'REGIONAL FOOD PREFERENCES'

A thesis submitted by

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in fulfilment of requirements for the degree of Ph.D.

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Dedication

TO MY MOTHER

in appreciation of her patience,
support and encouragement.
Summary.

The thesis is concerned with an interdisciplinary investigation of the regional food preferences of the British population.

The existence, nature and prevalence of current food preferences within geographical regions of Britain, in terms of food groups, food commodities, dishes and nutrients, are examined in the domestic situation and within school, hospital, industrial and commercial sectors of the catering industry.

Definitions of 'food' and 'food preferences' are derived, the factors governing preferences are considered and the historical development of each type of catering is briefly reviewed.

Food consumption is used as the main indicator of preference but an insufficiency of available raw data and very few pertinent secondary sources of information, necessitate the use of personal communication as a research technique.

Regional household food preferences are identified primarily by use of published data, while preferences of schoolchildren and hospital patients are investigated by collection of dish 'uptake' statistics acquired from local education and health authorities. Indications of regional preferences of employees are derived from published data, some dish 'uptake' statistics and also personal interviews with industrial caterers. The nature of the commercial catering sector is found to restrict the acquisition of raw data and so preferences are researched mainly by personal interviews and postal questionnaires.

The findings indicate that regional preferences are most pronounced in the household situation, but slightly less so in school and hospital catering. Although some regional preferences do emerge from within employee catering, differences in food consumption also seem to relate significantly to the type of occupation. Regional preferences are least apparent in the commercial sector and especially the popular market, although more expensive establishments appear to be increasingly featuring traditional regional fare, particularly in tourist areas.

Consideration is also given in the thesis to the development of regional food preferences, their modification within the catering industry, future influences upon them and the possible uses to be derived from their identification.
ACKNOWLEDGEMENTS.

I wish to thank my supervisors Professor S. Medlik and Dr. J. Thomson for their advice and constructive criticism of this work.

I am indebted to the very many individuals who represent various sectors of the catering industry, food manufacturers and distributors, academic institutions and both local and central government bodies, who have been so generous with their time and help in supplying statistics, confidential information and their invaluable opinions based upon experience. In many cases the information so acquired would not have been otherwise available. A comprehensive list of these individuals appears in the Appendix to chapter 1 (in alphabetical order by organization).

I also wish to thank the innumerable people who, although they were unable to provide specific information, took the trouble to respond to my enquiries by making useful suggestions and providing contacts, but who are too many to mention individually.

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NOTES ON TERMINOLOGY.

Regions. Throughout the text of the thesis regions with precise delineations are referred to by name and capital letters are used: e.g. the North (meaning the food preference region of the North (fig.4.2.), unless otherwise stated).

In the figures and tables abbreviations are generally used to refer to specific regions: e.g. "N" (denotes the food preference region of the North, unless otherwise stated).

Use of the lower case (e.g. north), implies reference to an area which does not have distinct boundaries. The 'north' or 'northern England' generally refers to the area of England which lies to the north of an east-west line approximately at the level of Birmingham; the 'south' or 'southern England' includes that part of England which lies to the south of that same line.

The 'Midlands' means the two Midland regions, but 'midland' implies an area approximately in the centre of England, though not necessarily conforming to the boundaries of the Midland regions.

Figures. Within the thesis all graphs, diagrams, histograms, maps and tabulations of information are referred to as 'figures'.

The occasional difficulty of determining whether a particular set of information truly constitutes a table, and the loss of clarity resulting from, for example, the spatial separation of a map from a related set of data by designating one a figure and the other a table, is thought to justify the common use of the term 'figure' throughout, to refer to all sets of information additional to the main text.

However, the lengthy tabulations of detailed statistics which are included within the supplementary text are termed as "tables".
PART I: BACKGROUND.
CHAPTER 1

OBJECTIVES, SCOPE AND METHODOLOGY.

1.1. Objectives.

Aim.

The aim of the research is to establish which foods are preferred in various areas of Britain, and to build up a gastronomic map of regionally preferred dishes, not only in the home, but also in sectors of the catering industry.

First of all it is necessary to establish what people consider food to be and what determines and governs the actual food considered to be preferable.

Historical reasons for the existence of regional differences in food consumption are considered and contemporary factors examined in order to elucidate why variations in taste exist between geographical locations within Britain.

Furthermore, the food chosen by people in various situations and in different types of catering establishments is compared to establish similarities or differences caused by feeding motivation and environment, over and above regional biases.

Not only the actual foods consumed, but also intimately related aspects of regional feeding habits are examined, such as time and nomenclature of meals, effect of the environment, mode of meal production and service.

Application of findings.

The researched information can be used to provide people with what they want and to simultaneously derive nutritional and economic benefits. Specifically regional food preference research can even satisfy a psychological need. The mass production of fare has recently spurred a reassertion of the need for individuality which regional dishes are increasingly being found to fulfil. Some commercial caterers have found there to be a substantial market for regional dishes among local residents and both British and foreign visitors to an area (English, Scottish and Welsh Tourist Boards, personal communication, 1975 & 1976). Indeed, all restaurateurs might derive benefit from a knowledge of the regional market situation as regards preferred food commodities, apart from the traditional fare.
The nutritional advantages of being aware of regional food preferences are manifold and the potential benefit, in view of advancing technology, is significant. Detailed knowledge of diets in the various parts of Britain would ensure that necessary adjustments could be made efficiently to local food-orientated welfare programmes, that food subsidies could be wisely and discriminately applied, that import controls could be adjusted to meet requirements and that food technology could direct its increasing proportion of the food production in this country along acceptable avenues.

Food preferences are not only regionalized in Britain: similar principles apply elsewhere. When nutritionists try to introduce a new food substance into a malnourished community, they inevitably encounter a multitude of prejudices and beliefs, seldom grounded in fact. These have to be understood, and then overcome; usually by adapting the colour, texture, flavour or origin of the new food to suit the ingrained preferences of the community they wish to assist. How very much easier their job would be if these various preferences were already elucidated, both in terms of commodities and perhaps, more importantly, in terms of the variables governing them.

Elimination of both food and financial waste would alone justify research into regional preferences, and indicates its importance. At the time of the last Government Statistical Inquiry into the Catering Trades in 1969 (DTI, 1972), annual sales of meals in the commercial catering sector alone amounted to some £700 million, and in employee catering to £30 million. When the daily provision of school meals and hospital meals are considered, in addition to the feeding of all other institutionalized persons as well as the armed forces, the enormity of the catering industry both in terms of food consumption and finance begins to emerge.

The Ministry of Agriculture, Fisheries and Food has calculated that at least 10% of food bought by the housewife is ultimately wasted (Buss, 1973), and catering inquiries have discovered that the percentage of food wasted within the industry is significantly greater than this (Glew, 1974). Numerous studies in all branches of catering have shown that food wastage could be drastically reduced if people were only offered the food which they prefer (Hollinghurst & Bolton, 1974).

Advancing technology has made it possible for complete meals to be produced in a central kitchen: cooked, blast-frozen and then distributed to various outlets for reheating immediately prior to consumption. The potential saving in production and labour costs
will, however, not be achieved if people do not receive on their plates the food they find acceptable.

A study of regional food preferences is essentially an interdisciplinary investigation of gastrogeography in which facets of numerous complementary disciplines are drawn upon to highlight and explain similarities, contrasts and prejudices among the food preferences of regionalized groups of people, so that practical use can be made of the conclusions drawn, extrapolations can provide solutions to related problems and indications and foundations for future research can be established.

1.2. Scope of the research.

1.2.1. Food.

Preferences are not only examined in terms of food groups, but also in terms of food commodities and dishes. The constituent nutrients of the preferred foods are also considered, primarily in terms of proteins, carbohydrates and fats, but also, to a limited extent in terms of vitamins and minerals.

Modern food science and technology enable food to be available in a number of different forms: the regional popularities of various forms of food preservation are also examined.

Regional food preferences are elucidated in terms of:-

(i) **food groups** (e.g. meat, vegetables, fruit, ....)
(ii) **food commodities** (e.g. beef, pickled onion, tinned peach, ..)
(iii) **dishes** (e.g. roast beef & Yorkshire pudding, haggis, fish & chips, ............)
(iv) **nutrients** (i.e. the chemical constituents of food)
(v) **types of food** (e.g. fresh foods, "convenience" foods, frozen foods, dehydrated foods, 'cook-freeze' dishes, ............)

However, the basic premise of what in fact food is, or is considered to be by various groups of people, is examined in detail in chapter 2.

Beverage preferences are considered only in relation to meals: drinking habits are not considered to fall within the scope of 'regional food preferences' and so are not investigated independently.

1.2.2. Preferences.

Preferences can be said to be either (i) the food which
people claim to "like",
or (ii) the foods which they actually choose to eat.
Both these aspects, although predominantly the latter, are examined within various sections of the findings.

Preferences can pertain to two different circumstances: the first being in an ideal situation where all substances considered to be potential foods are available, or secondly under circumstances where limits of availability and psychosocial barriers are imposed. In real-life situations the second set of circumstances prevail, and so 'preferences' are governed by a multitude of factors which determine which food will be consumed rather than another. (These governing factors are investigated in detail, individually and in combinations, in chapter 3.)

Actual food consumption can indeed be used as an indicator of preference. It has been found that various estimates of food consumption, such as total number of normal servings consumed, or indirect measures such as waste or left-overs, correlate between 0.5 and 0.7 with food preferences (Pilgrim, 1961). With this knowledge it is possible to gain information on food preferences by studying statistics of food or dish consumption in various parts of Britain.

It would be enormously time-consuming for one researcher to ask a statistically significant sample of people either what they like to eat or to rate their liking for various foods and dishes on a 'hedonic' (7 point) scale; so this undertaking is not attempted.

Throughout this study, therefore, "preferences" are primarily judged to be reflected by the foods or dishes chosen for consumption, or actually consumed, within a given set of conditions, as indicated either by actual statistics (original or published) or by informed opinion.

1.2.3. Geography.

The geographical scope of the study extends all over Britain, defined as consisting of England, Scotland and Wales.

The regional configurations vary as to source of information, but primarily, unless otherwise stated, refer to the Registrar General's Standard Regions for the period 1/4/1970 to 31/3/1974 (fig.4.2.) which are abbreviated throughout in numerous figures and tabulations as follows:-

Scotland...............................Sc
The most commonly referred to conurbation is that of Greater London (Gt.L.).

For some purposes certain regions are amalgamated and are therefore referred to as composite regional areas, such as, for example: "Y & H, NW + EM".

1.2.4. Time.

History gives meaning to the present (Lowenberg et al., 1974). Indeed, May (1957) postulates that "men eat what they can get from their environment, and, given a choice they eat what their ancestors have eaten before them". On the basis of this hypothesis, the food eaten by a community is the product of its present environment and past history, for within a people's history are included cultural, geographical and biospherical influences upon their feeding habits. Furthermore, the history of man and the history of his feeding habits are not easily separable "...the history of the world has been the story of a struggle for daily bread..." (Prentice, 1951).

The intimate association of the development of eating habits and man's history justifies the scope of the research extending back for several centuries, rather than merely dealing with the current situation. The history of man's chosen foods, regional preferences and historical influences upon them are briefly summarized in chapter 5.

Nevertheless, the majority of the research material (Chapters 7 - 11 inclusive) concentrates on contemporary Britain, in fact since 1954, the end of rationing after the Second World War, when regional preferences have been able to re-emerge after some years of nationwide, government imposed, similarity of food intake.

1.2.5. Types of catering.

Food, usually in the form of 'dishes' and 'meals', is eaten in a variety of different situations, and to satisfy different needs.
Therefore, to examine the foods chosen (or preferred) under the various circumstances, regional preferences are investigated:

(a) when food is prepared and consumed within the home,

and (b) when food is prepared by an independent operation (i.e. part of the catering industry) and is consumed outside the home for a specific reason, or, in the case of "take-away food", may be taken home for consumption.

Provision of food outside the home takes place for many reasons and in a variety of situations. The regionally preferred foods within a sample of these sectors of the catering industry are examined.

Regional food preferences and feeding habits are therefore investigated within the following situations:

I

(a) in the home (a domestic situation) - - - chapter 7

(b) in substitute domestic situations

(i) at school (State) - - - chapter 8

(ii) in hospital (National Health Service) - - - chapter 9

(ii) at work - - - chapter 10

(c) within commercial catering - - - chapter 11

which includes: 'take-away' food service cafes and snack bars restaurants hotel food facilities catering services allied to transportation, places of entertainment and recreation.

School, hospital and employee catering are but three examples of substitute domestic situations of feeding. These are chosen for research because all three are located in similar concentrations nationwide, all attract a wide cross-section of customers, and within each one of these the type of food available is comparable between regions.

Furthermore, each caters for a reasonably captive market which is generally drawn from within its region of location, often within a radius of comparatively few miles.

Food preferences within universities, colleges, prisons, old peoples' homes, private schools and private hospitals, etc., are not investigated due to the constraint of time and the lack of comparable
regional representation.

1.2.6. Factors affecting what foods are eaten.

Historical influences are enumerated in chapter 5, in which each catering sector is dealt with individually, in addition to a chronological summary of British diet in the home.

Contemporary economic, social and availability influences on eating practices are presented geographically and evaluated in appendix 4: such regional factors as climate, household income and composition, education and occupation are analysed statistically along with regional shopping and cooking habits, and availability and use of various catering establishments. The probable effect of these factors on actual regional food preferences is considered in chapter 13.

Future considerations could produce profound changes in the present regional pattern of food preferences. For example, foreign travel is already familiarizing Britons with hitherto unusual dishes, while high concentrations of immigrant populations create demands for their traditional fare in specific areas of Britain and so local people are introduced to new foods also in this way. Both these influences have considerable potential to increase.

Modern technology has already ensured that perishable produce can be preserved and transported, to be made available year round in all parts of Britain; and that composite meals can be ready for consumption after allowing only a few minutes for re-heating. Advances upon such developments could revolutionize the form in which food is available, and increase its "convenience". In addition, when TVP (texturized vegetable protein) becomes a widely-used food product, the form in which it will be most acceptable is likely to vary regionally, not only in Britain, but also elsewhere, and these differences may be based upon present food preferences.

Furthermore, Britain's comparatively recent entry into the E.E.C. could have considerable influence on her agricultural policy, food supplies and economics, with consequent modifications of British regional eating patterns.

These, and other future agencies which could enhance or alter regional food preferences and which are potential avenues of investigation, are considered in chapter 14.

1.3. Methodology of research.

A number of methods of researching regional food preferences
are necessary due to the nature of the industry in which the findings of any commissioned research for food manufacturers or distributors are closely guarded secrets and in which caterers tend not to keep records.

The research into regional food preferences therefore takes place using three primary methods: literature search, analyses of original statistics and personal communication.

1.3.1. Literature search (secondary sources of data).

No one piece of research nor any publication to date deals specifically with food and dish preferences within the regions of Britain. Indeed, very little research which claims to investigate an aspect of eating habits or the demand for food has actually examined food choice or preferences in terms of either food commodities or dishes: and even less has been concerned with regional food preferences. This is especially true within the sectors of the catering industry.

Some data are, however, available on regional consumption of various food products within the home, while a few individual studies have dealt with the popularity of a limited number of foods in either hospitals, works canteens or sectors of commercial catering. Equivalent information has not been produced in the case of the school catering service even though a recently published Department of Education and Science report states specifically that the child should have whatever food he wants, served in the way he wishes (D.E.S., 1975).

The information which is available is very limited in a number of aspects, being variable in quality and lacking in quantity. The majority of these principal sources of published information are reviewed in chapter 6.

Apart from these principal sources of secondary data, other information, traced from a variety of sources, relates only to specific material in individual chapters. This type of information is most usefully considered at the beginning of each relevant chapter, so many references are not included within the primary literature source review in chapter 6.

1.3.2. Statistical analyses (original data).

As secondary sources of data throw little light on British gastrogeography, except in the household situation, it is necessary to obtain relevant statistics from the various sectors of the catering
industry. Response rates to such requests are relatively low, however, and therefore can only indicate inconclusively possible regional preferences.

The method of data collection for each catering sector is described within the relevant chapter, as the nature of the obtainable material varies considerably between types of operation. Requests for raw statistical data reflecting dish choice prove most fruitful in the substitute domestic catering sectors (specifically State school and National Health Service hospital meal services), where acquisition of sample menus over a 4 to 6 week period, each marked with figures of dish uptake(*), provides a substantial proportion of the material.

Unfortunately it is more difficult to obtain this type of basic information from the employee catering sector, as many companies are commercially orientated and so are reluctant to divulge company "performance" (e.g. sales figures, if indeed these are kept at all). Commercial catering organizations are even less prepared to divulge their sales figures, added to which they have little time to collate material for researchers, and so a completely different approach to gathering the information is essential.

(*') 'Dish uptake' against menus refers to the actual number of portions of each individual dish or item on the menu which are bought or consumed, expressed as a number or a percentage.

1.3.3. Personal communication (with individuals listed in Appendix 1).
In order to qualify and add to the somewhat scanty statistical information made available from within the employee catering sector, a system of interviewing informed individuals within this industry is found to be an efficient way of extracting the necessary data.

