: the colour-nutrient dilemma

Chapter main arguments: a) the Report attempts to throw doubt on the McCance/Widdowson studies of white and brown bread in post-war German orphanages.

b) because of the 'lost nutrients' in refined flour and in spite of the policies of enrichment of flour by the addition of 'synthetic' vitamins, there is some risk involved in eating refined wheat bread. (p33)

FAB comments: a) The McCance/Widdowson investigations on orphanage children in post-war Germany have been widely accepted for years and the authors of the Report have no new evidence. They are however, prepared to refer to Dr. Widdowson when it suits them (p34). The TACC comments on McCance/Widdowson appear to be based on selective quotations from the authoritative Cohen Report (1956) which however firmly concluded that it knew of no evidence that white bread was nutritionally inferior to brown.

b) The argument about 'lost' nutrients and 'synthetic' vitamins is contrived. The idea that the UK suffers from a nutritionally deficient diet is wrong. Any nutritional deficiency in the UK would have shown up in the incidence of vitamin deficiency diseases such as beri-beri and pellagra but as the authors admit, these are virtually unknown in the West (p56). As for information on food intake, which the authors claim is inadequate, the National Food Survey, compiled annually by the MAFF, is detailed and comprehensive.

The argument against enrichment is based on the natural food concept but there are elements in natural foods which are dangerous. At the same time the Report admits (pp36 and 80) that there is not much use forcing people to eat natural wholefoods if they do not like them. The proper attitude is an enrichment policy with suitable safeguards. That the safeguards are operating well in the UK is evidenced by the conclusions of the FACC (FSC Report Appendix 4 para 48). After an extensive examination of the present policy of flour enrichment the FACC recommend that 'all the additives at present permitted should be permitted in future subject to some small additions and re-arrangements'.

The Report is extremely critical of additives to white bread on various grounds. It does not refer to, either because the authors are unaware of, or because they choose to ignore the fact that many of the additives permitted to the baker for white bread are also present in wholemeal bread (FSC Report para 77). In presenting his report the Chairman of the FSC said specifically 'No additives are recommended to be permitted for use in bread and flour for which evidence of a toxic hazard exists'.

Other points: p29: Palatability is a positive factor (see also p30 where there is a reference to unpalatability of war-time bread).

p32: The table of vitamins lost in milling gives a loss figure of 80% in respect of riboflavin, and mention is made (p33) of the loss of this vitamin in bread. Yet the FSC reports that the average consumption of riboflavin in the UK is 128% of the recommended intake of which bread and flour account together for less than 4%. (FSC Report Appendix 5 para 3.5)

p33: The argument on vitamin E amounts to: 'Since we do not understand it, we had better be on the safe side and eat more'. A leading article in The Lancet (5.1.74) emphasised the uncertainty of scientific understanding of vitamin E and the FSC Report can find no evidence on nutritional grounds for adding vitamin E to flour. (FSC Report Appendix 5 para 3.8)

p34: 'phytic acid' - the comment on phytic acid contradicts that on p23.

p34: The suggestion is that adding calcium is useless, that adding iron is dangerous. Dr. Elwood's work is quoted out of context. His results are 'disquieting' in that they may indicate that the iron enrichment policy is not as effective as had been thought, not that it is dangerous. The FSC Report recommends that the legal requirement for adding iron to flour should continue. (para 123.7)

p36: Vitamin enrichment in the USA is voluntary and not, as suggested, mandatory. It is also a State and not a Federal matter.

p37: Lysine - Another TACC error. The lysine loss is 25% not 50%. The FSC Report (para 47) recommends that lysine should not be added to flour.

Chapter 5 - Fibre: the neglected nutrient

Chapter main argument: The removal of bran during milling is harmful. The FAB and FMBRA counter arguments are discredited because of bias.

FAB comment: Eminent medical opinion is divided in this controversy, and additional work since 1972 has only served to confirm the FAB in the views it expressed in its statement quoted on p42. The milling industry has a cordial relationship with Mr. Burkitt and his colleagues and, in association with them, has asked the Committee on Medical Aspects of Food Policy to examine the whole question of fibre in the diet which extends beyond the parameters of flour and bread. The TACC authors push Burkitt's hypothesis further than Burkitt would go himself but they undermine their argument with regard to bread by their comment (p48) 'Bread consumption is still falling. Even wholemeal bread can only provide fibre, to keep healthy our large intestines, if it is actually eaten!' The FSC Report, which does not regard fibre as a nutrient, points out (para 49) 'We do not regard the place of fibre in the diet as a matter which should be considered in relation specifically to bread and flour'.

Other point: p43: There is an exaggerated attempt to discredit the industry's scientific advisers. The bona fides of those scientists who favour the Burkitt hypothesis are underlined - those of the FAB advisers, questioned.

Chapter 6 - More skeletons in the bread bin

Chapter main argument: Bread is associated with a number of diseases including tooth decay and cancer of the colon. As part of a general attack on modern refined foods, it is implied that bread is bad for you (p56).

FAB comment: Bread is a good wholesome food whose contribution to the diet and nourishment of the people of this country is well established. The TACC authors distort or misrepresent the research to which they refer. This is irresponsible and could lead to unnecessary public alarm.

The FSC Report (Appendix 5B para 1) concludes that 'over the country as a whole, bread and flour together still furnish about one-sixth of the total energy, and about one-fifth of the protein and iron obtained by the average household. Bread and flour together also supply about one-quarter of the thiamin and about one-eighth of the total nicotinic acid equivalents in the food obtained by those who live in the average household.'

On dental caries, Grenby's work for the FMBRA is conclusive that bread is not cariogenic. The authors have completely misinterpreted the work of Dr. Grenby. They have attempted directly to relate two completely separate experiments in a quantitative sense without the error replication factor. Dr. Grenby's earlier work referred to by TACC had shown conclusively that when the intake of flour and bread in a diet was increased and that of sugar decreased, the incidence of dental caries was reduced. It was immaterial whether the bread was white or wholemeal. This same result has been confirmed by Professor KÜnig of the Dental Institute of Zurich.

Finally, the scientific absurdity of the argument that bread is cariogenic because it is eaten with jam, merely demonstrates TACC's lack of objectivity.

COMA will be discussing whether there is a relationship between the intake of fibre and cancer of the colon as part of the general question of the position of fibre in the diet.

In considering the evolution of diet over the last 100 years, the TACC Report fails completely to give any consideration to the increased consumption of fat.

Chapter 7 - selling us the staff of life

Chapter main argument: There is criticism of the economic performance and marketing methods of the three main milling/baking groups.

FAB comment: Comments on particular brands is the responsibility of each company but the general point can be made that the whole commentary on prices is inaccurate and also out of date. Bread is now a subsidised product subject to very close scrutiny by the Department of Prices and Consumer Protection and the Price Commission. There is no mention in the TACC Report of the world cereal situation or the price of wheat. Over the past two years the prices of imported wheats have more than trebled and home-grown wheat prices have followed a similar pattern.

Other points: p62: The NBPI criticism of distribution: the reason for high distribution costs is due in part to the normal process of competition. Since 1971 there has been some rationalisation particularly because of the increase in the amount of bread sold in supermarkets.

p62: Contrary to the statement in the Report, the economies resulting from the Chorleywood bread process, have been passed on to the consumer. Without the Chorleywood process, bread would be much more expensive than it is. This process allows a greater use of home-grown wheat in place of the more expensive North American varieties. There are also labour saving advantages.

p64; 'The Big Three have a fierce desire to keep bread prices high'. The demand for bread is not so insensitive to price movement as is commonly supposed. Industry research shows that bread sales do fall when the relative price increase is significant. In any event, bread consumption per head of population has been declining steadily since 1945.

p66: The 'Take and Bake' launch was the result of supposed consumer demand.

p68: Once again the authors get carried away:- 'Of course you will be tempted to eat more (slimming bread). If you give in and have butter on it (or worse still, jam), you may even be taking in more calories than with ordinary bread'.

Chapter 8 - Buying bread

Chapter main argument: The consumer wishes to buy wholemeal bread which he cannot find.

FAB comment: The sample survey (286 people from an A/B area in South East England) is not only 'somewhat unusual' (p73) but completely unrepresentative. The major preference in this country is for white bread. The companies have tried to increase the sale of various brown breads without success. In the light of the history of the popularity of white bread, related in the Report, this is hardly suprising. The definition of the various types of brown bread is given by the Food Standards Regulations and the FSC Report (para 78-80) recommends no change in the present definitions.

Chapter 9 - Proposals for a better British loaf

This chapter summarises the main arguments of preceeding chapters. Most of these points have already been answered under the chapter headings. It is worth noting that a number of the recommendations are already out of date. A Monopolies Commission investigation is in progress. The FSC has reported on an extensive examination of the enrichment policy and the use of additives and improvers and has recommended only minor changes. The milling industry, with the approval of Mr. Burkitt, has requested COMA to carry out an impartial investigation into the effects of fibre in the diet.

Other points: p77: The main factors in the price of bread, wheat/flour prices, wage costs, fuel costs are not controlled by the manufacturers in the way suggested by the Report. As for taste this is a matter of individual preference.

p78: The EEC proposals are in abeyance. The original proposals were drawn up prior to UK entry. The FSC (para 34) concludes 'the draft proposals would not lead to any radical changes in the composition of breads as known in the UK'.

APPENDIX 11.1.2 : LIST OF BBC RADIO AND TV PROGRAMMES ON BREAD

RADIO

Date of Transmission		Title of Script
10. 3.1971	FOR SCHOOLS:	'Discovery.' Bread (1)
17. 3.1971	" "	'Discovery.' Bread- Corn in Egypt
30. 4.1971	Radio 4 :	TODAY
30. 5.1971	" " :	Down Your Way /Use of Enzymes in Food (Bread)/
11. 6.1971	" " :	TODAY : Eat More Bread
6. 7.1970	Radio 2 :	"WOMAN'S HOUR": 'The Bread Man'
17.11.1971	" " :	"WOMAN'S HOUR": 'What Are We Eating'?
11. 1.1972	" " :	TODAY: Cut Price Bread for Miners
5. 2.1972	" 4 :	"WEEKEND WOMAN'S HOUR" What are we Eating? (4) Derek Cooper talking about bread /Repeat/.
31. 3.1972	Midlands :	Regional Extra. 'Good Friday Bread'
17. 8.1972	Radio 4 :	YOU AND YOURS: Bread
15. 3.1973	SCHOOLS (Wales) :	Exploring Wales : Supplying our Needs
8. 1.1974	Radio 4 :	TODAY: Cut in Bread Production
11. 3.1974	" " :	TODAY: Why should bread prices go up?
11. 3.1974	" " :	NEWS DESK: Price of Bread
11. 3.1974	" " :	THE WORLD TONIGHT: Subsidies - Bread, etc.
20. 3.1974	" " :	PM : Interview : Michael Cooke with Shirley Williams (on the bread subsidy)
20. 3.1974	" " :	NEWS DESK: Bread subsidies
21. 3.1974	" " :	YOU AND YOURS : Bread.
21. 3.1974	Scotland :	GOOD MORNING, SCOTLAND.
17. 4.1974	Radio One :	NEWSBEAT: Bread price
17. 4.1974	Radio Four :	THE WORLD AT ONE: Int. by William Hardcastle with George Springall of Federation of Bakers, on possible bread price increase.
10. 5.1974	Radio One :	NEWSBEAT; Bread
10. 5.1974	Radio Four :	PM : Bread

B R E A D

RADIO

Date of Transmission		Title of Script
12. 8.1970	Radio Four	: TODAY - Decline of the British Loaf
22. 8.1974	" "	: YOU AND YOURS: Brown is Best
5. 9.1974	" "	: PM : Bob Button interviews Eleanor Goodman on why it is possible that we can how have cheaper bread
18. 9.1974	" "	: WOMAN'S HOUR: Costing it out : Bread
28. 9.1974	" "	: PM : Jim Newman interviews Pierre Lardinais on Britain's possible replacement of food subsidies by Welfare payments to the poor
20. 1.1975	" "	: SPEAK: : The Bread of Life - about the bread we eat
13. 2.1975	" "	: NEWSDESK : Bread
15. 6.1975	" "	: YOU AND YOURS: Short weight loaf
24.10.1975	" "	: TODAY: Britain's Best Bread Baker
22.11.1975	" "	: SCIENCE NOW : British Bread - Why it is dry
19. 1.1976	" "	: YOU AND YOURS : What type of bread do people prefer
10.3.1976	" "	: Discovery: Our Daily Bread
17. 3.1976	" "	: Discovery: White Bread and Butter
7. 6.1976	" "	: "WOMAN'S HOUR" : 'Food Facts" (1) - Bread
8. 6.1976	" "	: "WOMAN'S HOUR" : 'Food Facts' (2) - Bread
9. 6.1976	" "	: "WOMAN'S HOUR" : 'Food Facts' (3) - Bread
10. 6.1976	" "	: "WOMAN'S HOUR" : 'Food Facts' (4) Viennese Pudding (Margaret Patten/Mary Redcliffe
7. 9.1976	" "	: WORLD AT ONE: Chairman of Baker on why they want to increase the price of bread
24.11.1971	" "	: TODAY : Bread Prices Watchdog: At Great Wishford in Wiltshire price records are kept by carving figures on the Church wall, and this has been done since Napoleonic times. Andy Price, the village baker interviewed by George Mitchell Young
24. 4.1973	" "	: YOU AND YOURS : "Malt Loaves"