Although the information derived from interviews tends to be of a subjective and impressionistic nature, the technique is sufficiently successful in terms of acquiring information on regional commodity and dish idiosyncracies and preferences, to be applied to the commercial catering industry where statistical information is totally unobtainable, due to commercial considerations of time, economics and competition.

A prerequisite of this personal communication method of gathering data is that the interviewee holds a relevant head office position within a nationwide, or at least, geographically very widely
spread organization, in which catering represents a substantial portion of the turnover.

However, throughout the entire research, personal communication by telephone, letter or meeting produces much of the original material, and indeed without this channel of investigation, few of the findings would be forthcoming. Personal face-to-face interviewing, rather than telephone or written requests for information, was used as much as possible because this channel of communication has been demonstrated to be most efficient in terms of passing information accurately and clearly from one individual to another in an optimum period of time (Guinane, 1973).

1.3.4. Implications of combined research methodologies.

The information presented throughout the entire study is a combination of that gleaned by three methods of research: literature search, statistical analyses of original raw data, and personal communication; all being reliant upon the others to some, often substantial, degree.

Research methodology for regional food preferences therefore ranges from significant use of secondary data particularly in the household situation, to dish-uptake against menus in the case of the captive markets in school and hospital catering, and thirdly to reliance on subjective information, gleaned by personal communication, on the part of experienced commercial caterers, in both large national organizations and individual units throughout the regions of Britain. Employee feeding, which in part has a captive market but which is also served by commercial catering units is necessarily researched by more than one method: partly through secondary data, but predominantly by means of dish-uptake statistics substantiated by the informed opinion of experienced individuals within the industry.

1.4. Methodology of the presentation of material.

1.4.1. Chapter content.

Within a precise definition of the three-word title of the study, 'Regional Food Preferences' (in chapters 2, 3 & 4), are contained all the important elements of the approach to the subject. Chapter 2 considers the nature of food and feeding. Each academic discipline has its own limited definition of food, and by reviewing and amalgamating these, a more adequate description emerges, relevant for present purposes.
Chapter 3 deals with a definition of food preferences, and considers the availability, social, psychological and chemical factors which influence them.

Chapter 4 describes the regional configurations of Britain within which food preferences are investigated, and Appendix 4 presents and evaluates certain relevant climatic, socio-economic and industrial regional factors which could influence contemporary food preferences.

Chapter 5 briefly reviews the historical influences upon regional food preferences. The first part deals generally with the British diet in the home since the Middle Ages, while succeeding individual sections highlight the major developmental stages of school, hospital, employee and commercial catering in Britain.

Chapter 6 reviews the principal published sources of information.

Chapters 7 to 11 discuss and present graphically the results of the research into regional food preferences:

Results

chapter 7....regional food preferences in the home
chapter 8..... "  "  "  in school catering
chapter 9..... "  "  "  in hospital catering
chapter 10.... "  "  "  in employee feeding
chapter 11.... "  "  "  in commercial catering

Chapter 12 compares and contrasts regional food preferences in the various types of catering operation, and within the catering industry as a whole, and attempts to produce a profile of food and dish preferences in each region.

Chapter 13 attempts an explanation of why there are regional preferences and an elucidation of the influences which produce and govern them.

Chapter 14 reviews future considerations that could have an effect upon regional preferences and enumerates points which have been raised during the course of the study which deserve further investigation.

Chapter 2 - 6 inclusive contain the background knowledge of food preferences to date, and the sources of published information on regional preferences.

Both 'food' and 'preferences' are precisely defined and discussed, both in relation to the present study and also within a wider context. Contemporary (Appendix 4) and historical (chapter 5) influences upon
the food preferences are presented and evaluated, within the specific regions of Britain, defined in chapter 4. The principal sources of published information on food and dish preferences both at home and within the catering industry are reviewed and criticized (chapter 6), while specific literature surveys are presented at the beginning of each individual chapter.

Chapter 7 - 11 inclusive all have the same basic structure. Each begins with a literature survey of the corpus of knowledge to date, as it relates to regional food preferences within a particular type of catering.

The methods of data acquisition and analysis are then outlined, the results presented in tabulated form and discussed, and finally conclusions are drawn. Food preferences are presented in terms of food groups, food commodities and dishes in each chapter; in addition to this the household preferences (chapter 7) and hospital patients' preferences (chapter 9) are analysed and evaluated also in terms of their protein, fat and carbohydrate content.

Detailed statistical information is included within appropriate appendices.

Chapter 12, 13 & 14 draw conclusions on the basis of the research findings (result chapters 7 - 11 inclusive), relate these to the information in chapters 2 - 6 inclusive, and hypothesize as to future trends and developments.

Regional preferences are considered not only in terms of food groups, commodities and dishes, but where appropriate, in terms of constituent nutrients, and also associated feeding habits.

1.4.2. Chapter numbering.

Each chapter is numbered and each section within chapters represents a sub-division of the chapter's numerical value; for example, the third section of chapter 2 becomes (2.3.). A further subdivision would be, for example, 2.3.1., 2.3.2., etc.

Each figure (a table or graph, etc.) within a chapter is similarly numbered; for example, the fifth figure within chapter 4 is (Fig.4.5.).

Appendices have an identical system of identification, although the numerical value has the prefix of the letter 'A':
e.g. the third section of the appendix information referring to chapter 8, is written as (A.8.3.).

Some data are too lengthy to be included within the present text and so are included within a supplementary text, the parts of which are numbered as those of the main text, but prefixed by the letter 'S'. Therefore the third section of supplementary material referring to chapter 10 would be identified as (S.10.3.). This supplementary text does not form a part of the submission for the degree, but is available to be drawn upon for additional evidence if required.
WHAT IS FOOD?

A number of academic disciplines each have their own definition of "food", which is often extended to encompass "feeding" behaviour. The molecular composition of foods is highlighted by the chemist, their physiological role is the concern of the nutritionist, while their intimate involvement with life-style is considered by the disciplines of the humanities. A progression through the various points of view illuminates the true interdisciplinary nature of "foods" and feeding habits, although all factions would agree on the following indisputable statement:

"Except for air, food is the most important environmental factor that affects the health of the body."

(Johnson & Peterson, 1974).

The composition of all food is chemical, and although this usually involves mixtures of very large numbers of different components, it is possible to elucidate the individual substances of which food is comprised. Many of these constituents are common to different foodstuffs.

2.1. The chemist classifies the chemical components of the diet as carbohydrates, fats and oils, proteins, vitamins, minerals and water. The chemical constitution, physiological role and dietary source of these constituents of food, or nutrients, are briefly described in Appendix 2, section A.2.1.

It is necessary to draw upon information regarding the chemical composition and physiological role of food from various sources when regional nutrient intakes are considered in relation to food consumption in the home (chapter 7), in schools and hospitals (where the nutritional aspect of food consumption is particularly important: chapters 8 and 9), and within industrial catering (chapter 10).

2.2. The biochemist regards food in its context of being necessary for normal growth, maintenance and reproduction of the human body, and considers that:

"food consists of essential nutrients which man cannot synthesize from other constituents of the diet. These include water, inorganic ions and a number of organic
compounds. Of the organic compounds in the body approximately twenty-four have been definitely established as dietary essentials. All other substances are synthesized by the organism in the presence of an adequate supply of these essential factors."

(White, Handler & Smith, 1968).

Therefore, the biochemist defines food as follows:

"Food is anything, either solid or liquid, possessing a chemical composition which enables it, when swallowed, to do one or more of these three things:

(a) to provide the body with material from which it can produce work, heat and other forms of energy;

(b) provide material for growth, maintenance, repair or reproduction;

(c) supply substances which normally regulate the production of energy or the processes of growth, repair or reproduction."

(Pyke, 1975).

2.3. Having considered the chemical aspects of food and feeding the principal foods require consideration in terms of intake of nutrients. This is the realm of the nutritionist.

"Nutrition is the act or process - it is, in fact, a series of co-ordinated processes - whereby the nourishment of the body is effected. It consists of the taking-in and assimilation through chemical changes (metabolism) of materials with which the tissues of the body are built up and their waste excreted, by which the processes of the body are regulated, from which energy is liberated for the work the body has to do, and heat generated for the maintenance of its temperature....." (McCarrison & Sinclair, 1961).

Recommended intakes of nutrients.

Numerous tables setting forth standard dietary needs have been prepared by official bodies. The most recent revision of British recommendations was published by the Department of Health and Social Security in 1969, (see appendix 2, fig.A.2.2.).

Such tables provide standards against which diets of individual communities can be measured so that vulnerable points can be detected; the standards serve as a guide for dieticians and caterers; and thirdly are necessary for any planned agricultural policy and an organized food trade. In general the figures provide a liberal margin
of safety and are related to the customary diets of the indigenous population.

In chapter 7 the regional percentages of recommended intakes of various nutrients are considered: figure A.2.2. provides estimates of the actual dietary needs of Britons against which the nutritional adequacy of regional diets can be evaluated in succeeding chapters.

Food 'value'.

Tables of food values (e.g. McCance and Widdowson, 1960), compiled by analyses of the chemical composition of food, state the exact nutritional content of individual foods and dishes, enabling nutritionists to classify foods, evaluate diets and make adjustments.

The nutritionist classifies foods not as chemical components of a diet as does the chemist and biochemist, but according to their "biological value" as judged by their content of various nutrients.

Nutritional Classification of Foods.

(1) cereals.
Cereal grains are the seeds of domesticated grasses, the principal ones being wheat, rice, maize, millets, oats and rye. Their whole grains have a similar chemical composition and nutritive value. They provide energy, some protein, and contain appreciable amounts of calcium and iron. Whole cereals are totally devoid of vitamins A and C, while milling can lead to insufficiency of B group vitamins.

(2) starchy roots
In this class, the potato is most important in temperate climates: in the tropics cassava, yams, sweet potato and taro are important. They all contain large quantities of starch and are good sources of energy, although for the most part are poor in proteins, minerals and vitamins.

(3) sugars and syrups.
Sugar is an easily digestible form of carbohydrate energy, but lacks every other nutrient. Syrups contain nutritionally significant amounts of calcium and iron.

(4) pulses, nuts and seeds.
Pulses are the seeds of peas, beans and lentils whose nutritive properties resemble those of whole cereal grains but with a higher protein content.
Nuts have a high fat and protein content, but, being eaten in small quantities their nutritional contribution is insignificant. Some miscellaneous seeds can contribute additional nutrients.
(5) vegetables.
Within this class there is a great variety of botanical structure: leaves, roots, fruits, stalks and flowers. However, all vegetables have little energy value and protein content, but do contain significant amounts of calcium and iron, some B vitamins, and chiefly vitamin C, folic acid and carotene (the precursor of vitamin A).

(6) fruits.
The only essential nutrient in which fruits are rich is ascorbic acid, although, like vegetables, they contain cellulose which provides "roughage." Small quantities of carotene and B group vitamins are present. Bananas alone supply energy as they have an above average carbohydrate content.

(7) meat, fish and eggs.
Lean muscle (meat) contains about 20% protein, 5% fat, 1% mineral ash and the rest is water, although there are great variations in fat content. Meat is of particular value because it contains protein of high biological value, fat for energy, iron, phosphorus, a little calcium and some vitamins.
Lean fish contains less than 1% fat and 10% protein of high biological value.
Eggs are very rich in essential nutrients: calcium, iron, vitamin A, thiamin, nicotinic acid, riboflavin; 10% is high biological value protein and a further 10% is fat.

(8) milk and milk products.
Proteins, fats, carbohydrate, calcium, iron and numerous vitamins are all present in milk. Cream contains all the fat and from one third to a half of the protein and lactose in milk, while cheese contains nearly all the protein, fat and many other nutrients of milk.

(9) oils and fats.
These are concentrated sources of energy and important sources of fat-soluble vitamins. There is no evidence that butter fat as such has any nutritional advantage over margarine, nor that the former is enriched with vitamins A and D. Vegetable oils are all of high energy value, but with one exception are all devoid of vitamin activity.

(10) beverages.
These predominantly supply water. Some are also a source of energy and a few provide significant amounts of minerals and vitamins.
Regulation of necessary nutrients.
The chemical composition of the body can be regulated by three mechanisms:
1. absorption from the alimentary canal
2. excretion by the kidneys
3. metabolism in the tissues.
By one or other of these ways adjustments can be made to varying dietary intakes of water, protein, minerals and vitamins. When not restricted by poverty or other adverse circumstances, most people elect to eat a diet which provides about twice the minimal requirement of these nutrients.
However, the metabolism of carbohydrate and fat are regulated accurately to the needs of the organs and tissues for energy. In consequence, if the dietary intake does not meet exactly the requirement for energy, a deficiency has to be met by withdrawal from the store or a surplus has to be deposited.

A nutritionist stresses that however nutritious a potential food may be, it cannot yield any biological value if it is not eaten. In this sense it can no longer be defined as food.

Nevertheless, certain substances are ingested which do not contribute to the body's nutrition. For example, pepper is eaten but has no nutritional worth, while salt (sodium chloride) clearly has.

2.4. The non-contribution of certain ingested substances to a body's nutrition is appreciated within the dieticians classification of foods into functional groups.

fig.2.1. Dietician's classification of foods into functional groups. (Mottram, 1951)

<table>
<thead>
<tr>
<th>Supply of calories</th>
<th>First class protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>group I</td>
<td></td>
</tr>
<tr>
<td>sugars and syrups</td>
<td>supply</td>
</tr>
<tr>
<td>cereals, potatoes, pulses and nuts</td>
<td>mainly</td>
</tr>
<tr>
<td>oils and fats</td>
<td></td>
</tr>
<tr>
<td>milk and milk products</td>
<td></td>
</tr>
<tr>
<td>meat</td>
<td>supply</td>
</tr>
<tr>
<td>II</td>
<td></td>
</tr>
<tr>
<td>poultry</td>
<td>first class</td>
</tr>
<tr>
<td>fish</td>
<td>protein</td>
</tr>
<tr>
<td>eggs</td>
<td></td>
</tr>
</tbody>
</table>
group III \{ fruits and fruit products \} supply ascorbic acid
\{ leafy vegetables \} supply water

IV beverages - have no food value - just stimulate appetite.

V condiments - "flavour belongs more to the art rather than the science of nutrition."

2.5. From the point of view of a physiologist food does not necessarily have to be eaten: a doctor can maintain the existence of an unconscious patient by means of a gastric tube or intravenous drip in order to adequately nourish the body. Therefore, more broadly, food can also be:

"...any substance which, when taken into the system, enables an organism to grow, or if an adult, to maintain its health" (Nottrum, 1951).

It would seem that the most important physiological drive is just to eat, in order to satisfy hunger - in order, that is to obtain calories. But as hunger is diminished, though intake perhaps is still below true caloric needs, the second physiological drive makes itself felt: this is the drive to eat palatable foods, the satisfaction of which would usually be to increase the intake of essential nutrients such as protein, and thus decrease the chances of developing malnutrition (Yudkin & McKenzie, 1964).

With most commodities demand can vary over an extremely wide range. With food however, there are fairly narrow limits below which life cannot exist and above which even the most gluttonous cannot reach. The function of eating is to sustain life and promote health, but like that of other biological functions, its fulfilment can be highly pleasurable.

What human communities choose to eat is only partly dependent on physiological requirement, and even less on intellectual reasoning (Pyke, 1968). People must eat what they need, but in real life they choose what they like. Health will be maintained therefore only when they like what they need (Pyke, 1970).


Food encompasses those substances which individuals are prepared to eat, which must also fulfil criteria apart from those merely of nutrition.

Therefore food must also:
(a) conform to the prejudices, beliefs and taboos of the people to whom it is presented so that they will be prepared to eat it;
(b) be available without restriction by social or community barriers which might prevent people from eating it.

(Pyke, 1975).

Food has many dimensions:—
a.) quantitative – insufficiency leads progressively from mild discomfort to severe hunger and eventually death.
b.) qualitative – food can affect health, life span, physical fitness, body size and mental development but improper diets can lead to malnutrition, obesity or disease.
c.) cultural – food habits are a part of cultural and emotional life. "Our preferences are ingrained. Food habits have become rituals and patterns of daily routine and are adhered to tenaciously. Satisfactory dining soothes both body and soul and is a major factor in the quality of life". (Hoff & Janick, 1973).

The first two dimensions deal with the essential biological needs: the third dimension is more emotive but nonetheless extremely important.

Food habits are indeed a branch of anthropology, which is the science of human behaviour. Each cultural group has a subconscious classification of food, which is learned in childhood by imitation and which is notoriously difficult to change.

There are five universal classifications:—
1.) cultural superfoods – these are the main source of calories and proteins. It is rice in S.E. Asia, corn in central and South America, wheat in northern Europe and the Middle East, and cassava in Africa...etc...
2.) prestige foods – these are served on important or special occasions and are usually rare or expensive. Arabs favour roasted camel hump or sheep eyes while in China birds nest soup would fit into this category.
3.) "magical" foods – these are thought to possess magical properties. As late as 1900 many people in the U.S.A. thought cancer was caused by eating tomatoes.
Some African children are not allowed to eat eggs as they are thought to cause bladder disease and
sterility after marriage.
There are very many such 'irrational' beliefs in every community.

4.) body-image foods - in India and some South American countries, foods are classified as 'hot' or 'cold' depending not on actual temperature but on how they affect the body. In China foods are classed as "yin" (fruits and dairy produce) or "yang" (meat, eggs, fish), and it is thought that health can only be maintained by ingesting a good balance of the two.

5.) foods for psychological groups - e.g. certain foods are only suitable for children, adults, the elderly, pregnant or lactating females, the sick....etc...

(Jelliffe, 1967).

A sociologist considers food in terms of a meal, one of a category of social institutions, in which a variety of common and differentiated values, objectives and roles receive both practical and symbolic expression and modification (Burgess & Dean, 1962).

Innumerable social occasions, both sacred and secular, centre around food; e.g. Christmas, birthdays,...et cetera (Wilson, Fisher & Fuqua, 1959).

To the psychologist, the special properties of a meal are linked to the character and number of individual participants. It is an occasion on which the role and status of each member of the household is demonstrated, clarified and maintained.

Eating is not merely the process of effecting adequate nutrition. A meal is a phase or an occasion of satisfying, more or less, a variety of needs and drives: pleasure-seeking, reducing or preventing of anxiety; and is symbolic of 'sharing' and 'belonging' (Burgess & Dean, 1962). The food can also demonstrate security, creativity and self-esteem (Johnson & Peterson, 1974).

"Food is needed for the physiological necessities of the cells and tissues of the body for optimal health, while satisfaction of the psychological wants gives pleasure to the mind and body." (Yudkin & McKenzie, 1964).

2.7. Food choice.

The food sources of an adequate and well proportioned supply
of all essential nutrients vary enormously between individuals, and particularly between communities.

In Britain today, for example, beef is a common and acceptable source of protein while in Uganda ants are a commonly accepted food. Westerners may find this repulsive, but they forget in their ethnocentrism that ants are approximately 20% protein, and so provide a widely available, cheap supply of good quality protein for many poor Ugandans.

Essential nutrients are available from a variety of sources, but there is no universal food that will satisfy all our requirements. An adequate diet can be designed in a number of ways to suit local tastes and diverse food supplies (Smith & Walters, 1967).

Today it is estimated that of the two million known species of animals, about fifty have been domesticated and make a contribution to man's food and one hundred species of the known 350,000 kinds of vegetables are cultivated and consumed (Johnson & Peterson, 1974).

It must be realized that people eat foods; they do not ingest nutrients. They eat that which conforms to their own definition of food. This fact gives rise to the following, initially seemingly superficial statements, which are in fact very true:

"Food is what one is prepared to eat" (Pyke, 1968).
"Food is what men eats " (Johnson & Peterson, 1974).

"Food" is specific to individuals or communities. Here again "preference" can define whether a potential food is indeed a food within a specific set of circumstances. Indeed, Burnett (1968) considers food only in terms of "dietary items" of a specific community or even a household.

The recent ability of food technology to separate palatability from nutritional value, makes it possible to satisfy our (psychological) wants without necessarily satisfying our (physiological) needs. Here palatability is important: people eat the foods they want, and they want foods they like (Yudkin & McKenzie, 1964). Preferences can therefore dictate to a great extent what is defined as "food", by a specific community.

'Food' can be appreciated as having various aspects: chemical, biochemical, nutritional, dietetical, physiological, anthropological, sociological, psychological, technological, et cetera.

From an amalgamation of the numerous limited definitions proposed by various disciplines, a more adequate description of food emerges for present purposes.
2.8. What is food?

Food is any solid or liquid, available and acceptable to an individual or community, the chemical composition of which, when introduced into the body, can provide material or a medium for the production or regulation of energy, reproduction, growth, maintenance or repair of the body. Food can also consist of a substance which an individual or community is prepared to voluntarily ingest, although it may not necessarily be nutritionally beneficial.

However, over and above this definition, why are some potential foods eaten by some communities, but rejected by others? The answer to this lies in food preferences, and the factors governing them.
WHAT IS A FOOD PREFERENCE?

3.1. What is "preference"? the election of one thing before another.

"To prefer" means: to regard, to esteem more than something else; to choose; to advance; to exalt; to raise; to promote.

Yudkin and McKenzie (1964) define food preferences as "the particular foods an individual likes or dislikes" and food choice as "the foods selected by an individual at a given time."

Man's choice of food can take place at a number of different levels. The choice can be between meat and fish or between cereal and pulse. A third level involves choice between beef or mutton, rice or wheat. At a further level choice is between, for example Cheddar or Cheshire cheese, brown or white bread (Yudkin, 1956). Nevertheless, at all levels, preference will be involved, which is determined by a great number of factors, each having a variable degree of influence depending upon the level at which the choice is being made.

A food preference is demonstrated when one particular food, or combination of foods is chosen, rather than another, by an individual or a group; on one or a number of occasions.

3.2. Previous studies of Variables Governing Food Preferences.

A number of individuals, specializing in diverse disciplines, have examined the variables governing food preferences. In many cases social influences have been considered paramount, with economic considerations taking a secondary place as determinants of food choice. The most commonly mentioned factors thought to influence food preferences tend to be culture, religion, geography and climate, nutritional education, food technology and transportation. The palatability of the food available and hunger are also frequently mentioned factors.

In 1936, Remington examined the social origins of dietary habits and concluded that dietary instincts were the outgrowths of mores which had their beginnings in tribal life, and were influenced by culture, religion (or superstition), geographical habitat, climate, commerce, advertising and "modern industrial and inventive genius." He also felt that an individual's sex, specific nutritional need and state of hunger would, when considered in the context of the various aspects of his economic state, dictate his preferences within the range of food tastes he finds pleasing.
The conclusions of the United States' National Research Council in 1943 on the factors affecting food habits firstly decided that the traditional feeding habits of a community and the way in which children learnt them are both of great importance. The Research Council also stressed the effect of the state of nutrition education and medical science as well as social conditions such as housing and transportation.

In 1956, Yudkin attempted a complete summary of factors determining food choice, which he divided into factors of availability, social factors and physiological factors. Within the last of these groups he includes heredity, allergy, therapeutic diet and nutritional needs, but also food "acceptability" which he feels consists of its presentation, palatability and pharmacological activity. Of the social factors, he considers religion and social custom to be important. He thinks social class and status concepts are interlinked and that the fact that an increasing range of foods are eaten on ascending the social order clearly has an economic origin. Yudkin believes that food habits established in early life are seldom affected by propaganda.

Records of the foods served in Pennsylvania in 1957 by housewives of various national origins indicate that culturally conditioned food habits can, and do, persist even when a household's location is changed (Fliegel, 1961).

The criterion of food acceptance is thought by Pilgrim (1957) to be "consumption with pleasure". He believes food acceptance to be based on human physiology, sensory perception and personal attitudes; and that studies of food acceptance behaviour suggest that experiences prior to the age of 16 are among the strongest controlling factors of food preferences. In 1961, among significant influencing factors of the food itself, he mentions method of preparation, menu combinations, frequency of serving individual foods and satiety value. Pilgrim believes food preferences to be stable, showing negligible change over a 10 year period.

On the basis of surveys of American soldiers Pilgrim and Kamen (1963) report that about 75% of the variation in the selection of food can be predicted from three factors; knowledge of previously expressed food preferences, subjective satiety and the amount of fat and protein in the food. Of these, satiety and preference are the most important, accounting for 55% of the variation if considered in combination with fat and protein content or 66% if considered without.
Yudkin and Mackenzie (1964) conclude that recent developments of food technology today tend to override the influence of geography and season, but that advertising and convenience, as well as industrialization and attitudes of the population are important. Although they feel education to exert a substantial influence, nutritional value is considered more as a rationalization for a choice which has already been made. Their social factors include culture, religious injunction, taboo, prestige, habit; although it is felt that the "availability factor" is predominantly economic, in terms of food prices and income. Palatability is also mentioned as a significant factor.

Amerine, Pangborn and Roessler (1965) list many complex factors which combine to influence selection of food: those of the product and those of the consumer. However, they conclude that palatability, cost, region, age and sex are perhaps the major determinants of food preferences.

In a Symposium in 1966 (Faber, Wilson and Wilson, 1966), Stare discussed the implantation of preference and questioned "why do people eat what they eat and when they eat?" He concluded that food habits are influenced by economic considerations as well as by other practical matters such as food processing, transportation and storage facilities. He felt that many social factors, for example religion, mythology, social imitation and tradition, are culturally rooted and influence the effect of education. The most important personal factors in his opinion are health, work and play habits, and experience.

Variations of gastrogeography, or "zones of cuisine," according to Dennis-Jones' Travel Guide (1970), seem to be dictated by climate, soil, crops, tradition, history, commerce, national character and psychology, but in his opinion this whole field is "wide-open for further research and surveys."

In a discussion of catering for regional tastes, Maddy (1971) considers geography and climate to have a particular effect on vegetables and fatstock (for example, Welsh lamb), and necessity to affect socio-economic group C and D (e.g. faggots, black pudding, potpie, trotters). Preservation and transportation have made previously local foods and dishes available nationwide, while mobility of people has brought them into contact with "new" foods (e.g. holidays abroad).

Stewart and Amerine (1973) consider that four categories of factors affect food preferences: food attributes, sensory attributes,
food habits and physiological factors. Their food attributes of purity, safety, convenience, functional properties and nutritional value link closely with the sensory attributes which include visual impression, smell, taste, touch, sound and flavour. The factors affecting food habits consist of climate, geography, life style, social class, cultural conditions, religion and "instinct."

Hunger and thirst were the only physiological factors mentioned apart from "quality factors;" presumably these refer to the food and so may have been better included in the "food attributes" category.

McKenzie (1974) stresses the impact of both economic and social status on food choice, and although the "role of income is almost too deceptively obvious and significant," social and psychological roles "are more complex." McKenzie considers that food choice takes place on two levels: first of all a total range of food obtainable within the economic scope is available and secondly, within this range, a selection of food is chosen on the basis of social and psychological criteria. He feels that there are five socio-psychological criteria which always apply in the choice of a diet, be it nutritionally good or bad: food as an aid to security; food selection and preparation as a substitute for maternal creativity; food choice as a means of demonstrating mood (e.g. celebration) and personality; and food as a compensation of denial or during times of crisis.

2.3. Implications of Previous Studies.

When a person leaves his native land, he may learn a new language, or change his style of dress, but his eating habits die hard. Introducing a new food into a community can be a long, tedious and often unsuccessful task, although it may be possible to substitute one food for another of a similar type. Above all it must be remembered that people eat foods: they do not ingest nutrients. (Pyke, 1968).

It is the form in which essential nutrients are ingested which involves preference. The factors governing food preferences need to be considered individually and bearing in mind that all their influences inter-relate, it is essential to appreciate a collective and integrated view of their effect. Social influences have an effect on which of the available foods are chosen: personal physiology and psychology can influence choice and even the food itself plays a part in affecting preferences. Most of the factors presuppose the existence of other influences: all are interdependent. Inherited features are interwoven
with cultural influences: the whole mass of experience of a lifetime can mould a preference which may be local, regional or national, religious or ethnic: indeed, may be associated with any kind of group.

An amalgamation of the previously devised classifications of factors affecting food preferences and a consideration of the variables mentioned leads to a more comprehensive representation of these factors (fig. 3.1.) and a discussion of their influence on regional food preferences.

3.4. Factors Affecting Regional Food Preferences.

Fig. 3.1. Food Preference Factors.

- Availability factors (3.5.)
- Social factors (3.6.)
- Personal factors
- Psychological factors (3.7.)
- Physiological factors (3.8.)
- Functional properties of food (3.9.)
- Sensory attributes (3.10.)


Psychological factors (3.7.): Brand psychology, Symbolism, Personality, Time, Appetite.

Physiological factors (3.8.): Hunger, Nutritional needs, Health, Specific satiety, Circadian rhythms, Heredity, Allergy.

Functional properties of food (3.9.): of Food, of Environment.
The relevance of some of these factors (fig.3.1.) to specifically regional food preferences is not immediately apparent. Nevertheless all of them do affect the food preference, and therefore consumption patterns of individual areas, either directly or indirectly due to their interdependence. Certain factors, such as soil type and local fuel availability no longer influence regional food consumption as they did prior to the introduction of food preservation and rapid transportation and gas and electricity for cooking. Nevertheless, some of the variations in food choice and feeding habits which such factors generated persist today due to the influence of tradition.

The members of a particular community are often similar in respect of many variables, be they economic, religious, occupational or genetic, and so are likely to show similar preferences in a number of spheres, including food preferences.

3.5. Availability Factors.

3.5.1. Geography.

The ecosystem, the functioning, interacting system of fauna, flora, soil and climate has had an important part in developing the dietary habits of man (Hurst, 1972).

3.5.1.1. Climate.

The environment sets limits to agricultural production: each crop has an optimal and marginal area of production imposed by the plant's temperature, rainfall and frost-free requirements.

The polar Eskimo subsists almost entirely on meat and fat as vegetation is scanty, but despite this seemingly monotonous diet rickets, scurvy or carious teeth seem to be absent. A carnivorous diet has also been shown to maintain Caucasians in health for considerable periods of time. Tropical peoples subsist to a greater extent on vegetables and fruits, due not to difference in physiological requirement of tropical life, but because plant life is easily obtainable (Remington, 1961).

In cold climates there is a greater motivation to eat and hot foods are preferred: salted foods and water are most often mentioned as preferred for eating and drinking in hot weather (Stewart and Amerine, 1973).
3.5.1.2. Soil.

The stiff boulder clay of the wetter parts of Scotland provides satisfactory grazing land while the fine loamy or silty soils of the South of England, derived from the brick-earth resulting from glaciation, is very fertile for crop growing. The rich, light soil of East Anglia is particularly suitable for growing soft fruits. The main arable lands of England are on the east side of the country, and the west has more dairy farming.

3.5.1.3. Season.

"In season" is rapidly becoming an outmoded expression. Sterilization in sealed containers makes seasonal fruits and vegetables available year-round at moderate cost, and this availability stimulates their consumption.

3.5.1.4. Fuel.

Cooking is a truly universal form of human activity. Boiling, as opposed to roasting, can be looked upon as proof of "culture" as a receptacle is used (Levi-Strauss, 1966).

There used to be a number of traditional fuels common in England. In Warwickshire was found the raised hearth log fire; and in Exeter and the North, 'brushwood.' Roasting being impossible in a reed district, food was boiled in Norfolk. Traditionally, Cornish pasties were baked, as "furze" or turfs would not roast dishes. Clotted cream could be raised over the slow peat fires. Peat was dug out of marshes in the Western Islands of Scotland, and from the Fenlands of Eastern England. Yorkshire peat was light and loose and teased out into peat moss litter, to be burned in flat hearths. In Hampshire charcoal was burned and heath stone was mined in Surrey.

3.5.2. Food Technology.

Food technology is the technological application of the principles and discoveries of food science to the selection, preparation, processing, preservation and distribution and use of foods (Smith & Walters, 1967).

Today the housewife demands more mechanical aids and convenience foods and food technology has greatly extended the availability and range of pure and safe foods. The increase in real income and
tourism cause increasing pressure on the industries concerned with food production and service, as more people wish to "eat out."

In the catering industry, production can now be separated spatially and temporally from consumption, to maximize labour and equipment utilization: quality-controlled pre-cooked frozen dishes need only be heated and served by the caterer.

3.5.3. Transport.

Well preserved foodstuffs can be distributed to a wide market by rapid means of transport. Food has a large distance exponent value ($\beta$) because much fresh produce is perishable and cannot stand long hauls. Exponent values are available for the various regions in Britain: the major regions of the North East, North West, Midlands and London have the smallest distance exponent values (all less than 2); for example: $\beta = 1.3$ for London, compared to 4.8 for Northern Scotland (Brook and Hay, 1974, p.39). Britain owes a great deal to modern communications for overcoming the dietary restriction imposed by geographical availability (Yudkin, 1956), but world trade and travel also reduce the tendency to develop strong local food preferences. Trade has been especially important in introducing exotic and common foods to distant lands (Stewart and Amerine, 1973).

3.5.4. Location Factors.

Availability of food is obviously affected by the location of agriculture and by the concentration of retail outlets and catering establishments.

Some food production areas are selected by economic considerations, but others by historical inheritance and tradition, or emotional ties. Specialization has also occurred with increasing capital inputs. Economies of scale, regional specialization, and factors of comparative advantage are increasingly important to commercial and redistributive farming systems.

The retail facilities of an area form a subsystem structure by the consumers' demands and income interacting with the retailers' supplies and location through a feedback system (Hurst, 1972).

Similarly the location of hotel, catering and leisure establishments depends on consumer demands and user perception, economic need, physical amenities and accessibility. Location factors provide a measure of comparison between different areas.
Food is readily available in convenience forms: location often being of primary importance to "take-away food" shops.

3.5.5. **Economics.**

3.5.5.1. **Direct Economic influences.**

Economic theory suggests that a consumer selects a combination of goods giving highest utility. Utility theory suggests that a consumer's demands for a commodity depends upon his preferences, and also incomes and prices as explanatory variables. However, if tastes change, more or less of a commodity may be demanded even though its price, and all other prices, and household income, remain constant (Lipsey, 1972, p. 77).