B R E A D

RADIO

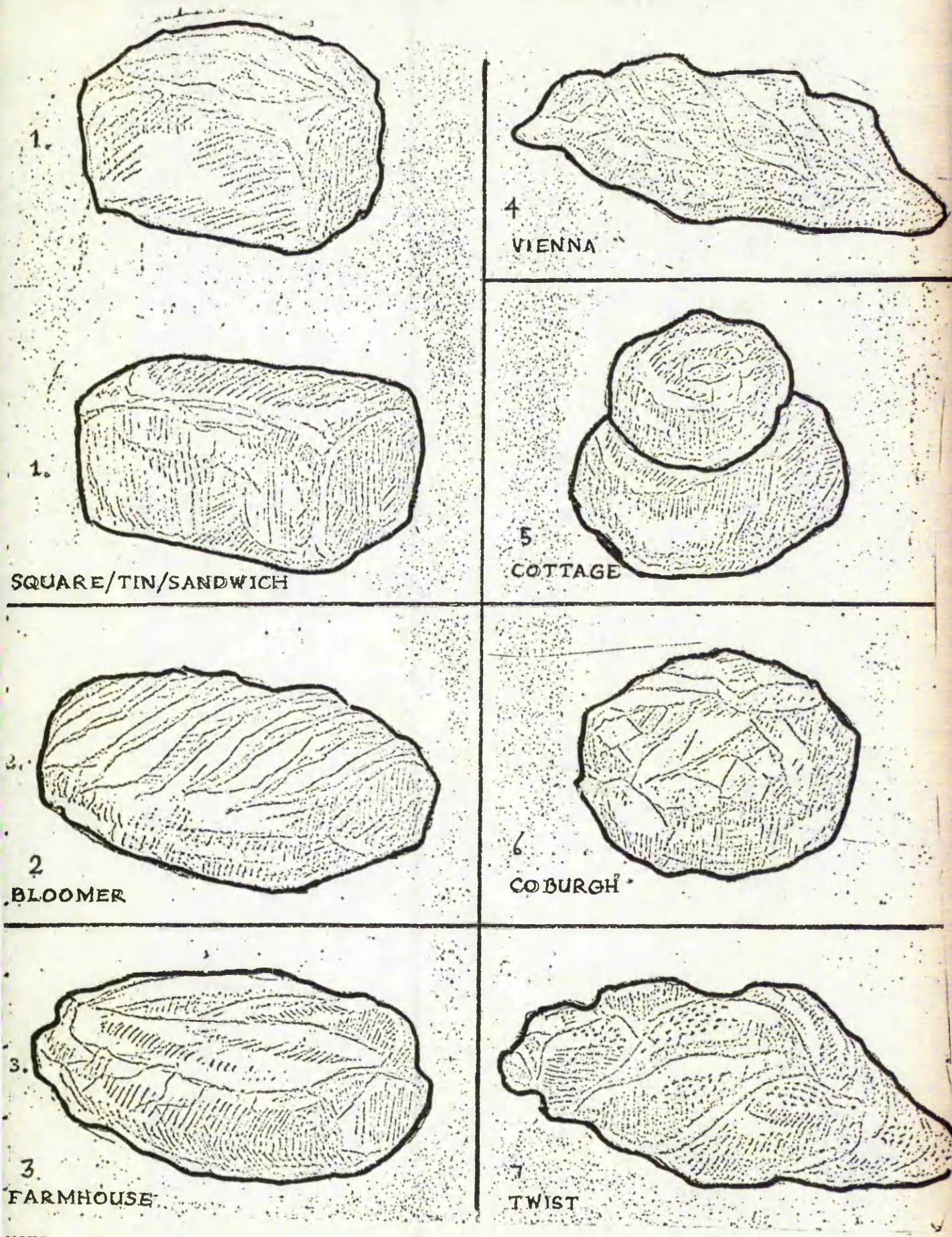
Date of Transmission		Title of Script
28.11.1974	Radio One :	NEWSBEAT: Ban on Sunday baking
29.11.1974	Radio Four :	PM : Gordon Clough interviews Peter Smith about overtime ban by bakers which could cause bread shortage next week
30.11.1974	" " :	TODAY: Barry Wilson/George Spring about bakers ban on Sunday baking
2.12.1974	" One :	NEWSBEAT: Bread strike
2.12.1974	" Four :	TODAY : Bakers 66% Pay Claim
2.12.1974	" " :	YOU AND YOURS: Soda Bread
2.12.1974	" " :	PM : Chris Schofield interviews Stan Gretton, Bakers Union re stri decision
3.12.1974	" One :	NEWSBEAT : Mike Shiels interviews Vox Pops re bread hints during strike
3.12.1974	" Four :	TODAY : Nutritional importance of bread
3.12.1974	" " :	PM : Bread situation. John Hosken re hopes for bakers settlement
3.12.1974	" " :	NEWSDESK: Bread
3.12.1974	" " : (Wales)	GOOD MORNING, WALES : Bakers strik
4.12.1974	Radio One :	NEWSBEAT : National Bread Strike TODAY
5.12.1974	Radio Four:	PM
6.12.1974	Radio One :	NEWSBEAT
6.12.1974	Radio Four:	PM. Gordon Clough interviews John Hosken on unknown decision ma by Bakers Union Reps.
7.12.1974	" " :	TODAY: Bread Strike is settled.
8.12.1974	" " :	WORLD THIS WEEKEND: : Micheal Delaheye interviews Alber Derbyshire [illegible] of Bakers Union on his call for renewal of strike. Mike Vestey interviews Stan Gretton on why some workers are refusing to accept settlement
9.12.1974	" " :	TODAY: Bread still short in some places
9.12.1974	" One :	NEWSBEAT: Bread strike over
9.12.1974	" Four : (Wales)	GOOD MORNING, WALES: Reaction to the Bakers Pay Offer

B R E A D

TELEVISION

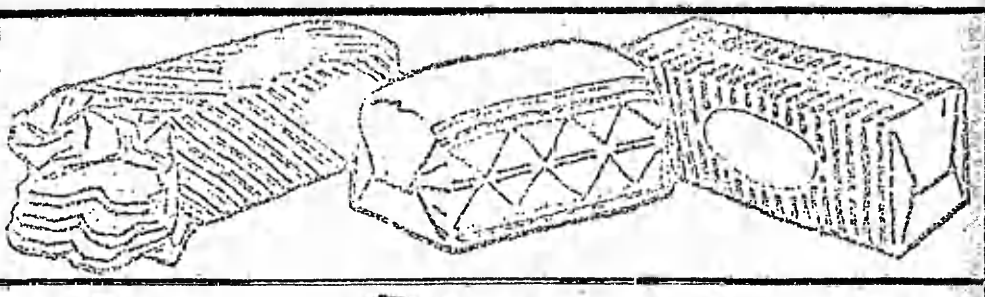
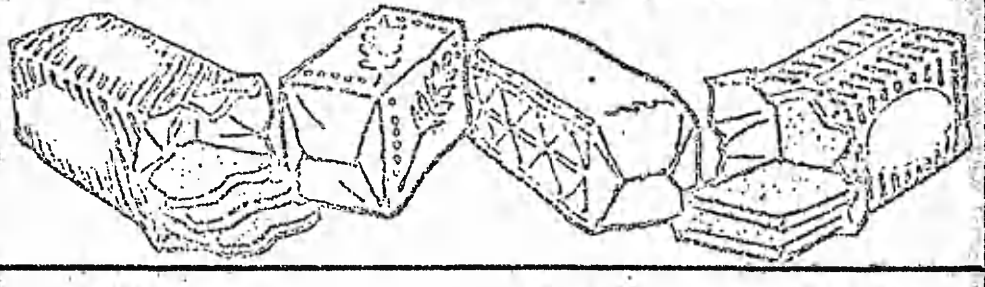
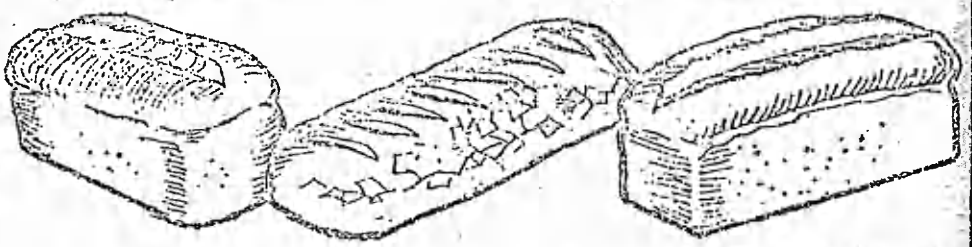
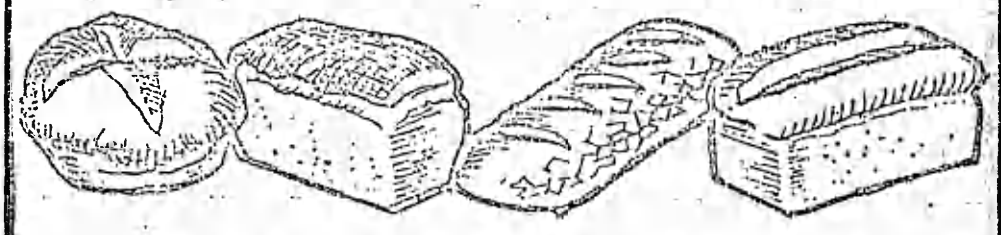
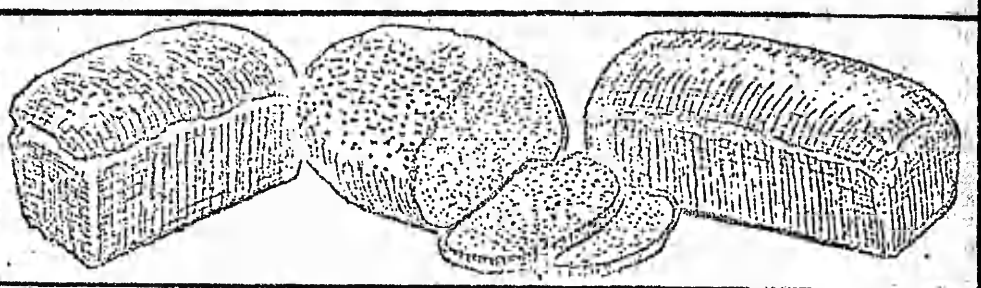
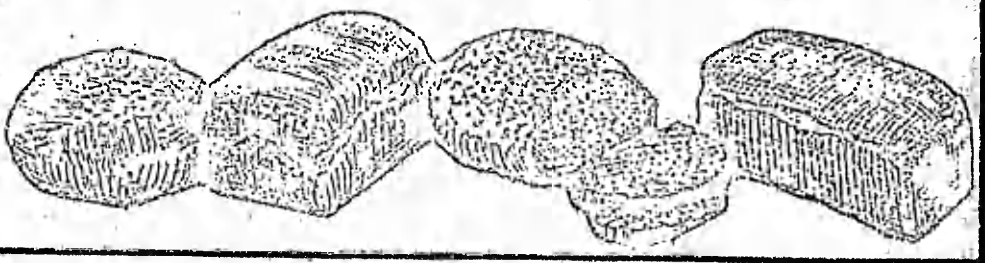
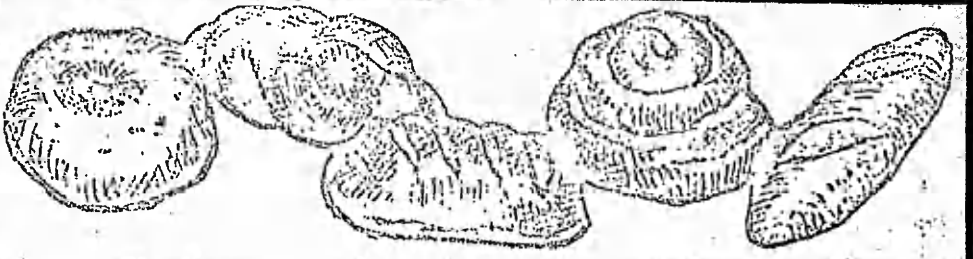
Date of Transmission	Title of Script
9. 3.1971	LOOK NORTH (From Manchester): Stuart Hall interviews Yves Champaeur and Jean Pierre Chapeau about the perils of being recommended in good Food Guides.
1.11.1973	PEBBLE MILL AT ONE : Talking about bread
8.11.1973	PEBBLE MILL AT ONE :
3. 1.1974	TOMORROW'S WORLD : A new way of baking bread
26.11.1975	NATIONWIDE: Interviews Patricia Jacobs, author of 'THE BEST BREAD BOOK'; various processes that go into bread making.

CBR/bdv
20.12.1976



NOTE: This is a photocopy of the prompt card as seen by informants, except that names have been added for the different shapes of loaves. During the Survey loaves were identified by shape only.

APPENDIX 11.1.4 : REPRODUCTION OF SHOWCARD USED ON SCHLACKMAN STUDY

Large white sliced-and-wrapped.	
Small white sliced-and-wrapped.	
Large unwrapped white.	
Small unwrapped white.	
Large brown.	
Small brown	
Small speciality loaves-like baps, plaits short batons, vienna loaves.	

Sales, profits and capital employed—flour milling and bread baking

	ABF			*RHM*			*Spillers*		
	Flour milling £'000	*Bread baking* £'000	*Total* £'000	*Flour milling* £'000	*Bread baking* £'000	*Total* £'000	*Flour milling* £'000	*Bread baking* £'000	*Total* £'000
	1971			*1971*			*1971*		
	Year ended 1 April 1972			*Year ended 4 September 1971*			*Year ended 29 January 1972*		
Sales	38,050	76,468	114,518	68,390	79,587	147,977			
Profit/(loss) before interest and tax	4,616	2,284	6,900	5,827	4,413	10,240			
Average capital employed	12,505	22,810	35,315	33,139	28,166	61,305	Not available		
Return on sales	12·1%	3·0%	6·0%	8·5%	5·5%	6·9%			
Return on capital employed	36·9%	10·0%	19·5%	17·6%	15·7%	16·7%			
	1972			*1972*			*1972*		
	Year ended 31 March 1973			*Year ended 2 September 1972*			*Year ended 3 February 1973*		
Sales	43,918	81,650	125,568	69,829	84,409	154,238	61,520	57,435	118,955
Profit/(loss) before interest and tax	4,984	1,725	6,709	4,760	4,683	9,443	3,627	(1,491)	2,136
Average capital employed	13,044	25,011	38,055	33,058	28,035	61,093	27,981	24,973	52,954
Return on sales	11·3%	2·1%	5·3%	6·8%	5·5%	6·1%	5·9%	(2·6%)	1·8%
Return on capital employed	38·2%	6·9%	17·6%	14·4%	16·7%	15·5%	13·0%	loss	4·0%
	1973			*1973*			*1973*		
	Year ended 30 March 1974			*Year ended 1 September 1973*			*Year ended 2 February 1974*		
Sales	71,470	100,588	172,058	82,230	90,081	172,311	81,301	59,348	140,649
Profit/(loss) before interest and tax	5,292	(2,389)	2,903	8,102	1,725	9,827	5,214	(4,740)	474
Average capital employed	17,848	31,760	49,608	34,113	27,967	62,080	28,737	25,398	54,135
Return on sales	7·4%	(2·4%)	1·7%	9·9%	1·9%	5·7%	6·4%	(8·0%)	0·3%
Return on capital employed	29·7%	loss	5·9%	23·8%	6·2%	15·8%	18·1%	loss	0·9%
	1974			*1974*			*1974*		
	Year ended 29 March 1975			*Year ended 31 August 1974*			*Year ended 1 February 1975*		
Sales	116,778	138,790	255,568	137,571	111,457	249,028	131,626	81,817	213,443
Profit/(loss) before interest and tax	12,208	(5,214)	6,994	10,657	(2,559)	8,098	9,007	(5,229)	3,778
Average capital employed	23,041	39,414	62,455	41,066	29,082	70,148	32,431	26,557	58,988
Return on sales	10·5%	(3·8%)	2·7%	7·7%	(2·3%)	3·3%	6·8%	(6·4%)	1·8%
Return on capital employed	53·0%	loss	11·2%	26·0%	loss	11·5%	27·8%	loss	6·4%
	1975			*1975*			*1975*		
	Year ended 3 April 1976			*Year ended 30 August 1975*			*Year ended 31 January 1976*		
Sales	121,035	168,041	289,076	158,317	134,556	292,873	134,531	95,625	230,156
Profit/(loss) before interest and tax	14,657	(763)	13,894	15,046	(1,946)	13,100	11,542	(621)	10,921
Average capital employed	26,053	43,879	69,932	46,457	29,644	76,101	35,846	24,314	60,160
Return on sales	12·1%	(0·5%)	4·8%	9·5%	(1·4%)	4·5%	8·6%	(0·6%)	4·7%
Return on capital employed	56·3%	loss	19·9%	32·4%	loss	17·2%	32·2%	loss	18·2%

SAMPLE DESIGN AND FIELDWORK

The Survey

ACCESS is a market research service based on the BMRB Continuous Consumer Survey. An ACCESS questionnaire is incorporated into as many versions of the questionnaire used for the Continuous Consumer Survey, for as many check periods, as are required in order to achieve an adult or housewife sample of the desired size.

Sampling Method

The sampling technique used in this survey is known as Random Location Sampling. It is a form of sampling procedure which has been developed within BMRB over the course of a number of years. Widespread use is made of this technique in the consumer surveys which BMRB conducts.

This sampling method was developed to eliminate the more unsatisfactory features of quota sampling. At the same time it mitigates most of the cost and other penalties of strict probability methods.

One of the principal advantages of probability over quota techniques of sampling is that the selection of respondents is taken out of the hands of interviewers. In conventional quota sampling, interviewers are given quotas to fill usually from within specified administrative areas. When, for example, an interviewer is asked to complete a quota of AB respondents she will tend to go to a part of the district where she knows such individuals to be readily available. AB individuals living in mixed social class areas will have little chance of inclusion. This, and similar defects lead to biases which are concealed by superficial agreement between the sample profiles and accepted standards.

A principal distinguishing characteristic of Random Location Sampling is that interviewers are given very little choice in the selection of respondents. Respondents are drawn from within a few randomly selected and carefully specified streets. Quotas are set in terms of characteristics which are known to have a bearing on individuals' probabilities of inclusion in the sample. Rules are given which govern the distribution and spacing of interviews.

Sampling on all ACCESS surveys is confined within a master sample of 200 constituencies although the number of constituencies used for particular ACCESS surveys will vary according to the size of sample chosen. A distinguishing characteristic of ACCESS surveys, however, is that the samples are spread over a larger number of constituencies than would normally be economic in an ad hoc survey yielding a similar number of interviews. The constituencies in the master sample were selected with probability proportional to size after first grouping by percentage Labour vote within conurbation versus other urban versus rural within standard region. A correct geographical and social class distribution was thus ensured. The selection of second stage sampling units (streets) uses a method developed at BMRB to yield a sample of streets which conforms to strict probability sampling requirements.

The quota controls are set in terms of the following groups:

Non-working and part-time working housewives (interviewed in the morning or afternoon)

Full-time working housewives)
) (interviewed in the evening)
Other women)

Men (interviewed in the evening or during the day at week-ends)

In addition there is a quota control in terms of:

Housewives with children

Housewives without children

After completing an interview the interviewer misses three houses/flats before attempting her next interview. Further rules govern the allocation of interviews to streets to accord with the way in which the streets were selected.

Weighting

For the housewife sample, weighting factors are applied by computer within four groups: non-working and part-time working housewives with children; full-time working housewives with children; non-working and part-time working housewives without children; and full-time working housewives without children.

In the case of the adult sample, weighting factors are applied within two additional groups: 'men' and 'other women'.

The effect of weighting is to adjust both the housewife and adult samples on average to the correct proportions as estimated by the National Readership Survey. Standard errors are only marginally affected since the weights are all close to one.

USING THE NOMOGRAM

Look up the design factor in the table of design factors. Distinguish carefully between area and demographic sub-samples.

Lay a ruler from the design factor (scaleA) to the size of the unweighted sub-sample n(scale C). Note where the ruler intersects scale B.

Lay a ruler from this point on scale B to the percentage on which you wish to estimate the confidence limits (scale E).

Read off the 95% confidence limits (i.e. twice the standard error) where the ruler intersects scale D.

You may be approximately 95% certain that the true percentage lies somewhere between your estimated percentage minus the reading on scale D, and your estimated percentage plus the reading on scale D.

NB. The 95% confidence limits are calculated as:

$$\pm 2 \times k \times \frac{P\,(100 - P)}{n}$$

P is the estimated percentage.

k is the design factor calculated on the basis of the expected degree of clustering within the sample. For housewife surveys this assumes 1000 interviews per period within 50 clusters.

DESIGN FACTORS

1. For use on the full sample and on television areas, marketing areas and standard regions etc. (i.e. samples for geographical sub-areas).

Total sample:

1,000	1,500	2,000	3,000	3,500+
1.4	1.3	1.4	1.4	1.4

(NB. The design factor is independent of n, the unweighted size of the sub-sample)

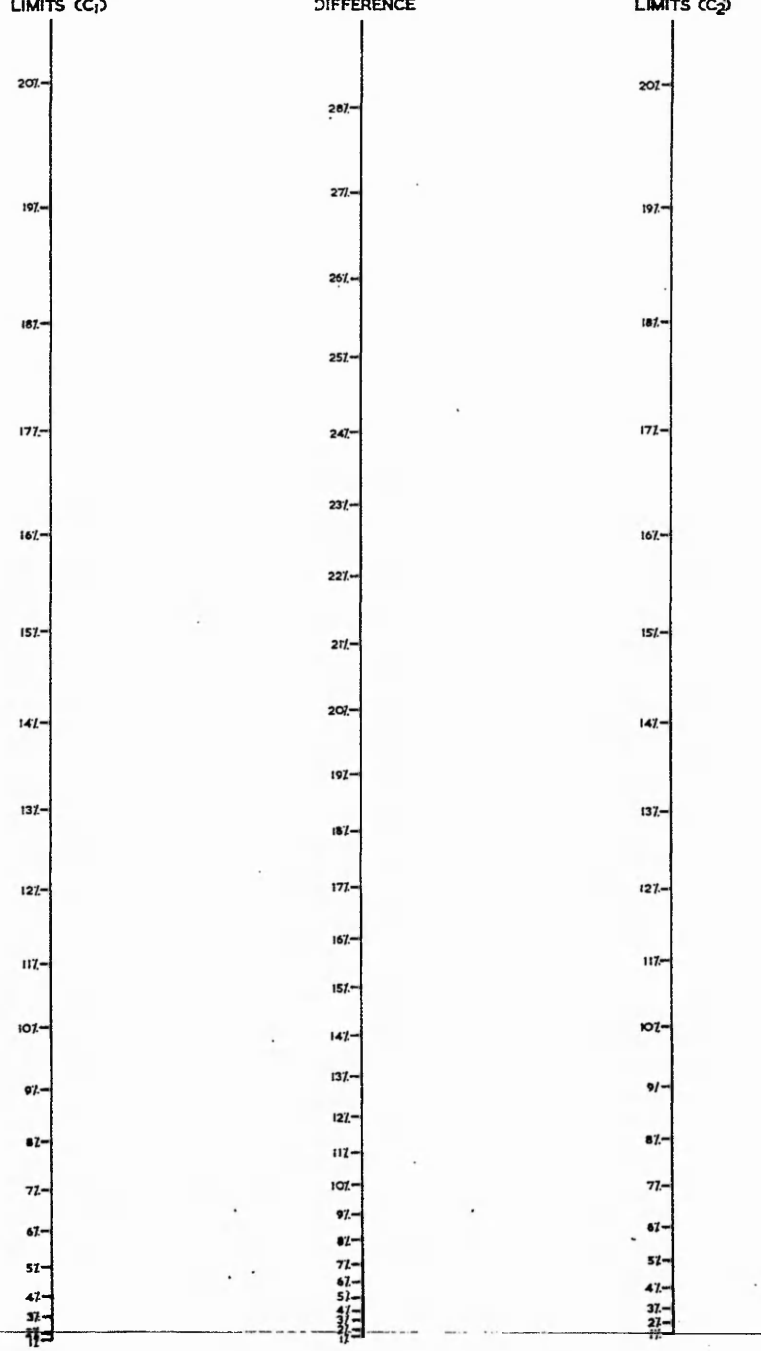
2. For use on samples of demographic sub-groups etc. (i.e. samples which cut across geographical sub-areas).

		n, the size of the sub-samples:						
		250	500	750	1000	0500	2000	2500
Total Sample:	1000	1.1	1.2	1.3	1.4			
	1500	1.0	1.1	1.2	1.2	1.3		
	2000	1.0	1.1	1.2	1.2	1.3	1.4	
	2500+	1.0	1.1	1.1	1.1	1.2	1.3	1.4