Engel's Law states that as household income increases the proportion of household expenditure on total food falls: as a corollary to this, in times of economic hardship, food, as an essential of life, is the last item to be dispensed with. Household income does have a significant influence on a household's diet.

Price will place limits on purchases, but not determine commodity choice to any great extent within those limits. Indeed, housewives today state that cost is not the most important factor in food choice: increasing income only opens the gate to wider choice and the more nutritionally desirable and more palatable foods happen to be the more expensive ones (Yudkin, 1956; Yudkin & McKenzie, 1964). Bennett's Law (1930) states that as income rises, plant proteins are replaced by animal proteins (Faber, Wilson & Wilson, 1966).

As many foods are necessities, the demand for them is inelastic: in this case the income elasticity is less than unity. In the case of a luxury food demand is elastic and income elasticity exceeds unity. In Turkey cereal is a necessity: in India it would be a luxury: but in Europe and the United States it could be termed a "Giffen good." (Consumption of a "Giffen good" falls as income rises).

According to Coreux (1960), income is one of the most important factors influencing food consumption per caput. Due to "economies of scale," for a population of a given number, the smaller the average size of households, the lower the average efficiency of household management, and consequently the larger the total food expenditure for the entire population.
3.5.5.2. Broader economic influences.

Economic factors link with geographic factors: regions may show differences in expenditure and consumption levels due to differing income levels or family sizes.

The amount of money available for food may be affected by a variety of factors. For example, transference of people from slums to new houses, with higher rents, can reduce the nutritive value of the diets (M'Gonigle and Kirby, 1936). Tobacco and drink may also be a prior call on income before food is bought (Yudkin, 1956). In Peru and Bolivia the chewing of coca leaves by the chronically undernourished Indian, primarily to relieve hunger, leads to an even greater degree of malnutrition since the purchase of coca leaves reduces still further the amount of money left for food (Verzar, 1955).

The Hindu peasant's goat which carries his burdens, works his land and feeds his children with her milk, has an economic value far greater than if he were to kill her. In fact, his religion forbids him to do so.

The pastoral peoples of Turkestan find it easier to slaughter a sheep for food than to provide grain or bread. Small dairy farmers may sell their cream for a profit, but feed their milk to the new calves: inevitably their children grow up with the idea that milk is suitable food for calves or pigs but not for humans; and so a dietary habit is created (Remington, 1936).

A highly prized article of food, that is served on special occasions, is almost invariably an exotic one, or one whose scarcity makes it expensive. Price and quality are often synonymous, but more often it is scarcity, not value as food, which determines price.

3.5.5.3. Economic influences upon eating out.

Expenditure on and the propensity to eat out are positively correlated with household income, (Eryñ-Jones, 1970), and it is argued that income is the only important factor to determine demand for meals out, for within it are contained the effects of all other variables.

Expenditure elasticity for meals, drinks or snacks taken outside the home, is very high, generally larger than unity, and does not seem to diminish as income increases; therefore, the share of these expenses in the food budget increases rapidly as income rises (Goreux, 1960).


Culture embodies an historically transmitted pattern of meanings embodied in symbols (Hurst, 1972), which shapes man's way of thinking and behaving. Food habits can be defined as culturally standardized sets of behaviour in regard to food, manifested by individuals who have been reared within a given cultural tradition. The ways in which individuals or groups select, consume and utilize their food constitute their food habits (Stewart and Amerine, 1973).

Mores are also related to food: a "moral" is a habit or action that results in strong moral pressures. The dietary habits of men are an outgrowth of certain mores which originated in early tribal life and are influenced by religion, geography, climate, commerce, modern industrial and inventive genius and by advertising (Remington, 1936). It is a tradition in Britain for different generations of the same family to gather together to eat their Christmas dinner: it is a communion meal. The custom of a "Christmas drink" at an office party often breaks down social barriers which would be insurmountable at other times. In these two examples tradition is linked with religion in a social context by specific foods and drinks.

3.6.2. Religion/Taboo.

All primitive religions are religions of sacrifice. Man feared his gods and placated their wrath or won their approval by placing the choice of the flock, and the best parts of the slaughtered animal on the altar (Book of Leviticus, Ch.1.). As the parts demanded were mostly the entrails and blood, possibly these were once highly esteemed, but after generations man came to look upon them as not fit for food, although physiologically they are most nutritious.

Religion has also been employed to reinforce taboos of economic, or other, necessity. Jews prohibited eating camel, as it was an important beast of burden. Jews and Mohammedans were also forbidden to eat the meat of animals which died other than by slaughter, although it is unlikely that these people were aware of the parasites trichina (in pig) and tularemia (in rabbit) (Remington, 1936).

The principal centre of pork avoidance is in the Middle East among Moslems and Jews, the Mandaeans of Iraq and Iran and peoples of Ethiopia (Simoons, 1961).
Beef is mainly avoided in India: the cow is held sacred by Hindus and Buddhists: Buddha in fact did take a stand against cruelty and animal sacrifice (Simoons, 1961). In Africa beef-eating is not common except among the Masai to whom the cow is important in terms of their economy, society and ceremonial life.

The avoidance of chicken and eggs is most common in Africa, India and Pakistan (Simoons, 1961). Malays believe that eating eggs leads to infertility, whereas the Chinese make great use of fowl and preserve eggs for long periods.

There was an early centre of horseflesh eating in Northern Europe, particularly in Britain and Scandinavia, but avoidance spread to this area with Christianity which was determined to obliterate pagan customs. In the eighteenth century horse-eating was reintroduced in France with limited success among the half-starved poor (Simoons 1961). In Britain the horse is considered a companion of man, and so not a source of food.

Similarly Europeans do not eat dogflesh (Bates, 1957/8); it is eaten chiefly in tropical and central Africa, South East and Eastern Asia and the Pacific Islands.

Prejudice against animal food is stronger than against vegetable food, generated by a primitive dread of being contaminated or debased by the waste products of the human or animal body. Contact with, and especially ingesting, anything from the body evokes disgust (Simoons, 1961).

The aversions spread gradually after the beginning of Neolithic times and religion provided an ideal vehicle for this diffusion. Taboos may be based on harmful experiences. Milk, for instance, is often not given to young children in hot countries: if there is no refrigeration or sterile conditions it may well be contaminated (Faber, Wilson and Wilson, 1966).

3.6.3. Food Ways.

A food way is a tradition, be it a taboo, a fad or a fashion.

A food way is in operation when a decision is made as to whether a certain substance is a food or not, or whether it considered a food fit for the elderly, for the sick or for children; this is the cognitive aspect of how people of a specific community think and talk about food. Food ways also include what clothes are worn for meals, whether conversation is permitted during a meal and
also the individuals with whom one eats. A community's normal pattern of life includes its food ways: for example, the use of a knife and fork in Britain or the combination of certain foods such as roast beef and Yorkshire pudding or lamb and mint sauce. By studying food ways, differences between the town and country dweller, between different social groups or age groups can be detected.

3.6.4. State Ways.

Laws can be made to enforce desirable food ways. State ways describe the legal machine of the state, and with reference to food very often are related to hygiene (Hurst, 1972).

In Britain, for example, there are laws regarding the handling of food and the addition of chemicals.

The state can influence nutrition education, slaughter techniques and food enrichment.

Welfare programmes are organized to protect the citizen against nutritional damage: antenatal care may be provided, for instance. There are strict regulations governing food manufacturing plants, wholesale and retail outlets and all catering establishments. In extreme circumstances food distribution may be controlled in the form of rationing.

The state can also influence the economy and the price of food, control the quotas of various foods that are imported, provide subsidies and make themselves aware of the nutritional status of the population.

3.6.5. Social Class.

Social class affects not only the content of meals, but also their nomenclature, time, duration and location. Sociological studies have shown that "working class" mothers want larger, faster-growing babies and so feed them accordingly on carbohydrate foods: both sweet and filling. They also give the largest male in the household the most generous portions, provide food in bulk, spend more money on sweet foods and the costly convenience foods.

There is a marked positive correlation between higher social class and the propensity to eat out: perhaps due to the economic effect in part at least (Bryn-Jones, 1970).


Many foods are symbolic of the people or social class with
which they are associated. People eat what they consider their social superiors eat, in an attempt to be accepted by that group. More refined foods are often preferred - even if they have lower nutritional value: white flour being preferred to dark, polished rice to unpolished and white sugar to brown. Whiteness seems to be associated both with higher status and with purity.

It is difficult to get "working class" peoples to try new foods; on the other hand trying new food is almost a prerequisite of the socially superior. (Yudkin, 1956).

As standards of living are raised in many parts of the world, preferences for sugars and fats, including meat fat, in place of potatoes, cereals and breads seem to be evident (Faber, Wilson and Wilson, 1966).

3.6.7. Occupation.

Obviously, individuals whose jobs require great physical exertion need a high calorie intake. Pattern of meals is also to a great extent dictated by occupation.

Employment or unemployment greatly effects eating out. The blue collar worker's frequency of eating out however is not matched by the amount he spends but the less regular eating out behaviour of the white collar worker is more than made up for by his expenditure. The status of an occupation within an industry is positively correlated with expenditure on meals away from home (Bryn-Jones, 1970).

3.6.8. Household Composition.

Food consumption of a household depends on its particular configuration of biogenic and psychogenic needs.

Another determinant of food division is the status of a person and the food. Thus, the head of a tribe or of a family may be considered to have a first claim on the more desirable foods (Yudkin, 1956).

Food habits are very resistant to change, but are more firmly fixed if they were formed in a loving environment rather than under a system of rigid discipline. Italian immigrants to the United States retain Italian dietary customs more tenaciously than Germans retain theirs (Pyke, 1968).

A father's main influence on his child's food preferences appears to be in the limitation of the variety of food offered to the
child. Foodstend to be served infrequently or eliminated altogether from the family menu by mothers, in deference to the father's food preferences (Bryan and Lowenberg, 1958).

i) Age of Individuals. With increasing age there is increased preference for soup and vegetables but a decreased fondness for fruit, generally speaking. In addition, there is a positive correlation between increasing age and tendency not to eat out. Young people, under the age of twenty, tend to eat out often, but seldom spend much on any one occasion (Bryn-Jones, 1970).

ii) Sex of Individuals. Rules of magic and primitive religion ensured observation of taboos to maintain household equilibrium in respect of feeding rights. The best of the game was set aside for the old men and hunters, and certain parts were forbidden to women and children. Today, it would seem that a larger number of foods are more commonly disliked by women, than are by men (Wallen, 1943).

This may be accounted for by assuming social pressures exist which force males to repeat experiences with disliked foods, but which permit females to retain habits of rejection.

Male students have more satisfactory diets: the women tend towards low energy intakes, low milk, meat, potato and bread consumption and a high consumption of cheese and sometimes fruit (Stordy, 1973). This indicates a strong slimming desire: in a number of cases it can prove positively harmful, despite their high level of education.

Household composition affects very much the amount spent on meals out: but has little effect on the propensity to do so. Single person households have a much higher expenditure per person than any other household, while children have a deterrent effect on expenditure on meals out (Bryn-Jones, 1970).

3.6.9. Education and Nutritional Knowledge.

What communities choose to eat depends partly on the physiological requirement, but even less on intellectual reasoning and nutritional knowledge: instead a curious mixture of reason, superstition and half-remembered "wisdoms" derived from many sources other than science (Pyke, 1968).

Although many of man's taboos are doubtless fanciful, others are based on substantial reasons. One of his remote ancestors may have experimented with a strange food and was poisoned by it, and the tradition became fixed in the tribe.
Food prejudices even abound among the educated: to avoid aversion to dogfish (infact a shark), it is called "rock salmon" in England. Explorers, however, in savage regions often learn to divest themselves of food prejudices, although with difficulty: necessity forcing them to eat the unfamiliar (Townsend, 1928).

The contribution of chemistry and physiology to our knowledge of nutrition, valuable as they may be to the live-stock industry, have to date played a very minor part in directing the eating habits of the human species. Increased education and nutritional knowledge does to some extent produce well-balanced meals and adequate nutrient intake such as during World War II rationing, based on scientific recommendations. Of course, knowledge of adequate nutrition was responsible for the wiping out of scurvy and the control of other deficiency diseases such as goitre, anaemia, rickets, pellagra, beri-beri and xerophthalmia.

However, nutrition education is not necessarily a panacea for all dietary ills. Brown, McKenzie and Yudkin (1963) discovered that...."most housewives believe that canned foods are inferior to fresh, that brown bread is better than white and that sweets are bad for the teeth. Yet most housewives buy white bread rather than brown, the sale of canned foods is high and rapidly increasing and we eat more sweets in this country than in any other."

3.6.10. Travel.
During a visit abroad people may be sufficiently adventurous to try local dishes: they may enjoy them and so cause a demand for them at home, both at a retail level and in catering outlets. When "out to eat" very often people want "a change," and here the unusual or foreign dishes find a ready market.

3.6.11. Immigration.
High concentration immigrant populations cause a demand for their own traditional foods both in shops and restaurants in the specific localities in which they live. As such communities become established the indigenous population is exposed to the availability of the new foods and may develop a liking for them.

There has been a tremendous increase in the number of Indian and Chinese restaurants, and "take-away" foods, over the last ten to twenty years.

A new dimension of availability has been added of late, and that is "convenience": present-day society imposes a demand for foods which are easy to obtain as well as prepare. "Convenience" foods have the obvious advantage of being both time and labour saving, but are more costly to buy. However, there is a high usage of convenience foods where there is a high proportion of working wives or single person households: "convenience" is obviously of more importance than slightly greater cost. It is also mostly convenience foods which are advertised.


Advertising a food product is most successful in regions where demand elasticities for it are highest. Advertising is used to introduce a new product into the market, or in the case of a food being sold under a number of different brand names, to maintain the brand share within the market. The promotion of foods is carefully calculated, and each product is given a particular image which is thought to appeal to the prospective consumer. The appeal of beauty is stressed when trying to sell to a young woman, health is stressed to the middle aged and security to the elderly.

Dichter (1964) believes that advertising depends on food motivation arising from symbolism or psychological meanings: for example he has found baking to be associated with a feeling of love and security and beans to have a fertility symbolism.

3.7. PERSONAL FACTORS - Psychological.

3.7.1. Brand Psychology.

Brand psychology is often enhanced by means of advertising, so that a housewife seeks the brand name rather than the food group to which the particular product belongs.

The idea behind "free gifts" and "special offers" is to shake brand loyalty, and effect a transfer from one "brand" to another: often the products are identical.

In a large scale operation, the manufacturer is forced to withdraw from having direct contact with the consumer, and so it is necessary to replace the benefits of this direct relationship by branding (Campbell-Smith, 1967).
2.7.2. Symbolism.

Some foods are eaten, not so much for their nutritional value, but because of what they represent; as gifts or rewards, et cetera. Foods have various roles: they can be "fillers" (potatoes), sources of immediate energy (glucose), long-term protection against disease (food containing vitamin C), curative foods (food containing vitamin B1, anti beri-beri), social foods (coffee), family foods (tea), pleasure foods (sweets), or foods for different age groups (Yudkin and McKenzie, 1964). There are a number of myths and magic surrounding foods: ideas deeply rooted in tradition, religion and culture, rarely substantiated on scientific grounds. Even in the twentieth century one readily accepts food from friends but distrusts food from strangers (Pyke, 1968).

Selection of food demonstrates one's attitude to society and the image which one wishes to project of oneself. Dry versus sweet sherry, instant versus ground coffee, which type of peas are eaten and how, whether a fork is used with desserts, are just a very few examples of demonstrating group acceptance, conformity and prestige. Food can also symbolize a celebration (e.g. champagne) or a special occasion (e.g. Christmas turkey) (McKenzie, 1974).

2.7.3. Personality.

There are five basic types of personality in society in relation to food. The innovator may start a food fad, the adapter anglicises it and the adopter includes it within his diet. The traditionalist continues to eat the familiar while the apathist eats whatever is available.

2.7.4. Time.

The time of day can have a profound effect on both what is eaten and how much. Very often people eat automatically, merely because their watch indicates that it is time to do so. This routine can bring about Pavlovian conditioning.

2.7.5. Appetite.

The basis for appetite has never been defined; it does increase with hunger, but even a hungry person may have no appetite for a food distasteful to him. A psychologist associates appetite with pleasure seeking: the presence of a positive incentive towards a pleasurable goal activity over and above the conditions of need.
Dichter (1964) believes that appetite is enhanced by an atmosphere of love, trust and security. The opposite of appetite is aversion.

Food toward which one has a personal aversion may arouse a reaction similar to disgust. Temporary food aversions may arise through overeating, particularly of sweets and fatty material. On the basis that meat is part of a dead animal it should be "disgusting" (Angyal, 1941), but it is clear that meat as food has undergone a radical change of meaning.

The change from "dead animal" to "food", usually by cooking, is not always easy to demonstrate because in any given culture only the meat of a limited variety of animals is eaten while that of many others is avoided as disgusting. It is interesting that animals which are eaten are usually herbivores, probably because carnivores feed on material which is "disgusting" in itself.

In physically active persons the appetite seems to equate, with great precision, the energy value of the food eaten and the external work performed. However, the sedentary Western life can lead to obesity from malnutrition.