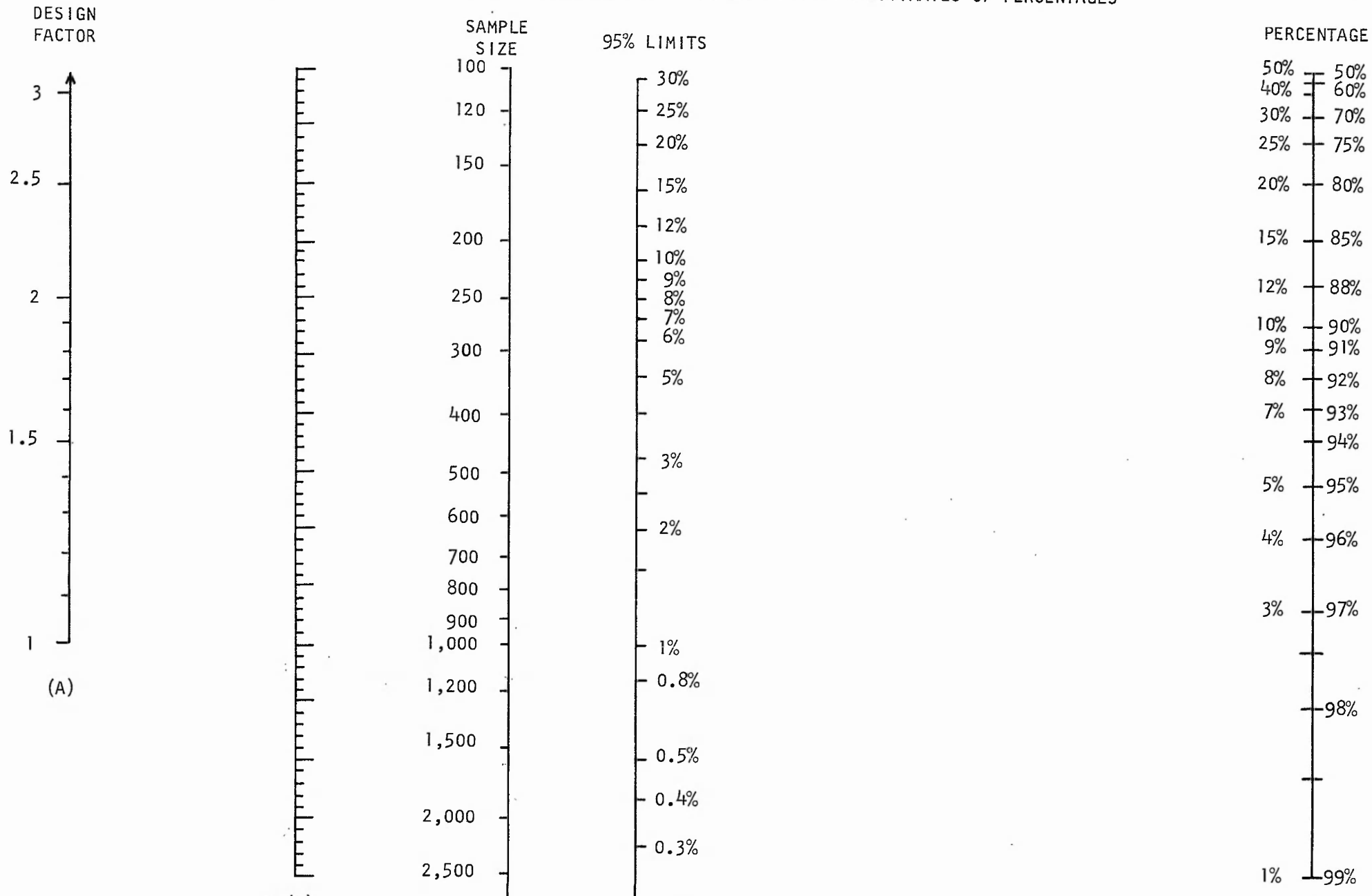
(NB. The design factor is dependent on n, the unweighted size of the sub-sample)

CONFIDENCE LIMITS FOR THE DIFFERENCE BETWEEN TWO ESTIMATES

Calculate the confidence limits on the two estimates using the nomogram headed 'NOMOGRAM ENABLING 95% CONFIDENCE LIMITS TO BE PLACED ON ESTIMATES OF PERCENTAGES'. Lay your ruler on the diagram to intersect these values on scales C1 and C2 respectively. The 95% confidence limit for the difference between the estimates is read off at the point where the ruler intersects the centre scale. If the estimated difference exceeds this value the percentages are said to differ significantly at the 95% level. In this case it is unlikely that the difference estimated is as an artifact of the sampling errors.



NOMOGRAM ENABLING 95% CONFIDENCE LIMITS TO BE PLACED ON ESTIMATES OF PERCENTAGES



CARD 67	(21.) 6	(22.) 7

ASK HOUSEWIVES ONLY

BREAD

SHOW LIST A

1. Which of these reasons do you feel is the most important consideration when buying bread for everyday family use? (CODE BELOW)

2. And which is the next most important consideration? (CODE BELOW)

	Q.1 Most Important	Q.2 Next Most Important	SKIP TO
	(23.)	(24.)	
Price per ounce	12	12	
Wrapped and Sliced, right size and shape for sandwiches and toast	11	11	
Readily available in most shops	0	0	
Keeping qualities	1	1	Q.3
Nutritious or health considerations	2	2	
Taste or freshness	3	3	
Some other reason	4	4	
Don't know	A	A	

SHOW ILLUSTRATION FOR BREAD

3. From which groups shown on this card can you remember having actually bought or tasted a loaf at any time? (CODE BELOW)
(NB: IF RESPONDENT HAS EXPERIENCED ANY ONE LOAF IN A GROUP IT COUNTS AS A GROUP)

4. From which groups shown on the card do you regularly buy each week? (CODE BELOW)

	Q.3 Bought or tasted any time	Q.4 Buy Regularly Each Week	
	(25.)	(26.)	
Group 1	1	1	
Group 2	2	2	
Group 3	3	3	
Group 4	4	4	
Group 5	5	5	
Group 6	6	6	Q.5
Group 7	7	7	
Group 8	8	8	
Group 9	9	9	
Group 10	10	10	
Group 11	11	11	
Group 12	12	12	
None/Don't buy/Don't know	A	A	

SKIP TO

5. IF 'None/Don't buy/Don't know' AT Q.4 SKIP TO *

IF 'Buy regularly each week' AT Q.4

Of the groups that you regularly purchase, on average how many large loaves do you buy each week? (WRITE IN NUMBER AND CODE)

And how many small loaves do you buy each week on average? (WRITE IN NUMBER AND CODE)

	Large loaves			Small loaves	
	Number	Don't know		Number	Don't know
Group 1	(27.)	A	(39.)		A
Group 2	(28.)	A	(40.)		A
Group 3	(29.)	A	(41.)		A
Group 4	(30.)	A	(42.)		A
Group 5	(31.)	A	(43.)		A
Group 6	(32.)	A	(44.)		A
Group 7	(33.)	A	(45.)		A
Group 8	(34.)	A	(46.)		A
Group 9	(35.)	A	(47.)		A
Group 10	(36.)	A	(48.)		A
Group 11	(37.)	A	(49.)		A
Group 12	(38.)	A	(50.)		A

Q.6

CONTINUE TO SHOW ILLUSTRATION

6. Assuming now that all types of bread shown on the card were equally available in the shops and all the same price per ounce, from which group would you mainly buy for everyday family use? (NO MULTI-CODING) (51.)

Group 1	1
Group 2	2
Group 3	3
Group 4	4
Group 5	5
Group 6	6
Group 7	7
Group 8	8
Group 9	9
Group 10	10
Group 11	11
Group 12	12
Don't know	A

*

APPENDIX 11.1.7 : LIST OF NFCG BRANCHES POLLED

NFCG/438
15.10.75

NATIONAL FEDERATION OF CONSUMER GROUPS
61 Valentine Road Birmingham B14 7AH 021 444 6010

Local Consumer Groups

1 ABERDEEN
2 BARNET
3 BASINGSTOKE
4 BIRMINGHAM
5 BRIGHTON
6 BRISTOL
7 BROMLEY
8 CARDIFF
9 CHELTENHAM
10 CLEVELAND
11 DARTFORD
12 DERBY
13 DONCASTER
14 DURHAM
15 EDINBURGH
16 EPSOM
17 FAIR DEAL
18 GLASGOW SOUTH
19 GLENROTHES
20 HARLOW
21 HARROW
22 C.HERTS
23 N.HERTS
24 S.HUMBERSIDE
25 ISLE OF WIGHT
26 ISLINGTON
27 KIRKINTILLOCH
28 E.KILBRIDE
29 LEWISHAM
30 LOUGHBOROUGH
31 MEDWAY TOWNS
32 OXFORD
33 PLYMOUTH
34 POOLE
35 PORTSMOUTH
36 PRESTON
37 READING
38 RUSHMOOR
39 SHETLAND
40 SLOUGH
41 SOUTHAMPTON
42 SOUTHEND
43 N.W. SURREY
44 SUTTON+
45 TYNESIDE
46 WATFORD
47 WINCHESTER
48 BRENT
49 ALNESS
50 COATBRIDGE
51 CROYDON
52 DUNDEE
53 HUNGERFORD
54 KIRKCALDY
55 E.LONDON
56 MOTHERWELL
57 PERTH
58 GARFORTH
59 SWINDON
60 STIRLING
61 DUMFRIES
62 PAISLEY
63 CARDROSS/ HELENSBURGH

APPENDIX 11.1.8 : COVERING LETTER FROM NFCG H.Q.

REPLY RATING = HIGHLY DESIRABLE

Survey Questionnaire on Bread In a separate envelope in this circulation you will find 20 questionnaires and illustration sheets for a survey on attitudes to, and awareness of, bread by David Pearson of Trent Polytechnic. The circulation of this questionnaire has been approved by NFCG Officers and postage costs are being paid by the researcher.

Please do your best to hand out the questionnaires to Group members (each questionnaire is individually numbered if you wish to keep a check).

Whilst the questionnaires need not necessarily be completed by bona fide members of Consumer Groups it is hoped that in practice the majority of them will be answered either by members or sympathisers. Part of the research will endeavour to detect differences in buying behaviour between the more aware Consumer Group Members and the general public. For this reason it would help the research considerably if Branch Secretaries would mark "N.A." (standing for not associated) over the code in the top right hand corner, wherever the person having completed the questionnaire is not associated in any way with the Consumer Group.

Completed questionnaires (without the illustration sheet) should be posted back in the addressed envelope provided, if possible by the end of October, although questionnaires can be returned after that date (up to the end of the year).

If you wish to analyse the questionnaires before returning them to use as the basis of a group article, you are free to do so. The full results will be made available to NFCG and to groups on request.

TO THE BUYER OF BREAD FOR THE HOUSEHOLD



PLEASE HELP ME IN THIS RESEARCH INTO BREAD CONSUMPTION BY COMPLETING THE FOLLOWING SHORT ANONYMOUS QUESTIONNAIRE. I CAN OFFER YOU NOTHING BUT THE CERTAINTY OF MY GRATITUDE AND THE POSSIBILITY THAT THE RESULTS MIGHT EVENTUALLY BENEFIT BREAD EATERS, BUYERS AND SELLERS

From: DAVID J PEARSON
SENIOR LECTURER IN MARKETING
THE MANAGEMENT CENTRE
TRENT POLYTECHNIC c/o
21 CHARLECOTE DRIVE
WOLLATON, NOTTINGHAM

DATE: Sept. 1976 CODE 4 2 1 2

THIS COLUMN IS FOR OFFICE USE ONLY.

PLEASE ANSWER HERE

New card col. no. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PLEASE CAREFULLY LOOK THROUGH THE ENCLOSED SHEET SHOWING VARIOUS GROUPS OF BREAD VARIETIES CURRENTLY ON SALE AND KEEP THIS IN FRONT OF YOU WHEN ANSWERING THE QUESTIONS.

1 Please put a figure 1 against whichever of these reasons you feel is the most important consideration when buying bread for everyday family use. Then put a figure 2 against the next most important consideration.

A	Price per oz →
B	Wrapped and sliced, right size and shape for sandwiches and toast →
C	Readily available in most shops →
D	Keeping qualities →
E	Nutritious or health considerations →
F	Taste or freshness →
G	Some other reason →

2 From which groups shown on the sheet can you remember having actually bought or tasted a loaf at any time?

Please put ticks in the boxes for the appropriate group numbers.

- Group No. 1 →
- Group No. 2 →
- Group No. 3 →
- Group No. 4 →
- Group No. 5 →
- Group No. 6 →
- Group No. 7 →
- Group No. 8 →
- Group No. 9 →
- Group No. 10 →
- Group No. 11 →
- Group No. 12 →
- NONE →

3 If you do not buy loaves at least once a week, would you please tick which one of these reasons is the main cause and then proceed to question 6.

A	Do not normally eat bread →
B	Usually bake my own from flour and yeast →
C	Usually bake my own using branded bread mix →
D	Usually eat out →
E	Usually buy cobs or rolls instead of loaves →
F	Some other reason →

P.T.O.

4

First please put a tick in the left hand column to show the group (or groups) from which you regularly buy each week.

Now please enter in the appropriate columns marked "large" and "small" the quantity of loaves that you buy each week on average, against the ticked group (or groups).