The appetite for a particular food depends on the chemistry of the food, but the need to satisfy hunger is based on the chemistry of the body. Appetite is often confused with hunger. The two are intimately associated with feeding behaviour, but appetite is an incentive for specific foods and not merely a need to relieve hunger pangs.

3.8. Personal Factors - Physiological.


Hunger is controlled by the brain. It is associated with uncomfortable contractions of the stomach and the "sensation of hunger" which is caused by hypoglycaemia (the lowering of the blood sugar level). A large central region of the brain, the hypothalamus, is concerned with feeding and drinking: it is here that the blood glucose level is sensed. Hunger can be specifically directed for physiological reasons: a person on a sugar free diet for some time will develop a craving for sweet things. In contrast to this, adults react to a protein-free diet by a complete loss of appetite, whereas children develop the condition "kwashiorkor."

Thirst is connected with dryness of the mouth and throat and can be partially alleviated by the first drink of water, but there
is also some complex motivating force, much like appetite, which informs one as to how much water to drink (Stewart and Amerine, 1973).

3.8.2. Nutritional needs.
Of course, every individual needs an adequate intake of protein, carbohydrate, fat, vitamins, minerals and water for maintenance of health, although the proportional requirements vary according to age, occupation, climate, etc.

The human body seems to be "aware" of some of its needs, but not of others. Eskimos have a marked dislike for salt. It appears that men (and animals) subsisting largely on grain and vegetables, which contain an excess of potassium over sodium, as compared with the composition of the tissues and the fluids of the body, would require salt to correct this imbalance, while those of purely carnivorous habits would require less or none (Remington, 1936).

A considerable part of the carotene of green plants, a precursor of vitamin A, is destroyed or inactivated in the process of cooking. Human taste apparently can not detect differences in this respect: white cabbage and lettuce hearts are preferred and all greens are thoroughly cooked.

3.8.3. Health and Therapeutic diet.
Health is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity (World Health Organization, June 1946).

Adequate nutrition is positively correlated with a low number of behaviour and mental disorders, such as irritability, restlessness and anxiety, as well as with improved physical health, structural development, fertility and social behaviour.

A number of medical conditions such as gastric or diabetic disorders can be controlled by suitable diet as can obesity and inadequate nutrition: and deficiency diseases can be cured.

3.8.4. Specific Satiety.
One's bodily needs and morphology, age, social class and status concept all affect the amount of food considered sufficient at any one time. Occupation immediately prior to and proposed activity after a meal may also affect consumption.

It is found, in the case of men, that the more filling a
food is, the more likely it is to be eaten. Women, it seems, are more conscious of voluntary restriction on their food intake.

3.8.5. Circadian Rhythms.

These are biological rhythms, having a cycle of about twenty-four hours, (circa diem = about a day), but this time may vary as to individuals. The secretion of digestive juices is depressed at night, and this may be the cause of indigestion after a heavy supper. This, and other bodily rhythms are affected by changes in environment, season, climate, altitude and also exercise, age and emotion.

3.8.6. Heredity. (Genetical variation)

The ability to taste the bitter synthetic compound PTC (phenylthiocarbamide) is inherited as a simple Mendelian dominant. The threshold concentrations at which individuals first detect PTC forms a bimodal distribution. In England alone the percentage of non-tasters is 31.5%. The Orkney Isles have an unusually high proportion of non-tasters, 38%, compared with the rest of Britain; probably due to gene pooling. However, in most of Northumberland, 24% are non-tasters (Sutherland, 1966).

This is an example of a single racial difference that in certain circumstances might conceivably have an important influence on local food preferences, and so on consumer demand. Thresholds of tasting sweet, sour and salt also vary due to inherited factors but as yet no research into their geographic variations has been reported.

In 1935 individual taste reactions for 16 different substances (and PTC) were carried out on 47 adults (Blakeslee and Salmon, 1935). It was found that no two people were alike in all their taste thresholds, but it was hypothesized that these sensory reactions had an hereditary basis.

3.8.7. Allergy.

The manifestation of rash after eating, for example strawberries, may produce an aversion to the food.

More serious are conditions such as 'favism,' an often fatal haemolytic deficiency of glucose-6-phosphate dehydrogenase (G-6PD), inherited as a sex-linked condition due to a single X-chromosome gene. It results from ingesting fava beans (vicia fava), and has long been recognized but the biochemical mechanism of this response is not known. Favism is fairly common in Greece, Sardinia and Iran: the highest

The functional properties of a food are those physical or chemical characteristics of food which contribute to the use of the particular product as a food.

For example, the desirability of wheat flour over other types of flour lies in its better leavening property which permits the making of typical bread; while the colloidal properties of eggs provide important functional performance, such as in souffles and cakes. Resistance to injury is an important functional characteristic of commercial fruits and vegetables which have to be transported long distances and subjected to unfavourable handling conditions (Stewart and Amerine, 1973).

Various properties have always been ascribed to food. Pyke (1968) considers magic as an important factor in the development of food prejudices. The Romans considered the mandrake fruit to have magical properties (Genesis 30:14-16), and in the Middle Ages people ate long-lived plants as a means of prolonging life.

3.10. Sensory Attributes of Food and the Environment in which it is Eaten.

The actual food itself can have an affect on appetite once one is contemplating eating a meal.

Renner (1944) suggests that the senses seem to have evolved "to create the everlasting play between pleasure and dislike."

3.10.1. Sight.

The appearance and presentation of food has an obvious and immediate effect on the consumer. Size, shape, gloss and any defects are noticed; aesthetic qualities are often considered important. Colour is a particularly important feature: white polished rice, white flour and white sugar are all considered desirable. Colour and appearance of foods (e.g. fish, fruit and vegetables) are often a good indication of their quality: particularly freshness or maturity. Appearance is often so important that it has been said that people "eat with their eyes."

3.10.2. Smell and Taste.

The senses of smell and taste have one unique property: they
can and do instigate strong acceptance or rejection responses (Pfaffmann, 1961).

Odour and aroma, palatability and flavour are all closely linked and are most important characteristics of foods.

Smell has not only an aesthetic, but also a protective role, in feeding. Spoiled foods often have typical and easily recognizable odours which cause man to reject them: this being particularly true of meats. Herbs and spices are often added to foods to either produce or heighten desirable smells (Stewart and Amerine, 1973).

Standards for food odour are not universal. "Ripe" cheese is not appreciated by many people and appreciation of the smell of curry must certainly be a cultivated "taste" (Stewart and Amerine, 1973).

3.10.3. **Touch.**

Texture and viscosity, handfeel and mouthfeel are all involved. Touch has little protective value as far as food is concerned, but it does help rejection of sharp or bulky foods. Appreciation of the crispness of lettuce or the crunchiness of certain breakfast cereals or nuts depends on the kinesthetic (literally "feeling of motion") sense; the stimulation of proprioceptors located in the muscles of the jaw (Stewart and Amerine, 1973).

3.10.4. **Temperature/astringency.**

Warming or cooling effects are desirable in various foods and drinks: and if served at less than optimum temperature will be considered unsatisfactory.

Temperature also modifies odours and tastes which may affect over-all appreciation. There are two distinct temperature effects: one due to physical or volatility changes which the lowering or raising of temperature brings and the other the direct warm or cold sensation of the food.

Pungency and astringency may also be important: for instance the acid of a slice of lemon can stimulate taste buds. The attraction of pepper and various spices is apparently owing to pain reactions which may vary between individuals, although they have a negative aspect at extreme levels.

3.10.5. **Sound.**

The sound of a succulent rasher of bacon "sizzling" in a
frying pan could enhance the appetite of an already hungry person.

Reitz (1961) feels that the sound of the crunching of nuts is an important sensory impression. His unproven theory is that the sound of the crunching of the nuts distracts our attention from their taste and smell and hence increases taste and smell thresholds.

3.10.6. The entire meal experience can have a profound effect on the appetite: caterers of all kinds are very much aware of this and endeavour to make both the food and the environment in which it is to be eaten as pleasing as possible to the prospective customer.

Food quality is obviously important: quality is easier to recognize than define but it is some sort of mental summation of the physical and chemical properties of the food. Many sensory factors are involved but the relation of each to palatability is unknown (Stewart and Amerine, 1973).

When the decision is made to eat out, this can be the result of either a deliberate or impulse choice. In either situation there are three influences at work; the personal attributes of the customer, the circumstances in which he lives and works and the particular situation in which he finds himself at a given moment.

Making the decision to eat out involves two stages: the first concerns the decision to eat out or not, the kind of restaurant, the kind of locality, its convenience, speed of service and so forth; while the second concerns whether the restaurant interior is pleasing and acceptable or not (Cambell-Smith, 1967).

The "atmosphere" within a restaurant results from an integration of many things such as the size and shape of the room, type and layout of seating, appearance, age and dress of staff and other customers, table appointments, noise level, ambient temperature, colour scheme of the decor, level of illumination, degree of comfort, cleanliness, tempo of the staff, nationality of the restaurant, etc. Such factors have been established to have an affect on metabolism, specifically the digestion: for example, brightness and the red end of the spectrum increase blood circulation and increase muscular activity, which in turn assists digestion. One of the most important aspects of digestion is that people digest most efficiently things that they like: the dish choice available and type of menu should reflect this. Value for money and customer acceptability integrate all these elements and can dictate customer preferences (Campbell-Smith, 1967).
3.11. Definition of a regional food preference.

Numerous factors, including those of predominantly historical significance and others of relatively recent innovation, interrelate to produce, reinforce and modify the food preferences of regional populations.

A regional food preference is demonstrated when a particular food or combination of foods is chosen, rather than another, by the majority of a regional community over an appreciable length of time.
4.1. What is a region? : "..a region is a geographic area with a considerable measure of unity in its activities, services and organization. It is an area of common living." (Dickinson, 1964).

A region is an area homogeneous in respect of some particular set of associated conditions, whether of land, people, industry, farming — or food habits. Such an association can exist in terms of one or a variety of independent factors. A region can be a social unit in as much as economic exchange and communications are factors which identify it; or it can be a cultural unit, held together by elements of religion, tradition, knowledge and habits.

The inhabitants of a particular region may have a sense of "belonging" and tend to adhere to those traits which highlight their identity; so making a region: "..any one part of a national domain sufficiently unified physiographically and socially to have a true consciousness of its own customs and ideals, and to possess a sense of distinction from other parts of the country." J. Royce. (Kinshull, 1968).

Regional investigation seeks to discover locations of homogeneous phenomena. In order to examine regional food preferences in Britain, appropriate regions need to be defined.

4.2. Development of Regionalism in Britain.

Britain has been 'regionalized' in some way for many centuries: the mere fact of invaders and conquerors settling in particular locations led to centres of various cultures; "areas of common living," (fig. 4.1. maps 1 - 4, inclusive), and regional names from other centuries are familiar today.

Administrative counties (62) and county boroughs (83) were formed in 1836, and the rural and urban districts in 1894. Before this was the triple system of the County, the Hundred and Parish, dating back to the Norman Conquest. The county, or shire, was in existence before 1066.

The midland region of Mercia came into existence in the
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tenth century, but the northern and south-western regions were not
organised into administrative areas until the twelfth century and
were not efficiently absorbed into England until after Tudor times.

Wales had political divisions that existed before 1066.
These were based on the ancient tribal groupings of pastoral communities
who lived on the lower slopes of the hills. Hierarchy of tribal
space-groupings culminated in nine major areas, each under the rule
of an overlord. A similar situation arose in Scotland based on the
'clan,' in addition to which geography very much delineated the
Highlands from the Lowlands and Islands.

In more recent years Britain has been divided into different
regions for a variety of purposes: for administration, collection of
statistics, organization of numerous trades and professions, military
purposes, tourism administration, meteorology, planning and natural
resources, et cetera. There are as many regional configurations of
Britain in existence as there are purposes for their delineation
(Examples in fig. 4.1, maps 6 - 9). Although many regional boundaries
differ widely, a number of regions do show remarkable similarity in
geographic extent, especially around big cities.

The national Census of 1946 was based on the Registrar
General's Standard Regions of that date (fig. 4.1, map 5). This regional
breakdown remained the same until April 1970, when the English regional
breakdown changed. The standard regions of England were altered again
as of 1.4. '74 when adjustments were made to take account of local
government reorganization under the Local Government Act, 1972
(fig. 4.2.). Throughout these changes Scotland and Wales have remained
intact as standard regions of Britain. However, the counties in
England and Wales were altered as of 1.4. '74, while regions and island
areas were created within Scotland as of 16.5. '75 (fig. 4.2.).

4.2. Food preference regions.
The need of the present study is to identify areas of
Britain in which eating habits can be investigated and then related
to historical and contemporary regional factors in order to try and
determine reasons for varying commodity and dish preferences.

Many relevant regional studies, both government and
independent, which are drawn upon as secondary sources of data, have
used configurations of the Registrar General's Standard Regions.
Indeed the majority of the household food preference data are based
upon these, and so that equivalent data from within the sectors of
the catering industry are available in a comparable form the same Standard regional boundaries are used.

Furthermore, as little available secondary data, referring to any type of catering, was published after April 1974, the regional configuration as of 1.4.'74 is of no relevance. Similarly, all original statistics gathered from within the catering industry refer to the situation prior to April 1974, as caterers are generally reluctant to release 'current' information.

Therefore, as this study refers mainly to both original and secondary data prior to the regional reorganization of 1974, food preference regional configuration is the same as the Registrar General's Standard regions in existence between April 1970 and April 1974 (Fig.4.2.).

On occasions certain regions need to be amalgamated for purposes of data comparison. For example, regional household food preferences are examined since 1954 (when rationing, and therefore free choice limitation, ended after World War II), but the Standard regions changed in 1970 and again in 1974, so rendering continuity of regional data difficult. Nevertheless, the regional boundaries of Scotland, Wales, the North, West Midlands and South West remained identical after the April 1970 change, and in addition, the remaining regions can be amalgamated into two larger regions (SE / EA and Y&H, NW, EI) whose boundaries remain identical prior to and after April 1970. The change in 1974 is not a problem as published data are not available later than this time.

Some studies from within the catering industry use regions other than those of the Registrar General: in such cases the regional configurations are described where appropriate. Unless otherwise stated regions refer to the food preference regional configurations, (fig.4.2.)

Throughout this study:

(a) county boundaries refer to those of 1.4.'74 in England and Wales, and those of 16.5.'75 in Scotland. (fig.4.2.)

(b) Standard region boundaries refer to those of 1.4.'70 to 31.3.'74. (fig.4.2.)

(c) The 10 food preference regions are identical to those of the Registrar General, 1.4.'70 to 31.3.'74 (fig.4.2.); are abbreviated as follows and consist of:-
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
Region       Abbreviation   Contents.
Scotland     Sc.            The whole of Scotland
Wales        Wa.            The whole of Wales
North of England   N.        Cumbria, Northumberland
                       Tyneside, Durham and part of north Yorkshire
Yorkshire and Humberside   Y&H.   part of North Yorkshire
                                       West and South Yorkshire
                                       Humberside, Lincolnshire
                                                (parts of Lindsey)
North West   NW.            Lancashire, Cheshire, Greater Manchester, Merseyside, High Peak district of Derbyshire
East Midlands EM.          rest of Derbyshire, rest of Lincolnshire, Nottinghamshire
                                       Leicestershire, Northamptonshire
West Midlands WM.          Salop, Staffordshire, Warwickshire, Herefordshire
                                       Worcestershire, Birmingham
East Anglia EA.           Cambridgeshire, Norfolk, Suffolk
South West SW.            Avon, Gloucecs., Wilts., Dorset, Somerset, Devon, Cornwall.

4.4. Regional environmental, social, economic and availability factors.

The factors which influence food preferences are discussed in Chapter 3. Certain of these variables have, or have had, a direct effect upon food consumption patterns (chapter 3, section 3.4.) in a specific area, as they similarly effect the majority of a community's members. Some of these measurable influences are analysed regionally in Appendix 4, so that the variations which they highlight can be used to elucidate the findings of the research into regional food preferences in various types of catering.
CHAPTER 5

FOOD IN HISTORY.

Regional food preferences today are partly the result of historical occurrences and so a consideration of events which have influenced domestic, substitute domestic and commercial catering eating habits may help to elucidate the contemporary situation.

There is no single type of food which was used by primitive people everywhere, and the type of food consumed was related to climatic and geographic conditions (Lowenberg et al., 1974). Furthermore, the settling of successive invaders, each having their own food preferences, established 'regionalized' eating habits in different parts of Britain. These feeding patterns were modified by local factors of availability and socio-economic considerations.

Regional predilections can often be traced back to sound economic reasons which prevailed years ago, but which have by now disappeared. However, response-reinforcement and the need for affiliation explain why such habits persist.

More recently eating habits have continued to be affected by food availability, although now this is generally in the form of location and type of catering facilities, which in turn is the result of the historical development of the various sectors of the catering industry.

Information on regional differences of food consumption is meagre, especially within the sphere of catering outside the home. Few examples of actual menus from different parts of Britain in schools, hospitals, places of work and commercial catering establishments have been recorded: to quote the few which are available is erroneous as usually only one locality is represented so that no regional comparisons are possible.

Unfortunately the British diet prior to the Middle Ages is scantily recorded. Therefore, within this chapter, an historical outline of each type of catering which falls within the scope of the present research is given from the Middle Ages to contemporary times.