	Tick	No. large	No. small
Group No. 1 →			
Group No. 2 →			
Group No. 3 →			
Group No. 4 →			
Group No. 5 →			
Group No. 6 →			
Group No. 7 →			
Group No. 8 →			
Group No. 9 →			
Group No. 10 →			
Group No. 11 →			
Group No. 12 →			

Office 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 1* 2* 3* 4* 5* 6*

5

Assuming now that all types of bread shown on the sheet were equally available in the shops and all the same price per oz, from which group would you mainly buy for everyday family use? Please tick one box only

Group No. 1 →	
Group No. 2 →	
Group No. 3 →	
Group No. 4 →	
Group No. 5 →	
Group No. 6 →	
Group No. 7 →	
Group No. 8 →	
Group No. 9 →	
Group No. 10 →	
Group No. 11 →	
Group No. 12 →	

Office 7* 8* 9* 10 11 12*

6

Please indicate by entering or ticking as appropriate — (Please note that your name and full address are not called for, so as to ensure complete confidentiality).

A Your town ..... County .....

B Your sex - Female ☐ Male ☐

C Whether - Married ☐ Single ☐ Widowed ☐

D Your occupation .....

E Your husband's or wife's occupation .....

F Your accommodation - Council house → ☐
Council flat → ☐
Rented house → ☐
Rented flat → ☐
Own house or flat → ☐
Other → ☐

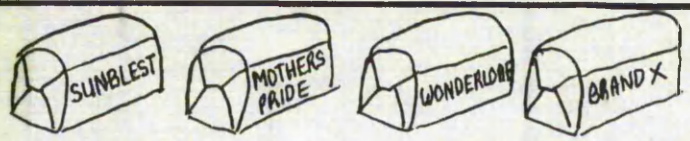
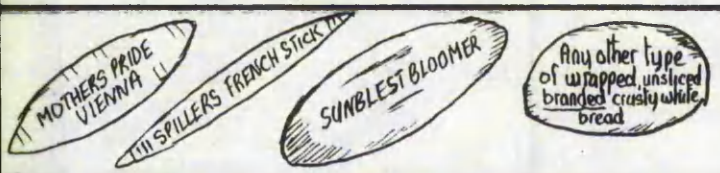
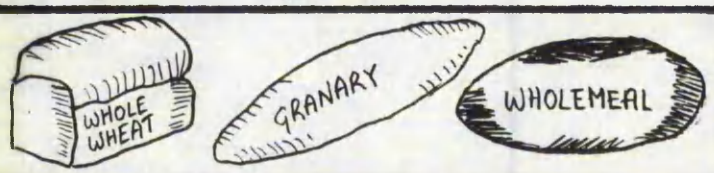
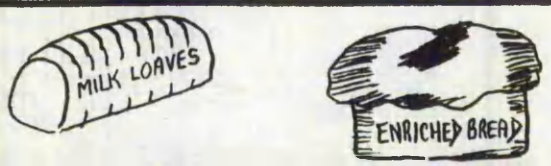
G Number of persons in household .....

H Ages of children living with you .....
.....

I Your own age .....

Office A* B C D E F G H I

THANK YOU VERY MUCH FOR YOUR HELP. PLEASE NOW RETURN THIS TO THE PERSON WHO GAVE IT TO YOU, OR TO ME.

GROUP NO.	ILLUSTRATION	DESCRIPTION
1.		STANDARD **WHITE** WRAPPED AND AND SLICED LOAVES, LARGE OR SMALL,, ANY BRAND, ANY SLICE THICKNESS (including 'Big T' and Farmhouse)
2.		STANDARD **BROWN** WRAPPED AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND EXCEPT HOVIS OR VITBE
3.		STANDARD WHITE UNWRAPPED AND **UNSLICED** LOAVES, LARGE OR SMALL
4.		HOVIS OR VITBE ONLY, WRAPPED OR UNWRAPPED, SLICED OR UNSLICED, LARGE OR SMALL
5.		DANISH ''LIGHTER'' BREAD, WHITE OR BROWN, WRAPPED AND SLICED, ANY BRAND
6.		SLIMMING BREAD, WHITE/BROWN, WRAPPED AND SLICED, ANY SIZE, ANY BRAND
7.		SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, UNSLICED AND **BAKED ON THE PREMISES**
8.		SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, BRANDED AND WRAPPED AND NOT BAKED ON THE PREMISES
9.		SPECIAL UNSLICED **WHOLEWHEAT** OR **WHOLEMEAL** BROWN BREAD, ANY TYPE SIZE, SHAPE OR BRAND
10.		PART-BAKED BREAD, EG. HOMEBAKE, TAKE 'N' BAKE, ETC - ANY BRAND
11.		MILK LOAVES OR ENRICHED BREAD OF ANY SIZE, TYPE OR BRAND
12.		ANY OTHER BREAD NOT DESCRIBED OR COVERED BY ANY OF THE ABOVE 11 GROUPS

TRENT
POLYTECHNIC
incorporating
NOTTINGHAM COLLEGE OF EDUCATION

Burton Street
Nottingham NG1 4BU
Telephone 0602 48248
Telex 377634 Ext. 2432

Our Reference

Your Reference

September 1976

To all Marketing Teachers/
Members of the Market Research Society

CONSUMER SURVEY ON TYPES OF BREAD

Dear Marketing colleague

I am attempting to discover by research, the degrees of mismatch (if any) between the proportions of different bread varieties produced and the proportions of consumer preference for these varieties. The split down of total national bread production into a limited number of varieties is to some extent contained in published data but I need to establish consumer preferences by an up to date survey on an extremely limited budget.

I am somewhat reluctant to trade upon the goodwill of my marketing colleagues but felt some of you might be interested and willing to help. I do appreciate that others might think it a nuisance and prefer not to assist.

In the hope that you might be prepared to help me, I have enclosed 10 questionnaires and would be more than grateful if you would be kind enough to return as many completed questionnaires as you can muster by the end of September, using the adhesive address label enclosed.

Should you have any comments on the survey design please let me have them. Better still, if you are aware of any previous research/data on types of bread produced, distributed or bought, I would be doubly grateful to have this information.

Yours sincerely

David J. Pearson.

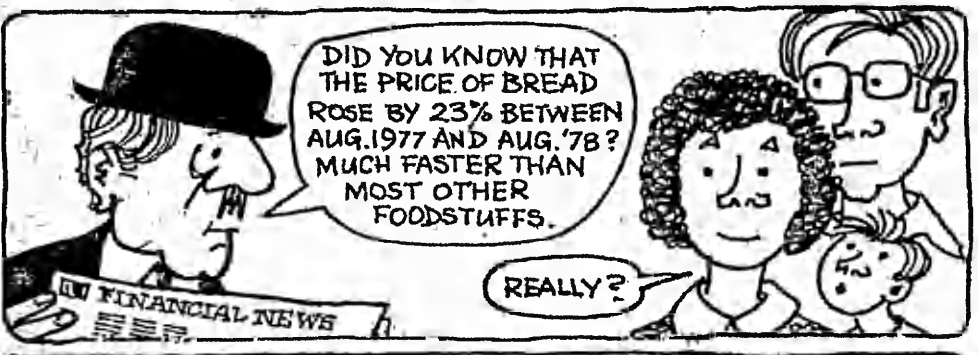
David J Pearson
Senior Lecturer in Marketing

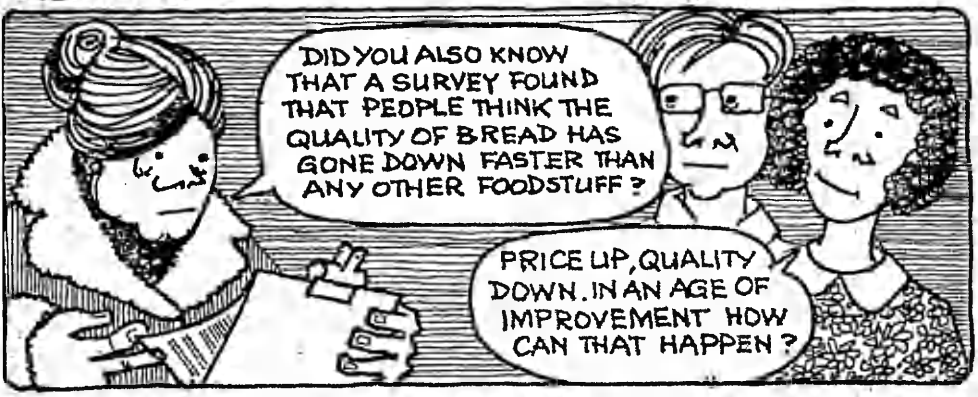
Director R Hedley MA
Chief Administrative Officer
D B Davies DPA

It's WHITE SLICED WRAPPED PROCESSED BREAD

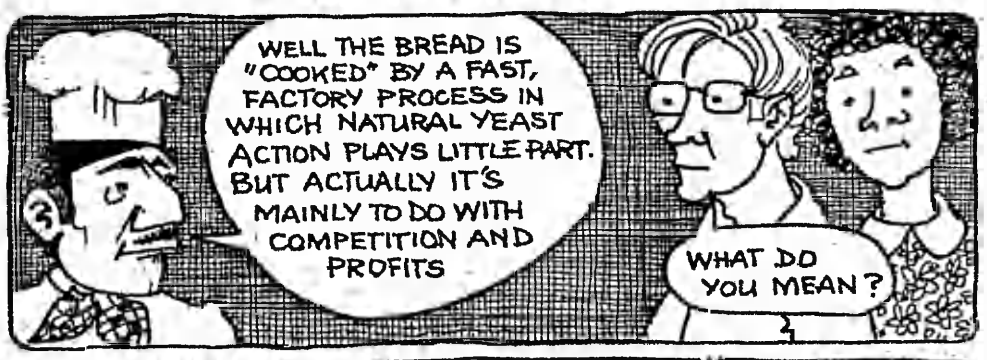
Let's take a look at this bland, waterlogged substitute for the real thing ... and the industry that sells it to us

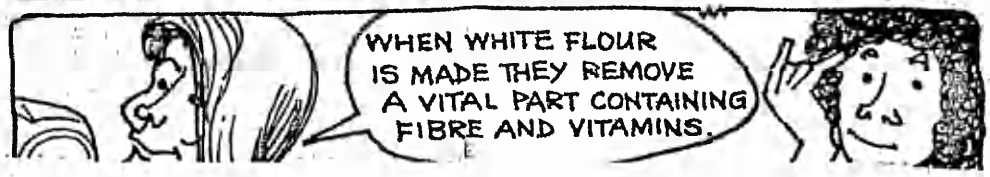
FAMILY SIZE FACTS YOU SHOULD KNOW











PRICE RISES

In over 300 years from 1600 to 1939 the price of bread just doubled **("Story of Bread" — Sheppard & Newton, 1957)**, in the 39 years since then the price has risen 18 fold. According to **Department of Prices and Consumer Protection** bread has risen faster in price over the last few years than most other foodstuffs — going up by 23% from August 1977— August 1978.

QUALITY

Bread is the single most important food in the U.K. diet — giving us about 15% of our energy and 16% of our protein **(National Food Survey 1976 Table 21)**. It is an even more important ingredient in the poor family's diet. Yet according to public opinion, bread is the foodstuff that has gone down more in quality than any other food. **(National Nutrition Survey of the Margarine and Shortening Manufacturers Assoc. Table 10 1969).** Experts such as the head of the Food Technology department of Birmingham's College of Food, agree that the manufacturers do not consider the nutritional value of their products to be of prime importance.

THE BIG THREE — OR IS IT TWO?

Until recently three companies controlled 62% of the U.K. baking industry **(Monopolies and Mergers Commission Report "Flour and Bread", 1977)**. These companies and their pre-tax profits were: Associated British Foods (ABF) (£78M in 1978), Rank Hovis McDougall (RHM) (£39M in 1977), and Spillers French (£8M in 1978). In April '78, however, Spillers pulled out of baking, selling 13 bakeries to the other two giants and closing down 23 bakeries **(Spiller's Annual Report 1978, Supplement)** at the cost of 6000 redundancies. One of the results is dearer bread for the consumer.

THE BAKING PROCESS

In 1961 the Chorleywood Bread Process was introduced and this revolutionised the bread industry. The traditional several hour rising of the dough by natural fermentation was replaced by a few minutes of intensive mixing with a pre-fermented gruel of yeast, oxidising agents, emulsifiers, yeast 'nutrients' and other ingredients. Three quarters of our bread is now made in this way. The manufacturers like it, because it is not only faster but, since more water can be included, it stretches the flour further **(The Monopolies and Mergers Commission Report, 1977** stated that the same quantity of flour stretched 4% further using this process. Since then the quantity of water in the standard loaf has risen to a record 40% — **(Composition of Foods, 4th edition H.M.S.O. 1978).**

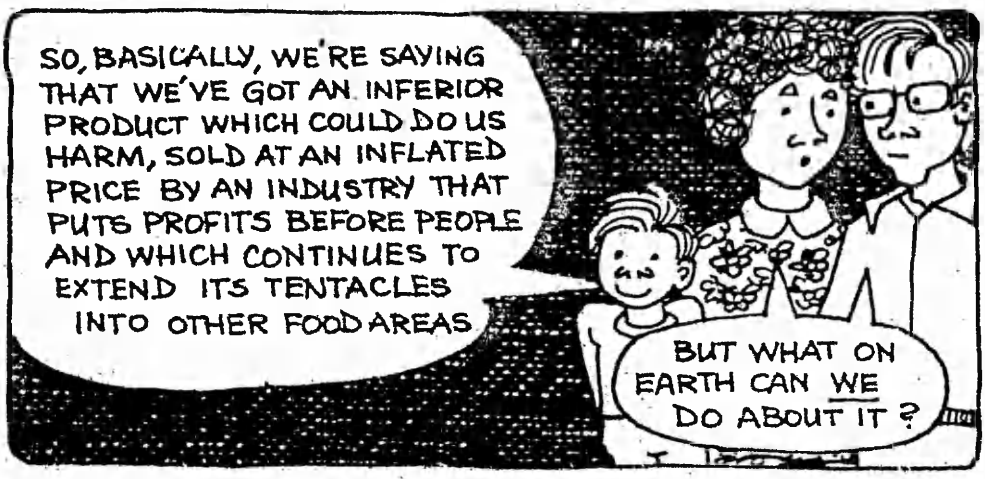


[1] Vaic F. et al. Lijecn. Vjesn. 1971 Vol 93
[2] Gerdemin V. and Litter T. Zbl. arbeitsmend 1972 Vol 22
[3] Herxheimer H. Acta Allerg. (Kbh) 1973 Vol 28



PRICING

A trade survey in 1973–4 by United Biscuits (UK) Ltd showed that wrapped bread and packaged cakes brought in 14% of the supermarkets' gross profits but only took up 7% of the shelf space – by far their most profitable lines **(Monopolies and Mergers Commission Report 1977)**



EXPANSION OF THE BREAD GIANTS

The expansion of the Big Three bread and flour companies has taken them a long way from bread. Not only have they cornered the wheat trade from beginning to end – starting with fertilisers and other agricultural sales, ending with owning the supermarkets in which the bread is sold (A.B.F. own Fine Fare etc.). But they have also moved into diverse other business fields including pet foods, biscuits, crisps, cakes, meat pies, pasta, tea, meat, milk, eggs, poultry, catering, finance companies, property investment, insurance and storage. **(Who Owns Whom 1977).**

This is what you can do...

★ Vote with your purse. Say NO to the waterlogged, tasteless, chemicalised loaf wrapped up in its nice plastic bag. Look around for wholemeal and wholesome bread. Encourage your local bakers to make sure there's plenty of it on their shelves.

★ Read this leaflet carefully. There's more, if you like, in our report – "Our Daily Bread" (cost 60p incl. postage). Talk to your friends about it – bring it up in your Women's Institute meeting, your union meeting, in the pub or club ... even write to your M.P. Be prepared to seem a crank if necessary. If it's idiotic to care about our own and our children's health – about heart disease and cancer – then most of us must be idiots!

★ Join our Food watchdog brigade. Keep your ears, eyes and tastebuds open to find out the 'cons' we're persuaded to buy; about bad working conditions and pay anywhere in the food business. Do *your* bit by keeping *us* informed.

THE AGRICAPITAL GROUP

... is about turning over ground. Turning over ground and digging up the facts that the food industry would prefer to leave buried. Our objectives are:-

- **Good food for the people**
- **Good pay and conditions for food workers**

We need your help and your information – so please write to –

AGRICAPITAL GROUP, BSSRS, 9 Poland Street, London W1

APPENDIX 11.1.12 : PAPER PRESENTED AT HERIOT-WATT UNIV.EDINGBURGH 25.3.80

CONSUMERISM AS A FORCE FOR MARKET CHANGES - THE BRITISH BREAD MARKET

David J. Pearson, Trent Polytechnic

ABSTRACT

For the purposes of this paper consumerism is here defined as "any force emanating from consumers or users which results in actions aimed at modifying products and services or the marketing of products and services, ostensibly in the interests of those consumers or users"

This paper attempts to examine the diffusion of change in markets caused by consumerism as defined, with specific reference to the British bread market, in the following manner:-

1. Evidence is presented which indicates sustained and widespread criticism by the media alleging that plant bakers are not making the types of bread which consumers would really prefer.

2. The results of research conducted in the form of consumer questionnaires on a national basis are then examined with a view to attempting to prove or disprove media allegations of mismatch between actual supply and real demand in the case of bread market segments.

3. Models of existing consumption of bread by market segment are compared with models under hypothetical conditions of "perfect supply", elicited from the above research.

4. Differences in attitudes and express demand between ordinary housewives and active consumerists are highlighted, with some reference to the supposed role of opinion leaders in bringing about market changes.

5. The nature of changes in bread market segments seemingly caused by aggressive consumerism are presented and an attempt made to forecast future trends.

CONTROVERSY SURROUNDING BRITISH "PLANT PRODUCED" BREAD

Sheppard and Newton (1) attempted to differentiate between a 'family' baker and a 'plant' baker on a number of bases including the number of employees and the type of oven used, but for the purposes of this paper a 'plant' baker is defined as "any one concern using one or more plants individually capable of producing a minimum of twelve sacks of bread per hour (about 2640 large loaves)" (2) This definition includes the two largest plant bakers namely Rank, Hovis, McDougall (RHM) and Allied Bakeries division of Associated British Foods (ABF) plus about 40 smaller independent regional baking concerns which together account for around 73 per cent of the market (3).

There are many types of controversy surrounding British bread which might be categorised as:-

i. That concerned with taste and quality of the various types of bread and which is largely a matter of subjective opinion.

ii. That concerned with nutritional and medical aspects of certain types of brown and white breads, based upon scientific research.

iii. That concerned with political interference in the British bread industry by various governments.

iv. That concerned with charges that plant bakers do not make adequate supplies of the 'right' types of bread available in accordance with consumer demand.

It is upon the latter category that this paper is based. Attention is drawn to sustained and widespread criticism by the media, the substance of which is the allegation that plant bakers are not making the types of bread which consumers really prefer.

There are some difficulties in seeking to establish a prima facie case proving the existence of this form of controversy, not the least of which is that no one researcher can possibly personally monitor the output of all the media over a long period of time. Fortunately the Flour Advisory Bureau, which to some extent protects the interests of plant bakers (4), maintains extensive files of press cuttings as well as subscribing to the Telex Broadcasting Service, which monitors all television and radio broadcasts and makes transcripts available to interested parties at a commercial price.

One of the strongest newspaper attacks on sliced bread produced by plant bakers, was mounted by the Sunday Mirror in 1973 (5). The first of a series of three articles stated:-

> "The white sliced loaf is what the housewife wants - say the big bakery groups. But is it really? Or have the bread bakers and ad men created a demand for something the industry is geared to baking? Sunday Mirror enquiries show that many housewives are far from happy with crustless, wrapped bread. Come to that, do they really have a choice?"

The following article claimed:-

> "The biggest surprise from the Sunday Mirror's special countrywide survey on bread is the indication that more than half of Britain's housewives PREFER anything but sliced, white bread".

The final article in the series enthused as follows:-

> "Our readers give their verdict on Britain's bread - we could use a better loaf ... More than 95 per cent agreed wholeheartedly with our criticisms of the bread industry. Many readers attacked the quality of loaves supplied by the Big Three concerns which bake two-thirds of Britian's bread"

From time to time other major attacks are published such as the TACC Report (6) which generated the following selection of press articles on May 10th, 1974:-

NEWSPAPER	ARTICLE HEADING
Financial Times	Bakers angry at report criticising modern loaf
Daily Mail	Cotton wool loaf takes a pounding
Daily Express	Bakers rapped over 'cotton wool'loaves
Daily Telegraph	White loaf 'bland and inferior'
Times	Bread advertising critcised in report
Daily Mirror	'Cotton wool' bread rapped

More recently (Sept. 1978) a report "Our Daily Bread" by the Agricapital Group (7) was widely publicised in the national press including the Times, Guardian and Morning Star. Free leaflets under the heading "It's white sliced wrapped processed bread - lets take a look at this bland, waterlogged substitute for the real thing ... and the industry that sells it to us" were made available together with a tapeslide presentation to Women's Institutes, Unions and Clubs.

In October 1979 the New Statesman featured on its front cover a lengthy inside article under the heading "The scandal of British bread" (8).

Part of the controversial views in a speech by Alistair Mackie, Director General of the Health Education Council in which he likened sliced bread to "a fine substitute for polyfilla" were published even more recently in"the Grocer" (9).

These instances are but a fraction of a myriad of long sustained media articles and broadcasts, which typify the criticisms under review.

RESEARCH RESULTS AND CONCLUSIONS

The following tables show overall bread consumption trends broken down by broad variety categories:-

TABLE 1 Consumption 1970-77 (oz person per week)

Bread category	1970	1971	1972	1973	1974	1975	1976	1977
White,large,unsliced	6.74	6.04	6.21	6.19	6.05	5.99	6.06	6.78
White,large,sliced	20.05	18.58	17.56	17.86	18.86	18.14	17.51	16.55
White,small,unsliced	2.84	2.74	2.97	2.50	2.23	2.32	1.98	1.95
White,small,sliced	2.09	2.04	1.60	1.33	1.10	1.23	0.84	0.52
Brown bread	2.38	2.54	2.41	2.22	2.08	2.61	2.95	2.96
Wholewheat/wholemeal	0.49	0.48	0.45	0.54	0.56	0.69	0.65	0.74
Other bread	2.91	2.78	2.94	3.08	2.62	2.69	3.12	3.22
Total) TOTAL BREAD	37.51	35.20	34.14	33.72	33.50	33.67	33.11	32.72

Source: National Food Survey

TABLE 2 Consumption 1970-77 (percentages)

Bread category	1970	1971	1972	1973	1974	1975	1976	1977
White,large,unsliced	18.0	17.2	18.2	18.4	18.1	17.8	18.3	20.7
White,large,sliced	53.4	52.8	51.4	53.0	56.3	53.9	52.9	50.6
White,small,unsliced	7.6	7.8	8.7	7.4	6.7	6.9	6.0	6.0
White,small,sliced	5.6	5.8	4.7	3.9	3.3	3.7	2.5	1.6
Brown bread	6.3	7.2	7.1	6.6	6.2	7.8	8.9	9.0
Wholewheat/Wholemeal	1.3	1.4	1.3	1.6	1.7	2.0	2.0	2.3
Other bread	7.8	7.9	8.6	9.1	7.8	8.0	9.4	9.8
TOTAL BREAD	100.0	100.1	100.0	100.0	100.1	100.1	100.0	100.0

The above tables reveal firstly a continuance of the pre-1970 trend towards steadily decreasing consumption of bread per capita and secondly that no particularly marked changes in the rank order of categories have occurred as a result of sustained media criticisms of plant produced British bread, over recent years. However, there are signs in the 1977 and subsequent figures of some acceleration in the rate of change.

In an attempt to discover whether the alleged consumer disatisfaction was general amongst housewives or whether this was confined to consumers of particular types of bread or with particular demographic characteristics, a national survey of 1,000 housewives was conducted through the auspices of British Market Research Bureau Ltd. The ACCESS service using Random Location Sampling was used and a valid response rate of 78 per cent achieved Four basic questions were asked:-

1. To elicit the most important considerations when buying bread for everyday family use.

2. To determine the experience level of buying/tasting the various types of bread available in the market.

3. To find out the types of loaves and the quantities currently being bought on a more detailed basis than the National Food Survey data.

4. To discover whether current buying behaviour patterns would change in the event of equal price and availability of all types of bread

In the first question respondents were asked which of the following reasons they felt to be the most important consideration when buying bread for everyday family use - i. Price, ii. Convenience, iii. Availability iv. Keeping qualities, v. Nutritious/health, vi. Taste/freshness, vii. Other, viii. Don't know.

Some correlation was expected between the number of people buying standard bread and the number declaring an economy or availability/convenience rationale; between the number of people buying crusty breads baked on the premises and the number stating taste/freshness as their most important consideration; between the number of people buying wholemeal/wholewheat breads and the number opting for nutritious/health as the prime buying motive.

This was not found to be the case. Only 4 per cent gave 'price', 1 per cent said 'availability' and 13 per cent 'convenience', against 52 per cent buying purely standard bread as their major purchase. It does not seem likely therefore, that housewives generally buy standard bread only because it is relatively cheap and readily available in the shops and that they are dissatisfied with it on other counts as alleged in the media

Over half the housewives gave taste/freshness as their most important buying consideration and there were no significant demographic variations.

It had also been postulated that some housewives, particularly the younger ones might never have experienced certain types of breads because of general lack of availability and therefore not be in the best position to choose between varieties. The results of the research on this point confirm a surprising lack of experience across the total range, with only three out of a total of 12 variety groups being experienced by more than half the housewives, in terms of having bought or tasted loaves from those groups. Lack of experience was however biased towards the older age groups rather than the younger. Wales and Scotland had relatively low spreads of experience. A striking feature is that experience lowers significantly down the social class groups and this could certainly be a factor when considering the role of opinion leaders in bringing about market changes.