5.1. A brief historical profile of domestic diet in Britain.

During the Middle Ages, which lasted from the eleventh to
the end of the fifteenth century, the workers' staple was dark, dry bread, perhaps accompanied by cheese or onion, varied with bean pottage, a little hog-meat on Sundays and dried cod on holy days; while fare in the Manor was much more delicate, varied and plentiful, (Moss, 1958). Toward the end of this era, although soups were popular during times of scarcity, the peasants' diet improved: he ate bacon and eggs when possible. Drummond (1964) postulates that traditional 'bacon & eggs' date from this time.

Cottagers of Tudor England lived on brown bread, stews, salted cod and a little dairy produce and ale, while the upper classes had white bread, roasted meats, pies and beer. Infact, during the sixteenth century a depression occurred. Many farmers had taken up raising sheep for wool at the expense of raising food crops and coinage was debased, so raising food prices. In the gardens, the greatest change occurred when the Flemish were driven to South East England to resettle and brought their knowledge and skill with them. The productivity of modern vegetable gardens is said to have dated from this time, (Lowenberg et al, 1974).

The upper classes of the seventeenth century were introduced to tea, coffee, chocolate, gin, the potato and the use of the fork, and they indulged in elaborate and lengthy banquets. The simple village folk fared on cheese, butter, skimmed milk, vegetables and occasional fish or game from poachers: in mid-England the black pudding developed. The approach of winter still meant little food for the animals until the late seventeenth century, when turnips were used as stock-food. Lord Townsend discovered that crop rotation preserved the nutritive elements in the soil: he rotated turnips and clover with wheat and provided the former as forage for livestock. Not until the nineteenth century did 'scientific' agriculture come to England, when Liebig helped farmers to begin to understand what nutrients were needed by plants, (Lowenberg et al, 1974).

By the late eighteenth century tea was even being drunk by the villagers who dined on salted bacon and vegetable stew, bread, home-made cheese and ale: meat was extremely scarce. The upper classes could dine on soups, a variety of vegetables, stews and fricasses, tarts and "fancy" desserts, claret and port, preserved and candied fruits.

The demographic changes of the first two decades of the nineteenth century had highly important food consequences: coal mines and iron works were already attracting people into the "industrial"
midlands and north, from rural areas into towns. Town-living encouraged competition and social imitation; even the very poor ate white bread and drank tea, both of which had been luxuries of the wealthy in the previous century. The Midlands and north of England clung longer to home baking than the south, probably due to the easier availability of oven fuel. The use of public ovens in some northern industrial towns was a compromise which persisted for some time, but by the mid-nineteenth century even rural areas began to rely on the professional baker (Burnett, 1968).

The arrival of the railways in the 1830's revolutionized food supply to the towns and extended food consumption: perishable foods especially benefited.

Uneducated and unenfranchised, immobilised by poverty and the Poor Laws, physically degenerate as a result of insufficient food, the agricultural labourer was exposed to unstable farming and trade, and common land enclosure. Early nineteenth century conditions in Scotland and the North were preferable and more stable than in the South: oatmeal and milk were available, potatoes more generally accepted and the yearly hiring of labour persisted longer than in the South, where labourers and their families were half-starved and reeling with weakness.

The 1840's also present a picture of a half-starved population existing on a scanty diet of bread and potatoes; root vegetables being the one redeeming feature. The South West was still the poorest of all; East Anglia somewhat better, where flour dumplings and red herrings made an occasional treat; and Yorkshire and Northumberland best of all, where milk, broth, oatmeal porridge, hasty puddings, pies and bacon varied the diet. In Lincolnshire a little meat and milk was sometimes available, as the labourer had a rent-free cottage, land for potatoes and perhaps a pig. In Scotland there was bread made from barley and pea-meal, and even eggs, butter, sugar, fruit pies and treacle at times. Nevertheless, high infant mortality, general debility, liability to fever, ricketts, deformity, indigestion and slow recovery from illness were rife.

In the first half of the nineteenth century, the earnings of townworkers ranged from 4s. to 40s. per week; the movement of prices adding more instability. Wives working in factories or domestic trades had little time or energy for cooking: rough bread, "jacket" or boiled potatoes and bacon became the mainstays of urban diet. Tea was essential to provide both warmth and comfort: soups, broths, stews...
and puddings were reserved for Sundays only. What little meat there was, was reserved for the husband's evening meal.

The years 1843-45 saw a brief respite, but in 1846 there was a railway crisis, the great Irish potato famine and renewed depression in a number of major industries.

The general state of the rural labourer between 1850 and 1914 remained one of chronic poverty. In 1850 the wages ranged from 6s. per week in Wiltshire to 15s. in parts of Lancashire: the relatively better position of the North being due to mixed husbandry and to competing and more remunerative factory and mining employment. In Somerset labourers lived on potatoes or a meal of barley, turnips and cabbage, in Warwickshire on barley bread, and in Norfolk on slightly better bread but the diet was still largely meatless. By the 1860's the labourers diet was generally superior to that of the industrial worker, but worse in England than in Wales, Scotland and Ireland. Again northerners fared better than southerners: bread being the staple but eaten in greater quantity in Northumberland than Cornwall: the second food was definitely the potato, not meat. Thirty percent of all families never ate meat; of those who did, more was consumed in the North - generally beef or mutton (a sheep's or cow's head lasting all week), while in the South East and South West, it was mainly pickled pork. Sugar was eaten, but few dairy products.

Generally in the second half of the nineteenth century only a third of industrial workers were hovering on the verge of starvation. The poorer classes were very ill-supplied with cooking equipment, modes of food preparation were limited and fuel very dear, but in the town there were more shops and a wider choice of food, and competition kept prices lower than in the monopolistic village shop. Tripe, pork butchers, and pie shops began to appear, selling such regional delicacies as faggots, black pudding, brawn, haslet and later fish-and-chips. In the 1860's a London worker lived on bread, potatoes, sugar, fat, meat, milk and tea: in Yeovil a little more meat was eaten, while in Derby cheese could be added to the list. In Coventry breakfast was bread and treacle, dinner of bacon and potatoes, and supper bread and cheese, while in Staffordshire tea was drunk with milk and vegetables were eaten twice a week. In 1900 average meat consumption was double what it had been forty years previously and both butter and milk consumptions had grown appreciably. Protein food intake, compared to carbohydrates, had grown, but fruit, green vegetables and fish
remained insignificant dietary items. Absence of "vitamins" was most apparent up to 1914, although the term was yet to be coined.

By 1880 it seems that there was dawning improvement due to slightly higher wages and Free Trade. The labourers of the South West were beginning to taste more meat; pies and pasties being great favourites in Cornwall. Wages were now about 10s. in Wiltshire and 18s. in Lancashire (per week) and purchasing power had increased, but in the south in particular conditions remained lamentable. By 1900 expenditure on meat was generally greater than on bread, even in the South and East. Variations in the Standard diet existed: Devon produced "Toad-in-the-hole;" the North, oatmeal porridge; Huntingdonshire, onion and potato pudding; Staffordshire and Norfolk, stews and Yorkshire, fruit pies. Nearly everywhere dumplings were eaten, and puddings of rice or tapioca.

From 1850 to 1914 increased industrial expansion meant increasing wealth for those who owned and controlled the means of production. The dinner party of the Victorian upper classes developed into a unique institution. Traditional English dishes were out of favour: only a French menu would do. However, just before 1900, service "a la Russe" became favoured, in which the dishes were placed in turn on the side-board and served to guests by the waiters. The new style was clearly in accord with the age of speed and progress. Equally important, the excessive meat-eating of earlier generations was gradually being replaced by more vegetarian dishes. Some reduction in the extravagance of menus took place after the accession of George V in 1911.

The food of the professional and middle classes followed a similar pattern to that of the aristocracy, but suitably modified by income and number of servants. The lower middle classes probably benefited most from the cheapness of food in the late nineteenth century. The better-off farmers continued, however, to eat three hearty meals a day of locally grown foods, undisguised by fancy sauces, as they had for centuries.

Tastes were changing and there was a revulsion against the strong colours and flavours which had been used to disguise the dangerously, and often lethally, adulterated foods during the 1800–1850 period, although not until 1872 did legal measures begin to be effective against food adulteration.

With a population of 36 million in 1911, much food had to
be imported such as American wheat, cheap but poor quality tinned meat, and fish, now packed in ice. More income was available for dairy products, fruit, vegetables and eggs. Milling and baking only became large-scale industries in the 1890's: the bread of 1914 was not only cheaper, but pure and well baked. The most important new food was margarine; biscuit, jam and chocolate manufacture grew rapidly from the 1880's onwards. Milk bottles began to appear in 1900 for "pasteurised" milk. Butter and cheese production were revolutionized also at this time and the application of science and technology had the effect of lowering the cost and widening the variety of the British diet by the turn of the century.

The nation which went to war in 1914 was still so chronically undernourished that for millions of soldiers and civilians wartime rations represented a higher standard of feeding than they had ever known before.

By June 1916, the food situation was causing some anxiety and prices had begun to rise sharply: two months later a Food Department was established at the Board of Trade and on the 1st of January 1918 civilian rationing began with sugar. Rations included 8 oz. sugar per week, 5 oz. butter and margarine, 4 oz. tea and 8 oz. bacon. Fresh meat was rationed by price but bread and potatoes not at all. Britain was fed better than her enemies, and rations, however small, were always available at a price the poorest could afford.

The conscription of 1917-18, found altogether 41% of men, supposedly in the prime of life, unfit for service: a legacy of the malnutrition of earlier years. The responsibility for the provision of nutritional adequacy was recognized. Regularity and quality of supplies improved after the war: food imports had been growing steadily since the 1860's. The British farmers' growing concentration on the "protective" foods, aided by government subsidies and grading and marketing schemes as well as by the commercial development of canning and refrigeration resulted in marked increases in the consumption of these foods. Large scale concerns emerged in the sphere of food distribution and the retail of food became one of the biggest aspects of the nation's business. The advertising of branded goods and fixed prices meant that standard quality could be relied on.

However, unemployment became rife during the slump after the post-war boom, and in "depressed" areas misery and hunger continued to abound. In the early 1930's many investigations were made into the
extent of poverty, ill-health and malnutrition which was highlighted in demonstrations and hunger-marches. In 1935, 62% of volunteers were found to be below the comparatively low standard of physique required by the army. By 1939 there was some improvement: the pattern of the British dinner was stereotyped: meat, potatoes and sometimes "greens," followed by pudding and tea. Afternoon tea and high tea were distinct: the former being found among social class A, Southerners and Londoners, the latter in the North and among lower social classes. "Dinner" in the evening also became a Southern and upper-class meal, as did midnight "luncheon."

In 1936/7 approximately a third of the whole population was short of calories and protein and half, or more than half, was deficient in vitamins. Bread represented 12% of food expenditure in class D, but only 3% in class A, and meat showed the opposite trend. Hunger marches and the dole seem inconsistent with a rising standard of living, yet the truth is probably that the proportion of very poor fell between the wars and that of the moderately prosperous increased. A unique opportunity for the improvement of the national diet was afforded not by a continuance of peace, but by the outbreak of war in 1939.

The organization of food control was in many respects easier in 1939 than it had been in 1914 due to the expansion of agriculture by improved mechanization and fertilization, more advanced government planning, greater nutritional knowledge and food technology, including canned and dehydrated foodstuffs. The rationing, concerned mainly with protein foods, milk and fats, ensured adequate nutrition for all.

Statistics show that as a nation the British eat substantially less bread than before the war and rather less meat, butter and fresh fish: on the other hand more milk and coffee are drunk and more poultry, eggs, vegetables and fruit consumed. The diet is lighter and less bulky than it was, though more nutritious in every respect. The outstanding trend since the war has been in the demand for convenience foods, especially in the south.

5.2. A Brief Outline History of the Provision of School Meals.

In 1552 in 'Christ's Hospital' school the children's diet included 'motton,' 'beof,' 'whytinge,' 'hearinge,' 'playse' and other 'ffyshe.' 'Beare' was an important item while the expenditure on
'mylke' and 'butyer' was small in comparison. Though the fare was plain and limited both in bulk and variety, and in some respects deficient, it appears to have been up to the standard of the time as can be judged from the meagre details (Friend, 1935).

In 1704 the meagre rations included 2.9oz. meat, 8.38oz. cheese and 3.25oz. butter per head per week, but 12.5oz. of bread per head per day (Friend, 1935).

Beer was drunk by even very young children at the rate of about 2½ gallons per week at Christ's Hospital. It was probably much safer and more palatable than water and had a calorific value of 150-200 calories per pint, besides containing several nutrients (Drummond & Wilbraham, 1964).

Charles Lamb wrote about the fare of Christ's Hospital while he was a pupil there, 1782 - 1789. Apparently the porridge was "blue and tasteless," the pease soup "coarse and choking," the boiled beef "detestable" and the mutton was served in "scanty, grudging portions, rotten-roasted or rare." (Lamb, 1823).

Many of the meals were scorbutic, but in 1770 potatoes were added to the diet: however, later in the century, with the shortage of potatoes, scurvy reappeared.

Vegetables were also absent in the diet of other children's institutions. In 1747 the diet sheet for the "Foundling Hospital" (an orphanage) included broth, gruel, hasty and 'sewett' puddings, bread and milk, bread and cheese and roast or boiled beef or mutton thrice weekly.

In the pork season, pork was substituted for the beef. However, in 1762, "potatoes, parsnips, greens, herbs & roots" were added to the menu and in 1782 a proposal to reduce the meat rations and substitute suet puddings was rejected on the advice of a Dr. Watson, who insisted on the beneficial effect of meat (Nichols & Wray, 1935).

At the end of the eighteenth century even the diets of better class schools were composed largely of gruel, pease puddings and other starchy foods. The introduction of broth made from beef or mutton and "good vegetables" was recommended at Winchester School at this time (Drummond & Wilbraham, 1964).

School-boy rations were supplemented when possible by the buying of "tuck." The Governors of Christ's Hospital tried to stop this at the end of the seventeenth century, but realised they were attempting the
impossible and adopted a profit-sharing tuck-trade in 1799 (Friend, 1935).

The description of conditions in many private schools in the nineteenth century make horrifying reading. The children were often half-starved and both ignorance and indifference to the necessities of their welfare was rife.

The conditions in the more expensive schools were little better. The ill-chosen diet consisted of meagre rations of porridge, bread, meat and boiled potatoes which was supposed to support them through an entire day of hard work, beginning at 6a.m. (Drummond & Wilbraham, 1964). One of the most serious defects, the continued paucity of fruit and vegetables, was in part rectified at Christ's Hospital during the early nineteenth century by the increase in potato rations from 1 to 2 lb. per week, and the provision of vegetable soup twice a week. However the reduction of butter from $4 \frac{1}{2}$ to $1 \frac{1}{2}$ ozs. meant a loss of considerable vitamin A and at least 100 calories (Friend, 1935).

Even at expensive public schools the diet was inadequate and monotonous; and these conditions very much favoured the growth of the tuck system, probably the salvation of many a schoolboy at that time (Drummond & Wilbraham, 1964).

In 1864 the Destitute Children's Dinner Society in London provided soup for the poor (Moore, 1975) and in 1865 Victor Hugo provided warm luncheons in his own home in Guernsey for children from a near-by school (Drummond & Wilbraham, 1964). In 1889 the School Dinners Association was established by the London School Board and from this date the number of voluntary agencies concerned directly with the provision of school meals showed a continuous increase. A minority of the 1898 London School Board Committee recommended that it should be part of the duty of the authorities to see that ill-nourished children were provided with necessary food. In 1902 a Royal Commission also recommended that children who suffered from lack of food should be fed, if necessary, by local authorities. Nevertheless, charitable bodies continued to increase in number, reaching over 300 throughout the country by 1905 (Le Gros Clark, 1948).

An organized school meal service was initiated when on December 21st, 1906 the "Provision of Meals" Act was finally passed and it was established that the provision of food was part of the educational process of the child's life. The number of needy children being freely or cheaply fed rose gradually, but not spectacularly, as many country areas paid little regard to the Act. However, the
flow of charitable donations declined (Le Gros Clark, 1948).

By 1911 more than 200,000 poor children were benefiting from free meals and the menu consisted of soup: bread: rice pudding, at the cost of 1d. for paying children (Moore, 1975). Even in big public schools diets were often still defective: plenty of carbohydrate was supplied but milk, fruit and salads seemed to be regarded as unnecessary luxuries. However, by this time Christ's Hospital was a particularly enlightened school which provided an excellent diet (Drummond & Wilbraham, 1964).

The passing of the 'New Provision of Meals' Act in August 1914 enabled the Board of Education to make grants in respect of school meals and the Chief Officer could henceforth indicate to the Authorities what kind of standard they were expected to reach.

Between 1918 and 1939 the proportion of children receiving meals remained very low, between 2 and 3\(\frac{1}{2}\)%, despite the provision of one third of a pint of milk becoming more general by 1930. Although by 1932 the economic depression was assuming wider proportions, it was only in that year that any considerable increase in feeding took place. In 1934 the long controversy on the method of selecting malnourished children for the provision of free school meals ended with the decision to allow teachers to recommend feeding (Le Gros Clark, 1948).