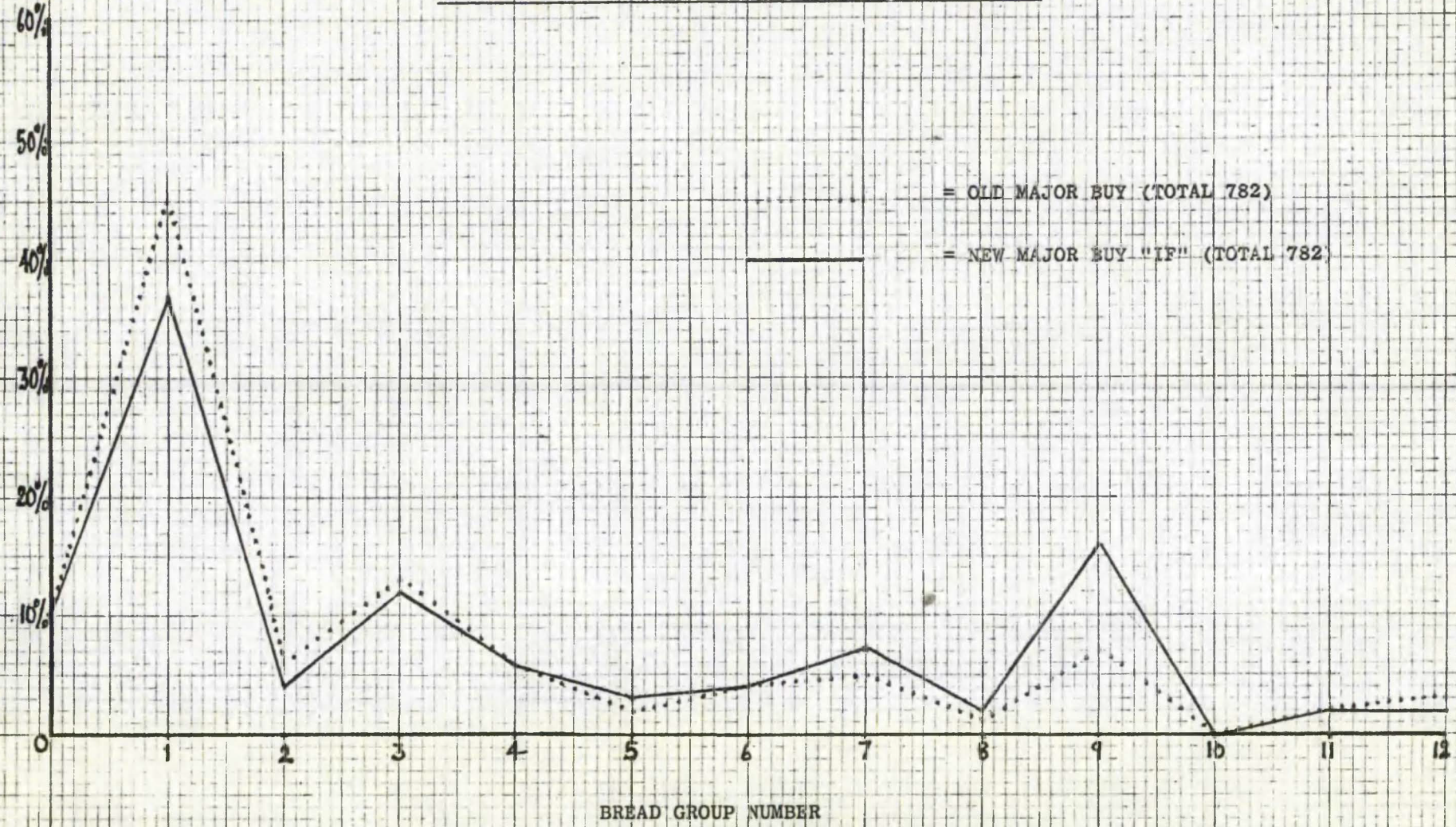
With regard to which types of bread constituted the major buy, all four demographic variables used (children/no children, age, geographic region and social class) were found to be highly significant in determining the bread group most heavily purchased from each week.

MARKET CHANGES GIVEN EQUAL PRICE/AVAILABILITY - ALL BREAD

Housewives were asked from which variety group they would make their major purchase given equal price and availability for all types of bread. The answers were then compared with the existing major purchase in the attempt to discover what market changes would occur under these conditions. It was felt that if a large number of housewives would desert standard bread for other bread varieties given equal price/availability, then a measure of dissatisfaction with standard bread could be inferred. The following graph demonstrates that very little change would occur in the overall pattern of the market given equal price and availability for all types of bread.

MAJOR BUY V NEW MAJOR BUY "IF"

TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1



..... = OLD MAJOR BUY (TOTAL 782)

——— = NEW MAJOR BUY "IF" (TOTAL 782)

However some 8 per cent of respondents would desert standard bread (Bread Group 1) as their major purchase, compared with the 5 per cent who gave price or availability as their most important buying consideration.

Also of some note is the gain of bread group 9 (wholemeal/wholewheat). The number of housewives who would buy this group as their major purchase would more than double from the current 7 per cent to around 16 per cent.

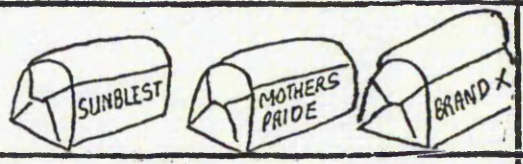
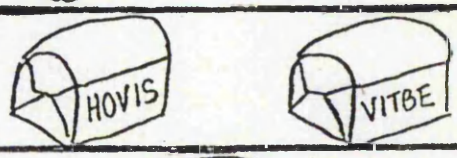
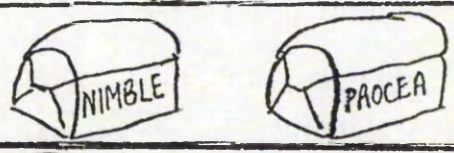
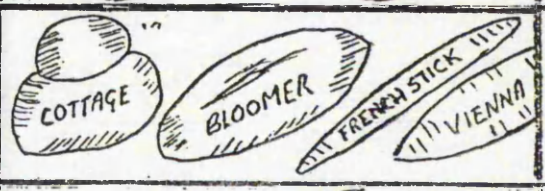
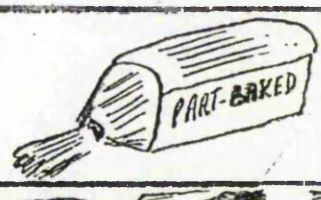
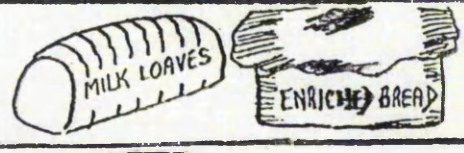
DIFFERENCES IN ATTITUDES/BUYING HABITS BETWEEN HOUSEWIVES AND "CONSUMERISTS"

It had been postulated that the dissatisfaction expressed by the media with British bread and the plant bakers, supposedly on behalf of the average consumer might in fact emanate from a relatively small group of opinion leaders and that these opinion leaders might be members of consumer groups or teachers/teacher's wives and therefore relatively active. In an attempt to find whether this might be a factor in the nature of consumerism as a force for market change, separate postal surveys were conducted on two sub-samples composed of these groups of people.

Some 379 responses were received from active members of consumer groups affiliated to the National Federation of Consumer Groups and 181 responses from teachers/teacher's wives. Some interesting results were obtained when comparing the attitudes/buying behaviour towards bread of consumerists and teachers/teacher's wives with those of the normal or average housewife. It should be pointed out here that members of consumer groups are biased towards the upper social classes and towards the older age groups and that teachers are as a profession counted amongst the AB social class group.

It has already been seen that the higher social class groups have relatively more experience across the total range of bread available and buyers of non-standard bread are also biased towards the upper social classes. Social classes A and B are proportionately the highest in terms of numbers buying wholemeal/wholewheat bread and to a lesser extent the crusty/fancy breads and are relatively low in terms of the numbers purchasing standard bread.

Differences between the average housewife and consumerists and between the average housewife and teachers/teacher's wives are even more marked. The following table shows the bread market shares occupied by the twelve bread groups used for this study and compares the shares accounted for by the average housewife (Sample 1), with those accounted for by members of consumer groups (Sample 2), and those accounted for by teachers/teacher's wives (Sample 3).

GRP	DESCRIPTION	ILLUSTRATION	SAMPLE 1	2	3
1	STANDARD WHITE WRAPPED AND AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND, ANY SLICE THICKNESS (including 'Big T' and Farmhouse)		54	35	36
2	STANDARD BROWN WRAPPED AND SLICED LOAVES, LARGE OR SMALL, ANY BRAND EXCEPT HOVIS OR VITBE		6	6	4
3	STANDARD WHITE UNWRAPPED AND UNSLICED LOAVES, LARGE OR SMALL		11	12	11
4	HOVIS OR VITBE ONLY, WRAPPED OR UNWRAPPED, SLICED OR UNSLICED, LARGE OR SMALL		7	8	9
5	DANISH "LIGHTER" BREAD, WHITE OR BROWN, WRAPPED AND SLICED, ANY BRAND		2	2	4
6	SLIMMING BREAD, WHITE/BROWN, WRAPPED AND SLICED, ANY SIZE, ANY BRAND		3	2	1
7	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, UNSLICED AND BAKED ON THE PREMISES		6	12	14
8	SPECIAL FANCY WHITE CRUSTY BREADS OR SOFT WHITE COB LOAVES, BRANDED AND WRAPPED AND NOT BAKED ON THE PREMISES		1	4	2
9	SPECIAL UNSLICED WHOLEWHEAT OR WHOLEMEAL BROWN BREAD, ANY TYPE SIZE, SHAPE OR BRAND		6	15	18
10	PART-BAKED BREAD, EG. HOMEBAKE, TAKE 'N' BAKE, ETC - ANY BRAND		0	0	0
11	MILK LOAVES OR ENRICHED BREAD OF ANY SIZE, TYPE OR BRAND		1	0	1
12	ANY OTHER BREAD NOT DESCRIBED OR COVERED BY ANY OF THE ABOVE 11 GROUPS		3	4	0

It can be seen that whilst standard white bread is still the most popular purchase for all three samples, fancy white crusty breads and wholewheat/wholemeal breads together account for some 31 per cent share of the consumerists market, and some 34 per cent share of the teachers or wives of teachers market compared with 13 per cent share of the average housewives market.

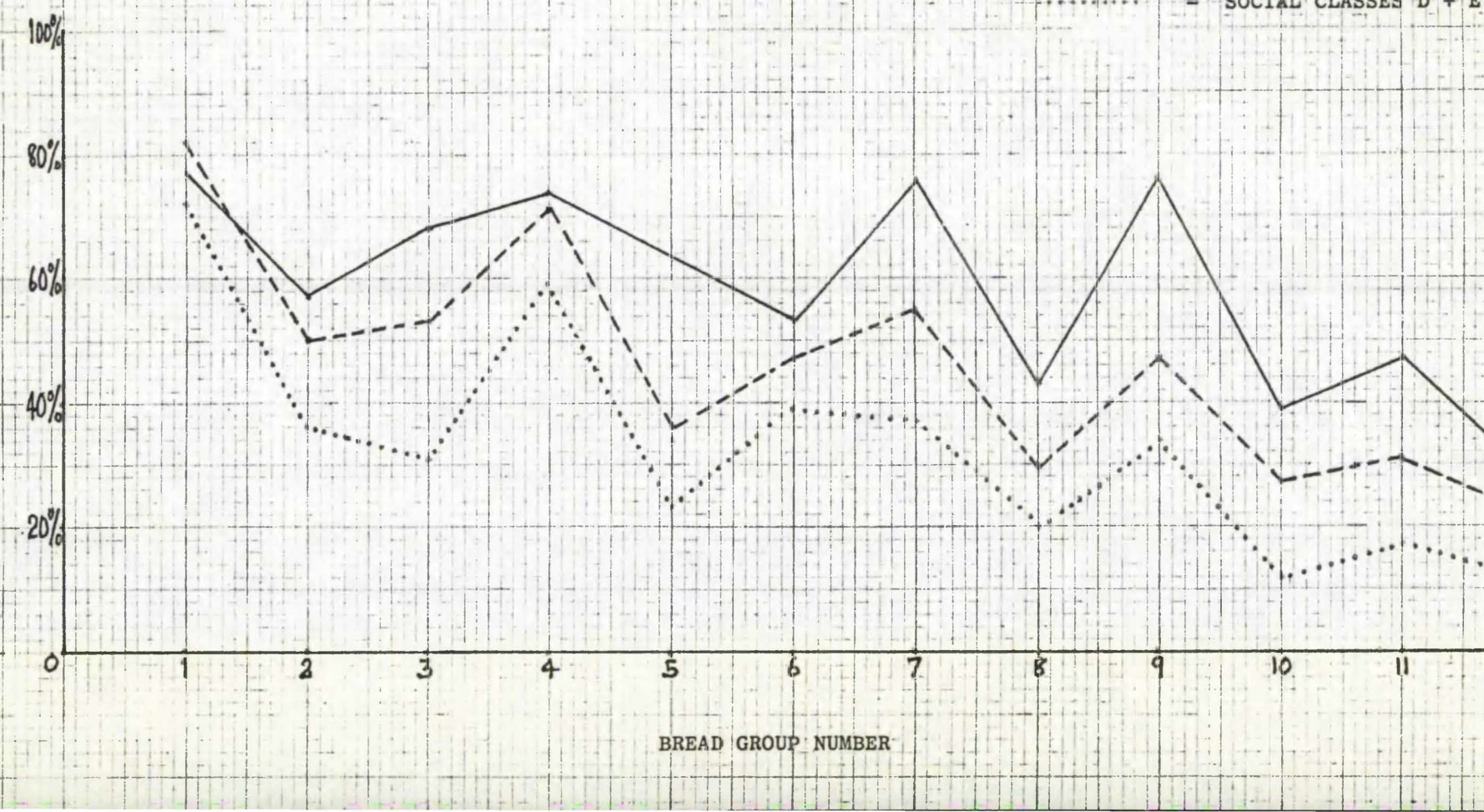
These differences in bread buying behaviour between the samples under review are underlined when comparing the experience profiles of the average housewife by social class with the experience profiles of the three samples, in the following graphs. The profile used here is experience in terms of either having bought or tasted loaves from the twelve different bread groups identified for this study and which are illustrated and described in the foregoing table of market shares.