A monotony of hash, stew and soup was still common among many authorities in 1937, but in 1940 the Ministries of Health and Education set standards for school meals by stipulating that there were to be two courses: meat and vegetables followed by a pudding. This was expected to provide a meal of specific nutritional standard at low cost, which, as the main meal of the day, would provide one third of a child's daily requirements (Moore, 1975).

Growth of school canteens was most rapid in parts of the North and South East, although by the end of 1941 not all authorities had initiated such schemes. Nevertheless, in the course of 1941 a number of boroughs established or expanded central kitchens, from which food could be transported hot to schools.

Between June 1940 and May 1942 the percentages of children receiving School Meals rose from 2.7% to 12.8% (Le Gros Clark, 1948). From early 1942, "cooking depots" were providing hot meals in industrial centres under emergency conditions. By February 1945 the percentage of children receiving meals had risen to 33.8% (Le Gros Clark, 1948), and the "depots" become central kitchens. However, during 1945, the
authorities began to adopt small self-contained kitchens and dining halls.

After the Second World War the School Meals Service was expanded "(a) to provide nutritious meals for children, (b) to give a measure of protection against deficiencies of home diet" (Drummond and Wilbraham, 1964). The Service was also intended to have the educational functions of establishing a flexible and wholesome set of food habits and to initiate children into a social life.

An Act of 1944 had required teachers to supervise school meals and this had led to "family service," whereby each table in the school canteen seated seven children and an adult (or older child) who would serve the food. However, a Report of a working party in March 1968 recommended the removal of the requirement for teachers to supervise meals and Parliament agreed. Family service ended and at the same time older children were desiring a choice of meals (Powell, 1975). Both these factors led to a "self-service cafeteria" style of service with a limited choice menu, and this system now operates in most parts of the country under the control of a trained Caterer.

5.3. A Brief Outline History of Hospital Catering.

The earliest hospitals in England of which there is any real knowledge started in the eleventh century. Between 1150 and about 1500 the Medieval Hospitals were ecclesiastical rather than medical institutions and the term was used for many different kinds of foundations, from the earliest times when "houses of hospitality" were wayside shelters for all comers. In small places there were often general hospitals, but in larger towns they were differentiated so that there was perhaps an infirmary-almshouse for the sick and helpless in the main street, a hostel for passing pilgrims and others near a frequented gate, while outside the walls there would be at least one leper hospital (Clay, 1909).

The provision of material comfort in hospitals rarely satisfied the bare necessities of existence. However, there was a wide difference between the lot of the ill-fed leper who was dependent upon the chance alms of passers-by and that of the occupant of a well-endowed institution. At the princely Sherburn Hospital (in Durham county) each person received daily a loaf and a gallon of beer; he had meat three times a week and on other days eggs, herrings and cheese, besides butter vegetables and salt. Unfresh produce or diseased
flesh was not permitted as food. In contrast, the "Forest Law" of this time directed that if any beast were found dead or wounded the flesh was to be sent to the leper-house if there was one near, or else be distributed to the sick and poor.

Salt meat was largely consumed in "hospitals," but it was insufficiently cured on account of the scarcity of salt. Bacon was a most important article of food, especially in Winchester. Hogs were the customary Christmas fare, as there was a marked difference between daily diet and festival fare in most hospitals. In Durham a festival day was celebrated with fresh salmon, in Pontefract with goose, in Norwich with herring and in York with mullet, salmon and cheese.

In later almshouses the inmates received wages and provided their own victuals which were cooked by the attendant. In the Leicester almshouse oats were provided for the poor and in the South West sevenpenny loaves of bread, baked on the premises. The diets in the charitable institutions of the sixteenth century were all of meat, salt, fish, cheese, beer and bread variety (Clay, 1909).

Outdoor relief was provided in many hospitals: in both Bristol and York resident brethren ministered to the poor for 2 or 3 hours daily. The fare consisted of wheat, barley and bean bread in Bristol and loaves and fishes in York.

However, the widespread charities declined at the Dissolution of the Religious Houses. Between 1536 and 1540 some 800 monasteries were pulled down and many of the monastic hospitals were also destroyed. St.Bartholomew's (founded in the twelfth century by a monk named Rahere), St.Thomas's (founded in the thirteenth century) and Bethlehem (Bedlam) were amongst the few which survived. There were to be no new hospitals for nearly 200 years (Clay, 1909).

A list of provisions at St.Bartholomew's, dated 1547, includes "whyte wyne", "redd wyne", "bere", "bread", "vele", "rybbes of beff", "porcke" and mutton " (Moore, 1918). Cheese was added to the diet in 1554 and herring in 1559. In 1557 the poor were given half a loaf of hard rye bread daily, but later in 1584 16oz. of "good and wholesome wheaten bread." By 1680, mutton was only to be given to special patients as directed by a doctor, each portion being one pint of broth and one mutton chop (Moore, 1918). An 'improved' diet of 1697 was particularly lacking in fruit and vegetables. In 1715 2oz. of bread and 2oz. of meat daily were added. In 1821 the physicians and
surgeons recommended 42oz. of meat and vegetables per week and the abolition of cheese alone being served. The beer was to be improved and milk puddings served (Moore, 1918).

During the reign of Elizabeth I, between 1558 and 1603, the local parish had become responsible for its own poor, unemployed, and sick as there were no longer monasteries to assume this role. The infirmaries or "poor law hospitals" were grossly inadequate and this lasted for 300 years under conditions that were often appalling (Clay, 1909).

In the eighteenth century over 150 new hospitals and dispensaries were started (Clay, 1909), but not until the Crimean War was a beginning made toward the establishment of dietetics as one of the hospital services.

Alexis Soyer, as a result of a letter begging him to advise men how to use their rations properly, went to the Base Hospital at Scutari during the Crimean War at his own expense and his own responsibility. (Apart from having been chef at the Reform Club he had also organized famine relief in Ireland in 1847 and soup kitchens for the poor of London). At Scutari he discovered the scandalous state in which unskilled "cooks" issued meagre and indigestible rations to about 2,500 patients by a chaotic, haphazard system using only eight copper boilers and a few tin pots on open fires.

Soyer made revolutionary changes: he ensured that the meat was boned and trimmed so that each portion was palatable, he trained some men as cooks, and invented special military boiling stoves and teapots, and a mixed vegetable dehydrated cake. He organized a system whereby different diets were prepared on each stove: he organized supply of utensils, cutlery and condiments and made use of local supplies to secure dietetic variation. Florence Nightingale said that no-one else had studied cooking "for the purpose of cooking large quantities of food in the most nutritious manner for great numbers of men...." (Brampton,1961).

Soyer has been hailed as the "father" of hospital catering.

Only immediately prior to the First World War did wholesalers stop "dumping" inferior foodstuffs on hospitals (and institutions in general) as the officials had begun to inspect stores. Only diabetic diets and diets for a few liver disorders were available in 1913. By today's standards food waste was scandalous both in terms of food and kitchen space. The food service was decentralised and meals travelled
to wards from a main kitchen in open, unheated trolleys. By the
1950's many special diets were in common use while the mid-forties
brought frozen foods into hospital feeding and administrators began
to consider sounder kitchen planning (Whitcomb, 1963).

The emergence of hospital catering as a specialist profession
was recognised early in the National Health Service when in 1945 the
Ministry of Health declared that catering in sizable hospitals should
be the responsibility of a suitable qualified and experienced officer
afforded adequate status in the organization. Prior to this hospital
catering was a function run largely by nursing staff under the matron's
control.

Under the hospital caterer menus were substantially improved, a choice
of meals was given to patients and staff and the food was prepared to
recognized catering recipes (Kitchen, 1970).

The first catering trade courses were introduced in 1944,
and the majority of hospital cooks hold certificates. Indeed, the
Scottish Hospital Catering School is now running an haute cuisine
course for hospital cooks.

In 1945 the first Catering Adviser was appointed in Kent,
and the second in Leeds in 1957, although even today some regions
lack this support, expertise and advice. The Hospital Caterer's
Association was formed in 1948 to promote higher standards of catering
in hospitals and in 1950 a catering advisory service was introduced
by King Edward's Hospital Fund for London, to be later followed by a
school of hospital catering.

In 1967 the catering officer was able to increase his range
of meals and goods available, when the "pay-as-you-eat" system was
introduced for all grades of staff. The appointment of catering
managers, first made in 1970, has led to effective control of the
catering for groups of hospitals (Kitchen, 1970).

Where hospital facilities are good caterers have recently
been able to introduce tray or plated meal service and so provide
properly presented and perfectly acceptable meals at closely controlled
costs. Freeze production catering systems are currently being
considered and tried in a few places to maximise economic use of plant
and labour by the use of pre-cooked frozen meals from a "food-factory"
independent of the hospital. The meals are regenerated and "finished"
at ward level. In practically all (National Health Service) hospitals
throughout Britain a limited choice menu is now available to all
patients.
5.4. Brief Outline History of the Feeding of Employees.

In the Middle Ages a King was the centre of his court and was responsible for feeding and sheltering his followers. In the countryside the Medieval Manor was a highly industrial unit where retainers were fed from the master's kitchen in the same great hall as the Lord and Lady.

The earliest record of industrial feeding as such is the supply of food and drink to the "villeins" during harvest-time: in 1222 Essex reapers were given one and a half loaves each, a cheese and a good ram, and boonwork in Sussex in the late thirteenth century was rewarded with wheat or barley. The highly organized monasteries fed their serfs and tenants, as well as travellers, and at this time the custom of "carrodies", a grant of food made as charity or in part payment for services, developed.

In the towns of the Middle Ages hours of labour were long and a master craftsman was responsible for the bed and board of his journeymen and apprentices, with pay often being in food even as late as 1577.

By the end of the fifteenth century rich masters could employ a limitless number of workers, and the 'domestic system' came into force, so that the workers had to feed themselves at home. Machinery was beginning to appear but was heavily opposed.

By the sixteenth century the factory was established in the clothing industry. Probably the earliest factory feeding took place in seventeenth century Newberry, where John Winchcombe fed one thousand employees, in addition to their pay of one penny daily.

In Tudor times the manorial organization was broken up and society centred on the power of the wealthy 'bourgeoisie.' In the towns the workshop gradually degenerated from a place where goods were made and sold, to one where they were only sold: nevertheless shop assistants continued to live under the proprietor's roof.

During the late seventeenth and eighteenth century, payment in the coal industry was often in kind or 'truck': exorbitant prices were demanded for poor quality goods, the men being kept in a condition of serfdom. Textile workers were paid in 'cheques' that had to be spent at shops owned by the employer which supplied very inferior goods. In contrast, farm labourers were still being fed and housed by their employers, a system dating back to early tenant farming (Curtis-Bennett, 1949).
Industry developed considerably during the eighteenth century due to innumerable technical inventions such as spinning machines, power looms and blast furnaces. The factory system became the accepted method of manufacture, particularly in the textile industries, and this was a situation in which large numbers of people were together under one roof. However their treatment was entirely dependent on the will of their masters: not only were men subject to awful conditions but women, juveniles and young children too. The parish authorities were glad to be rid of dependent children, relegated to them by the notorious Elizabethan Poor Law: manufacturers exploited them cruelly along with the children of the poor.

".... in many instances their (children's) labour was limited only by exhaustion, after many modes of torture had been unavailingly applied to force continued action; their food was stinted, coarse and unwholesome. ....... it was often so nauseous that even hungry stomachs rejected it." (Kydd, 1857).

The diet was also described as:

".....the scantiest share of coarsest food capable of sustaining animal life..... boys and girls, suffering from the unsatisfied cravings of hunger, have stealthily struggled with the pigs for food, and have been fed upon the purloined contents of the pig-trough...."  (Brown, 1832).

The appalling conditions, the long hours of work from 5a.m. to 8p.m., and irons riveted to their ankles and linked to their hips to prevent them running away, led to a number of suicides. Similar conditions were imposed upon mine-workers, including children from the age of four. No regular time was even nominally allowed for meals and it was reported that

"......people have to take what little food they eat during their long hours of labour when they can best snatch a moment to swallow it." (Mines Commission, 1842).

Nevertheless, there were a few enlightened employers. Samuel Oldknow provided staple foodstuffs for his operatives and although hours were from 6a.m. to 7p.m. this was a comparatively short working day. From 1791 the meals of his apprentices were good and sufficient, with milk, porridge and wheaten bread for breakfast. The London Lead Mining Company made provision for feeding in isolated mines and at times of hardship.
But, "the greatest of the enlightened employers of the Industrial Revolutionary Era was undoubtedly Robert Owen" (Curtis-Bennett, 1949). As manager of a spinning works in Scotland he organized a large store-cellar, a large kitchen for producing good quality, cheap food, an eating room next to the kitchen, cookery and catering courses for girls, a new public garden, a piece of ground for each householder to grow his own vegetables, and a board-house for the "apprentice" children which was clean, spacious, well-ventilated and served food of good quality. Owen has been acclaimed a pioneer of modern Industrial Welfare and the "father" of modern Industrial Catering.

In the countryside in about 1800, living varied considerably with locality. In the south oats were regarded as pig food while northerners found cereals more palatable as they consumed more milk with them: 1,300 quarts per year in the north compared to only 104 quarts in the south. Even by the second half of the nineteenth century farm diets in northern and Scottish regions had not changed for centuries: oatmeal, milk and vegetable broths. Due in part to the survival of the "primitive" system of paying men with food as part of their wages, Scots and northerners fared much better than southerners.

The early nineteenth century town diet was mainly of bread, potatoes and strong tea, but by 1864 a Lancashire operative ate bread, oatmeal, bacon, treacle, tea and coffee: a skilled workman ate butter, had Sunday joints cooked at a baker's shop and had a few vegetables. On working days artisans ate at a tavern or cheap eating house where an "ordinary" meal of hot meat, vegetables, bread, cheese and beer cost 6d. to 1 shilling.

By the end of the nineteenth century the advantages of adequate industrial feeding were beginning to be realized:

"...good work...depends on food not only good in quality but adequate in quantity and properly consumed under favourable conditions...." (Heakin, 1905).

By 1905 Cadbury's at Bournville (Birmingham) had one of the largest industrial dining halls in England, serving a roast meal for 4d., meat pies for 2d., soup and bread for 1d. Lever Brothers (Cheshire) were serving "Hot Pot" for 2d. : Hartley's (Liverpool) were offering "Hot Pot" and Pot pie for 2d., and "chips" for 1d. : Rowntrees (Yorkshire) were serving Yorkshire Pudding for 1d. :
Colman's (Norwich) were serving roast meat, vegetables and dumplings for 4d., and Messrs. Templeton & Co. (Glasgow) were offering "mince and potatoes" at 2d., to mention but some of the more "traditional regional" fare which was available.

The 1914-18 War marked the turning point in the history of industrial catering (Curtis-Bennett, 1949). Prior to 1914 there were less than 100 regular factory canteens in Britain: before the end of 1918 there were nearer 1,000. The 1915 Munitions of War Act stated that "all Government Munition establishments are to provide adequate canteen accommodation at the expense of the State," as many workers were found to be severely undernourished.

The general attitude to industrial catering had changed for the better, and the 1918 Factory Inspector's report said:-

"...In the Midlands many firms of consequence have had successful canteens running throughout the year for both day and night workers........An increasing number of small firms are realizing the importance of canteens."

Unfortunately, as soon as the compulsion of war was removed, industrial feeding fell back into apathy and remained in a state of comparative stagnation for ten years due to lack of enterprise by canteen managers, lack of support from management and indifference on part of the workers themselves.

Although the Depression dampened the enterprise of industry, great strides were made in the science of nutrition and it was realized that every department of a man's life had its importance in relation to his work. In 1926 the Pioneer Health Centre in Peckham and canteens were found to remedy many ill-effects of bad nutrition. In 1937 the Industrial Catering Association was founded to "raise the standard of industrial catering generally."

In 1940 the Factory Canteens Order stipulated that every factory with more than 250 people, by law had to provide a dining room with "wholesome meals at reasonable prices." In addition the rationing system allowed extra rations for heavy workers. From this time on, expansion of industrial canteens was rapid. By 1945 "British Restaurants" were providing fifty million meals weekly for workers for whom factory canteens were not available.

Many firms realized catering to be a "highly specialized undertaking requiring considerable experience and expert knowledge, and so employed catering contractors." (Curtis-Bennett, 1949).

Thus many big industrial catering firms developed.
The Hot Springs United Nations Conference of 1943 laid down as axiomatic that:

"... all industrial workers should be given full opportunities of obtaining one third of the total daily calories for maintaining health and efficiency in their respective employment at their midday meal."

By the end of the Second World War old canteens were being improved and new and better ones established in both large and small factories. From the time the kitchen and dining room facilities improved under the control of qualified Catering Advisers and Organizers, and to date the majority of organizations have made provision for a choice of nutritious, attractive meals of all kinds to be available to their employees at reasonable cost.

5.5. A Brief Outline History of the Commercial Catering Industry.

In the eleventh century religious houses and private persons provided food and shelter for pilgrims to shrines and travellers connected with the trade revival. In much frequented parishes special guest houses were established, and so it became accepted for travellers to eat outside their own homes.