It can be seen that the levels of experience across the range of bread are consistently higher for members of consumer groups and for teachers and wives of teachers, than for the A and B social classes.

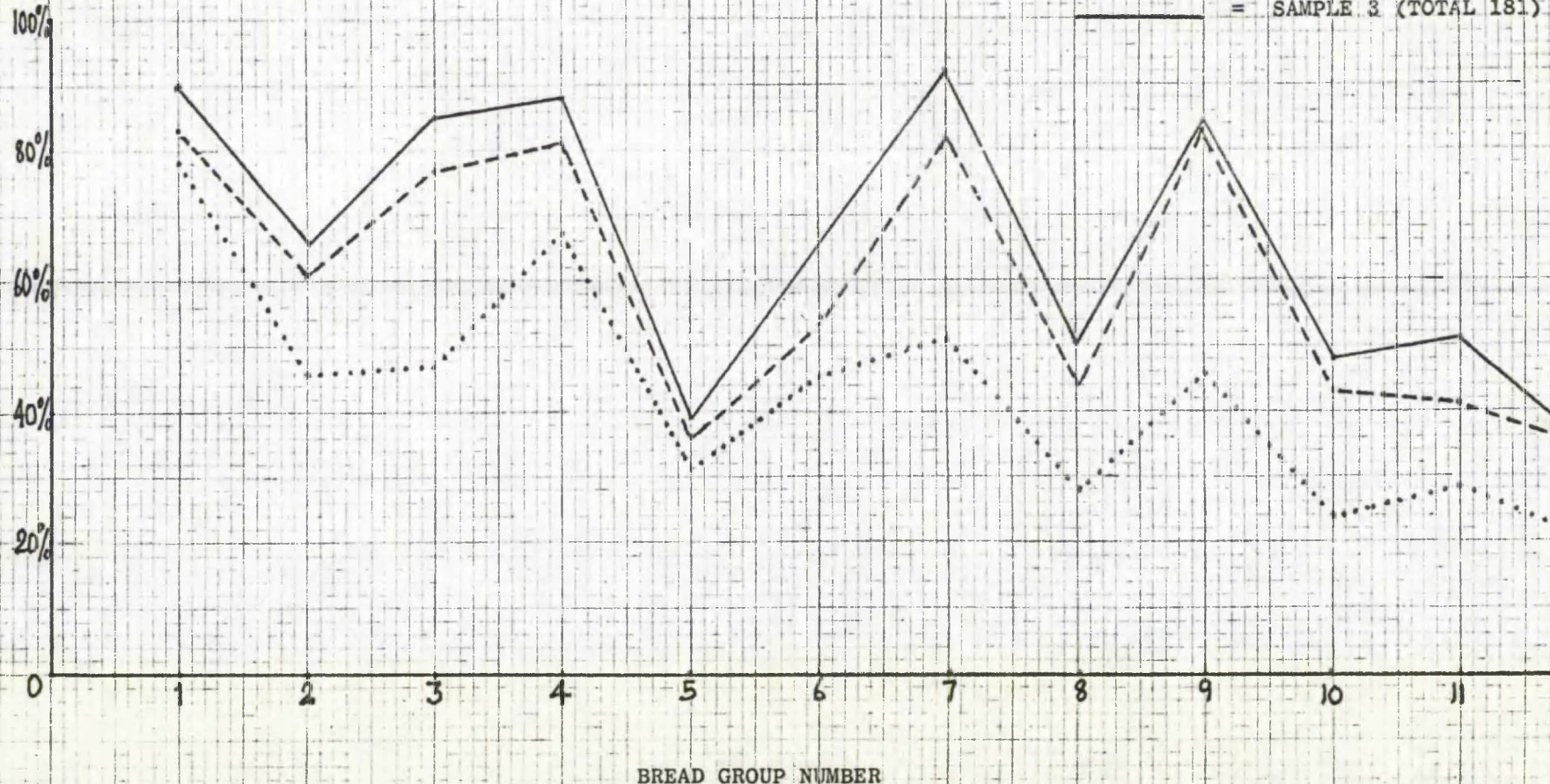
The roles of members of consumer groups and teachers or wives of teachers as possible opinion leaders and therefore agents for changes in attitudes towards particular types of bread leading to changes in bread buying behaviour, could be considered at this stage. Certainly there is some case for stating that members of consumer groups are highly likely to be active in bringing about such changes and that there is at least a probability that those buying fancy white crusty breads and/or wholemeal/wholewheat breads would seek to persuade friends and relations to do likewise. Whether this would necessarily lead to anti-standard white bread articles and programmes by the media, would to some extent depend upon whether journalists and producers feature among the friends/acquaintances of consumer group activists on bread and to another extent upon the efforts of such activists to secure publicity - a matter perhaps for further research.

EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) V SOCIAL CLASS

TO NEAREST 1% WITH 0.5 ROUNDED UPWARDS - SAMPLE 1



EXPERIENCE OF BUYING OR TASTING (BREAD GROUPS) - SAMPLE 1 V. SAMPLE 2 V. SAMPLE 3



Consumer purchasing behaviour with regard to plant produced sliced white bread is to a large extent concerned with brands which up to April 1978 included Wonderloaf as well as Sunblest, Mothers Pride and some lesser brands. Considerable research has been conducted into aspects of consumer brand choice, some of which were covered by Parker's recent paper (10) Parker's 1973 study in Dublin (11) found a degree of consumer 'irrationality' in buying behaviour when compared with their stated motives. Similar irrationality is indicated in the relatively low rankings of price and availability as bread buying motives compared with actual buying behaviour.

In this context Wills (14) refers to ample evidence that attitudes and behaviour do interact but states that there is no uniformly applicable model of how the interaction works.

Some explanation of apparent resistance to change in the branded segment of the bread market despite media exhortations, is afforded by Ehrenberg's Stationary Purchasing Model (13). The top 4 to 6 leading brands of bread were among the product-fields tested from 1950 to 1966 for time periods of 1 week to 6 weeks or more and for which various aspects of the model were found to hold.

Parker also refers to Stafford's work on peer group influences (12) which found that brand loyalty was more closely related to the behaviour of the informal leader than the relative cohesiveness of the group itself.

Foxall's paper (15) refers to the disappointing results of attempts to discover the behavioural correlates of brand and store loyalty and also to some findings regarding the situational variables relating to consumers' preferences for bread products over various meal situations.

Some support for believing that demographic variables such as social class and age are predictive of both innovation adoption and opinion leadership is found in Wills' excellent work on fashion leadership (16). Lowe (17) states that the spread of innovation will clearly depend on the type and nature of information available to the consumer and also the consumers desire to search out new information. He points out the economics of information search and the more favourable situation of the higher social classes in this context.

However this part of the discussion is perhaps best closed by reference to Tuck's statements (18)

> "...consumer behaviour studies are something of a Cinderella... yet there are promising lines for consumer behaviour research available ... anyone who has attended the annual conferences of ESOMAR (the European Society of Market Research) will know that their technical expertise is perhaps the most highly regarded in the world ... the final picture is a fluid one. There are no certainties"

CHANGES IN BREAD MARKET SEGMENTS, CONSUMERISM AND FUTURE TRENDS

Whilst the changes apparently wrought by aggressive consumerism upon traditional bread market segments have so far been somewhat small, there is certainly considerable evidence to indicate a relatively higher degree

of reaction in the marketing of bread. The following table indicates the latest position:-

Bread category	1976 oz	1976 %	1977 oz	1977 %	1978 oz	1978 %
White,large,unsliced	6.07	18.3	6.78	20.7	6.31	19.6
White,large,sliced	17.54	52.9	16.55	50.6	16.42	51.1
White,small,unsliced	1.98	6.0	1.95	6.0	1.89	5.9
White,small,sliced	0.85	2.5	0.52	1.6	0.44	1.4
Brown bread	2.95	8.9	2.96	9.0	3.15	9.8
Wholewheat/wholemeal	0.65	2.0	0.74	2.3	0.69	2.1
Other bread	3.14	9.4	3.22	9.8	3.24	10.1
TOTAL BREAD	33.17	100.0	32.73	100.0	32.13	100.0

APPROXIMATE SHARES OF THE BREAD MARKET

	1975%	SPRING 1978%	SPRING 1979%
RHM	23	31	29
ABF	22	29	28
SPILLERS	17	-	-
OTHER PLANT BAKERS	11	12	13
MASTER BAKERS	27	28	30
	100	100	100

The Master Bakers (about 4,000), are those bakers shops who bake on the premises. Morris Zimmerman the Director of the National Association of Master Bakers claims that "one of the more perceptible changes in the country's eating habits has been the swing away from the wrapped loaf to crusty bread. The trend is a real one which has undoubtedly benefited the independent baker but has also led to an increasing amount of supermarket shelf space being devoted to specialist breads and now, in the larger supermarkets, the in-store bakery".

Certainly there is evidence of considerable increase in the number of in-store bakeries. At the end of 1976 Tesco had 24 in-store bakeries and the concept was to be employed in all future new stores according to the Chairman Leslie Porter.

John Beamont, Director of Research, Institute of Grocery Distribution revealed that in 1975/6 some two thirds of the 24 new grocery stores over 25,000 square feet, built, recorded in-store baking facilities.

If it were true that the big plant bakers were over-producing standard bread and under-producing other breads as a deliberate policy contrary to true consumer demand, then it could be expected that very little product development would have taken place on non-standard varieties. However, the reverse situation would seem to obtain. Faced with continually declining total bread consumption the plant bakers have made efforts to develop new varieties to increase their market share. Furthermore whenever a new variety launched by one plant baker gains some measure of success it is quickly copied by the other plant bakers - hardly the behaviour of companies alleged to be pursuing a policy of enforcing the choice of standard bread. The launch of part-baked bread some 8 years ago is a case in point. Part-baked bread could be said to be a reaction of the plant bakers to the critics of standard plant-produced bread. It was small, unsliced, bagged (rather than wax paper wrapped) and only partially baked. A brown variety was subsequently marketed. This part-baked variety should have appealed to those consumers concerned with taste, freshness and crustiness and was intended to be baked off in the home with the attending aroma. Certainly the new variety was given favourable publicity in the media and it achieved a large measure of initial success. However, this variety gradually dwindled in popularity and recent figures indicate a less than 1 per cent market share.

Other new non-standard varieties launched during the past ten years include various slimming breads, cryovac-wrapped crusties (an attempt to get bloomers, french sticks, coburgs etc. into mass distribution through multiple outlets), various fruit loaves, new shapes and sizes such as 'Big T','Dinkum', 'Picnic' and the more successful 'Danish' which seems to have established itself nationally now.

More recently, in 1978 and presumably to combine the advantages of slimming bread with farmhouse and with wholemeal bread, RHM launched 'Nimble Farmstead' and 'Nimble Granary' and are claiming considerable success for both these varieties. Earlier that year rival ABF had launched 'Sunblest HiBran' with "25 per cent more fibre than wholemeal bread".

Even more recently (March 1979) 'Old Fashioned' bread was launched by ABF in the waxed wrapping paper of bygone days and in a market dominated by plastic bags. 'Old Fashioned' is being baked in modern plant bakeries but using an old fermentation process which allows the bread to ferment in storage bins for up to 16 hours.

In addition to product development ABF have been moving into the Master Baker segment of bread outlets and now possesses over 300 'Bakers Ovens' and similar 'hot bread' shops

It would seem therefore that consumerism has had some effect upon the marketing of British bread and recent trends indicate some acceleration in the rate of change.

Following the relative success of 'Campaign for real ale' (CAMRA) a 'Campaign for real bread' (CAMREB) was mentioned in the press last year but so far seems to have had little impact as an organisation.

Consumerism can also act as a force against market change when strong reaction is pre-empted by the proposers of such changes and in this respect this paper would not be complete without a reference to the fact that in December 1976, the Council of Ministers for the European Economic Community withdrew their proposals for standardising the quality of bread throughout the Community, recognising that public reaction was so strong as to make any regulation impracticable.

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