It is probable that the English inn evolved largely from the private house and became firmly established by the fourteenth century. Gradually one householder in a particular area would receive all travellers and become an inn-holder, either through having better facilities or lack of competition. In the early inns, mostly found in London and other large towns, meals were eaten in the large hall where later beds were spread for the night. To begin with travellers had to bring their own food, but soon they could buy bread, meat and beer.

Taverns and ale-houses were most common in the provinces. By the fourteenth century the tavern became a place for meeting and recreation which served casual refreshment of food and drink within certain hours. The ale-house sold beer rather than wine and offered more meagre amenities.

At the close of the Middle Ages private and monastic hospitality was declining, but the increasing importance of inns meant that England had a proper system of public hospitality allied to the posting system of travel. In Scotland, however, widespread hospitality of private citizens continued for longer: ins were fewer, but taverns
serving food and drink were more numerous.

Travel was extremely difficult and hazardous: the very word is derived from "travail". Nevertheless, from the sixteenth century onwards England established a good reputation for the number and quality of its inns, although the standard of food and beds left much to be desired.

In the sixteenth century resident populations, as well as travellers, began to eat outside their own homes when the habit of dining at taverns or 'ordinaries' became popular. The 'ordinary' was actually the name of the meal consisting of a hot meat dish, bread, cheese and ale.

From the beginning of the seventeenth century the licensed victualler gradually became a publican, whose primary and practically sole business was the retailing of alcoholic beverages.

In the seventeenth and eighteenth century inns better class guests ate in private rooms and the poorer travellers and the servants in the kitchen: by the end of the eighteenth century standards of comfort and service in inns was comparatively high. At this time the Tudor "common table" was revived for coach breakfasts and dinners and only private travellers dined alone.

With the industrial revolution the Commercial Inn, with its common dining-room and private rooms emerged to cater for the new class of traveller and the new holiday habit brought temporary residents and the Family Inn.

During the late sixteenth and seventeenth centuries journeying to spas by stage or private coach had become popular and so provision of accommodation and catering both en route and in these inland resorts themselves was greatly stimulated.

By the late eighteenth and early nineteenth centuries the road system of Britain was greatly improved, frequent change of horses became more usual, coach services were more efficient and vehicle design and construction was improved as a rapid expansion of travel took place due to the industrial revolution and increasing trade.

In addition the character of the spas was changing from being purely healing resorts to pleasure resorts, and some coastal spas were becoming fashionable seaside resorts. The standard pattern of resort development, from the patronage of Royalty to that of the working classes over a period of about 200 years or even less, had only reached an intermediate stage in the first half of the nineteenth
century: after Royalty and the aristocracy came the middle classes.

In 1650 the first coffee-house had opened in Oxford: by 1700 their popularity had grown so much that there were more than 2,000 in London alone. Up to the Restoration no intoxicants were sold, although tea, herbal drinks, chocolate, cakes, tarts and jellies were also offered. Coffee-houses rapidly became the main places of social intercourse. The first half of the eighteenth century was the hey-day of the coffee-house: in Queen Anne's reign they probably exceeded inns and taverns in London in number and importance. Boxes and partitions became more popular than the previous single large table in the middle of the room. Many became the meeting places of literary or artistic people or of particular professions and much business was done in them. Undesirables were excluded and "subscription coffee-houses" became the first clubs. By 1800 there were as many clubs in London as there had been coffee-houses in 1700.

When the first railway was opened in 1830, the first hotels had already appeared in Britain, the inn was at the peak of its prosperity, resorts were enjoying increasing popularity, clubs had most successfully emerged in their own right and the numerous "pubs" were engaged in a roaring trade.

However the railway age marked the decline of innkeeping. Hotels rapidly grew up along the new lines of traffic as had the coaching inns of previous centuries, and increased travel by railway and steamship among the better-off led to luxury-hotel building in European capitals and resorts. The railways made the sea accessible to the masses for the first time and the increase in the number of seaside resorts accelerated, while the inland spas declined.

The inns, eating houses and hotels of this period had a generally poor reputation. The one shilling 'ordinary' consisted all too often of:-

"parboiled oxflesh, with sodden dumplings floating in a saline greasy mixture, surrounded by carrots looking red with disgust and turnips pale with dismay" (Anonymous, 1853).

During the mid-nineteenth century street-traders purveyed an astonishing volume and variety of comestibles including soup, eels, whelks, tea, coffee, muffins, pies, hot potatoes, ham sandwiches and confectionery. The ice-cream trade had only started in 1850 while fish (no "chips" yet) fried in oil was sold with a slice of bread for 1d. and oysters 4 for 1d. Pleasure gardens, which had by this time sunk far in the social scale, provided refreshment and entertainment
As early as the 1830's fish were brought ashore live in flooded chests and later packed in ice. By 1830 fish was transported in special trains and fried fish and unpeeled chips were sold in 1884. Chips were often sold by tripe-dressers: people brought cold pieces of fried fish to be warmed up and the combination of "fish-and-chips" must have occurred in a number of places. The first "mobile chippie" appeared in Oldham in 1880; the two-county area between Oldham and Bradford giving rise to the fish-&-chip industry as it is known today (Priestland, 1972).

During the latter decades of the nineteenth century the dining-rooms of large hotels became known as "restaurants": a Parisian term used to denote an establishment where meals and refreshments were supplied. A few, large, high-class "restaurants" began to cater on a more elaborate scale for the fastidious diner and its popularity grew with after-theatre suppers and the spread of 'dining-out' (Medlik, 1972). At this time the common dining room with separate tables was introduced; only later did the "grill room", an informal offshoot of hotels and restaurants, become popular.

Picnics became a favourite occupation of Victorian and Edwardian society: the food on such occasions was all-important, the venue of the picnic secondary.

Very cheap refreshment was available to the masses in the form of cafes and teashops. The first ABC teashop was opened in London in 1884 and the first Lyons teashop in 1894 and within a few years both companies operated a chain of them (Medlik, 1972).

The Victorian "pub" was a combined product of the inn, tavern and ale-house. Following legislation in 1869 the number of beerhouse licences was restricted and so brewers were encouraged to invest in the retail trade. They competed for control and ownership of "pubs" which led to the "tied-house" system, which is almost universal in England today (Medlik, 1972).

During the First World War requisitioning of hotels for billets, rationing of food to catering establishments and loss of manpower greatly restricted commercial catering. However a widespread reaction to war-time privation and the development of motor transport led to the desire for travel and enjoyment, and brought new custom to the hotel and catering industry after 1918. The Licensing Act of 1921 permitted drinks to be served after 11 p.m. provided a sandwich at low cost (Burnett, 1968).
was ordered with them. Restaurants were quick to combine "eating out" with the dancing craze and "night-clubs" provided a method of evading licensing restrictions. "Road-houses", elaborate inns providing meals, drinks, dancing and a night's lodging, appeared (Burnett, 1968).

Popular catering provided well-cooked meals in comfortable surroundings, often with a "palm court" orchestra. By the 1930's waiters and "nippers" were giving way to the self-service cafeteria, a convenience provided by some of the larger stores. The first milk bar opened in Fleet Street in 1935 and by mid-1937 there were over 900 throughout England and Wales. Milk bars, snack bars, cafeterias, cinema restaurants and dance-hall buffets all contributed to a significant growth in eating out among the lower middle classes. By contrast, the dietary standards of the wealthier classes probably declined, due in part to choice, but mostly necessity (Burnett, 1968).

The Butlin organization opened the first large-scale holiday camp at Skegness in 1937, and it is estimated that by 1939 there were about 200 permanent holiday camps owned by various firms, catering for some 30,000 people weekly during the season (Brunner, 1945).

The outbreak of war in 1939 again disrupted hotel and catering services, but the economic 'levelling up' process which has continued since the war has made 'eating out' more of an everyday experience among all classes of society. The outstanding recent trend of growth in the use of convenience foods has spread into the catering industry so that a wide variety of meals are available to all income brackets. It also seems likely that after a long period during which 'pubs' dispensed only beer, spirits and packets of crisps, they are now returning to their former function of selling food as well as drink.
CHAPTER 6

PRINCIPAL SOURCES OF SECONDARY DATA.

Very little research which claims to investigate an aspect of eating habits or the demand for food has actually examined food choice or preference in terms of either food products or dishes, and even less has been concerned with regional food preferences.

The criterion for including a piece of work within this chapter is that it relates directly to actual regional food or dish preferences in Britain over the last three decades. On this basis, this survey of literature is selected in terms of major published material, pertinent to the findings of the present research.

Many pieces of work have been published which have a tenuous connection with food habits or factors which influence them. The majority of these deal with the topic in a superficial and general manner and contain few, if any, specific results or conclusions supported by actual data.

Such subsidiary sources of information are omitted from this chapter, but are included within relevant literature surveys which preface each individual chapter.

The principal sources of secondary data, herein reviewed and criticized in relation to present purposes, are broadly divided into:

(A) those references which deal with food demand, choice and consumption generally and in terms of the household situation, and
(B) literature which refers to food preferences within various branches of the catering industry.

(A) LITERATURE REFERRING TO FOOD PREFERENCES GENERALLY, AND IN THE HOUSEHOLD SITUATION.

Individual family budgets have been available from the fifteenth century onwards, but in Britain the first systematic studies based on records kept by housewives which are sufficiently detailed for consistent study and evaluation, date only from the decade prior to the Second World War. For present purposes, the most significant of the three studies carried out at that time is that of Crawford and
Broadly (1938), which established the existence of regional food preferences in the home at that time and is of methodological importance because of its influence on later surveys.


Crawford and Broadley were concerned primarily with what they called a "national food inquiry;" its analysis by meal and the feeding habits of the nation in relation to economic standards of various sections of society.

The "national food inquiry" of urban families was intended to cover all social classes, to include a reasonably representative number of people from various areas, and to deal not only with the amount and value of the food purchased but also with daily meals, methods of purchase, home cooking, and "other facts relating to the use and preservation of food after it has entered the home."

Geographically the inquiry concentrated on London and Birmingham (where economic conditions at the time of the inquiry were good), Leeds and Glasgow (where economic conditions were less good but definitely improving, and Newcastle, Liverpool and Cardiff (where economic conditions were still much below the national average). Approximately 5,000 families, arbitrarily divided among the 7 urban areas and 5 social grades, were interviewed between the 15 October 1936 and 31 March 1937. For the food "budget," the purchases during the "previous week" were taken as the basis of the survey: for food consumption habits, the meals of the "previous day."

No tabulations referred to regional differences: these only being mentioned in the main text, in terms of 'yesterday's choice of food.'

One of the main drawbacks of the survey is that the conclusions are now out of date. Furthermore, "eating out" was not prevalent at the time of the survey and so very little mention was made of it. The lack of regional consideration of results is another problem, as well as the fact that no total regions are considered, only a few isolated and arbitrary urban areas. Furthermore, the results only reflect winter food habits. Altogether the discussion is somewhat superficial, while the arbitrary sampling technique casts doubt on the validity of the conclusions.
Using statistical evidence, Wright demonstrated that it had taken 30 - 50 years to change the pattern of the diet to the richer and more varied character, typical of 1934/38, compared to that of 1880. However, World War II, with its curtailment of imports, emphasis on primary calorie production from home agriculture, and rationing, caused an immediate reversal of the pre-war trend, and produced a similar pattern of food consumption nationwide.

Nevertheless, again relying on statistics, Wright showed that in 1956, both quantity and type of food commodities consumed were almost identical with those of the immediate pre-war years. Liquid milk alone, due to subsidies and welfare schemes, showed markedly different consumption patterns.

At the time of writing, Wright felt that insufficient evidence was available for a comprehensive survey of regional variations, but he did derive "a few pointers to local customs and preferences from national food consumption levels" then available.

The value of this piece of work is that it demonstrates that when no restrictions of food supply are in force, regional food preferences are apparent throughout Britain.

It appears that the nutritional pattern of the national food supply, after wartime and post-war changes, may have reached something like stability by 1956 (Hollingsworth, 1961). Food consumption and meal patterns in Britain at that time were investigated by the Market Research Division of W.S.Crawford Ltd. (Warren, 1958).

The survey was undertaken to discover what people were actually consuming at that time: the intention was to investigate meals eaten in Great Britain in terms of their content and chronology by season, day of the week, region, class and age.

The first part of the survey was carried out during one week in August 1955: the second during one week in February 1956. Both surveys were based on a representative sample of 4,557 interviews with adults over 16 years of age. The content, time, location and nomenclature of each meal consumed on the previous day was
investigated by trained interviewers. Additional questions regarding household composition, daily time-table, and religious or medical bases for food habits were also asked.

Class definitions were judged by the interviewers on social bases such as occupation, mode of speech and dress, type of house and area of its location, rather than on income levels. Four age groups were also used. Unfortunately the regional delineations differed significantly from the "food preference regions" (chapter 4 fig.4.2) since they consisted of:-

1. London.....the Metropolitan Police District of 1956.
2. South......Old Standard Region of "Southern," and parts of the South East not included in (1)
3. West.......South West and Wales (Standard Regions)
4. Midlands...Old Standard Regions of "Midlands", "N.Midlands" & "East"
5. North......" " " "North","East & West Riding"
   and "North West."
6. Scotland...Scotland (Standard Region)

A separate chapter was devoted to each of the seven 'meals': early morning tea, breakfast, "eleven ses", midday meal, afternoon tea, evening meal and late supper. The statistics given in the main text, referring to sex, season and days of the week, are broken down into tables of percentage regional, social class and age group figures at the end of each chapter. By using the figures provided in the 1951 Census, representative samples were taken from these categories to give a true reading for the population as a whole.

It is not possible from the tables to estimate whether a certain percentage of men or women ate a particular type of dish at home or in a canteen in a specific region. Superficial deductions can be made as to dish preferences, but not in terms of catering establishment, although canteen, cafe, restaurant and hotel are included as meal locations.

The lack of specificity as to meal content in various locations, the limited range of dishes mentioned in the questionnaire, the broad regional delineations which are incomparable with those of the other studies, and the fact that the information is 20 years out of date, are the main drawbacks of the survey as a viable source of data for present purposes.

Nevertheless, comparisons were drawn between the findings in 1958 and those of a more recent "menu survey" (Bird & Mills, 1972).

The BMRB carried out a menu survey between January and June 1972, covering 4,200 homes. It was a systematic study of all in-home preparation and consumption of food and drink in Britain "on the previous day", and comparisons were drawn between the results and those of the W.S. Crawford Survey of 1958. Unfortunately the data was purely descriptive and the hypotheses totally subjective, but some regional tastes and idiosyncrasies were included, although they were scanty and non-specific.

The source from which most indications can be derived is that of the annual reports of the National Food Survey Committee, initiated in 1940 to provide factual knowledge of the domestic diet in order to ensure adequate nutrition during the wartime period of rationing, and which has continued to operate ever since. The statistics produced in these reports are used as bases for a variety of analyses by various researchers.


The annual National Food Survey is a continuous sampling inquiry into the domestic food consumption and expenditure of private households in Great Britain. The survey was initiated in July 1940. Until January 1950 the main survey was confined to urban working class households, but thereafter it was extended to all classes and to all parts of Great Britain.

Each household which participates in the survey does so voluntarily, and without payment, for one week only. By completely changing the households surveyed each week, information is obtained continuously throughout the year except for a short break at Christmas. Since the survey aims to determine what families, rather than individuals, consume, the informant is the housewife or family caterer. In a specially designed log-book she keeps a record of the description, quantity and cost of all food which enters the household on that and next six days, and particulars of persons present at each meal and of the foods served. Items which other members of the family often purchase for themselves are excluded, but particulars are noted of the number and type of meals obtained and consumed outside the house by
each member of the family, but not of the cost or composition of such meals. When the log book is collected the interviewer obtains certain relevant supplementary data such as income of the head of the household and of the family.

The National Food Survey sample is selected by means of a three-stage stratified random sampling scheme. The sampling frame covers the whole of Great Britain. The first stage involves the selection of regional groups of Parliamentary constituencies; the second the selection of polling districts or combinations thereof within the selected constituencies; and the third or final stage, the selection of about 8,000 addresses within these polling districts, by a system of interval sampling from a random origin.

The survey data of food purchases, consumption, expenditure and prices are tabulated for each of 154 categories of food. Apart from the results for the sample as a whole, i.e. "national averages", there are four regular analyses: by region, by type of area (London conurbation, provincial conurbations, larger towns, smaller towns, semi-rural and rural areas), by income group (defined in terms of the gross weekly income of the head of the household), and by household composition. Various analyses are also carried out on the energy value and nutrient content of recorded foods. The survey records the quantity of food entering the household expressed in "units per person per week", not the amount actually consumed; it cannot therefore provide frequency distributions of households classified according to levels of food consumption or nutrition.

(A "person" is defined as an individual eating at least half of his meals at home during the survey week, while it is assumed that the daily meal pattern consists of breakfast, dinner, tea and supper.)

In the regional analysis nine regions are distinguished: Wales, Scotland and the Registrar General's Standard Regions of England, except that East Anglia is combined with the South East. Result tables referring to regional differences relate to household expenditure, food price indices, household consumption of main food groups, annual averages for individual foods, and variations in energy value and nutrient content.

The fact that housewives have to record their purchases can make them more aware of them and so could influence their habits. A major drawback of the survey for present purposes is that only the household feeding situation is dealt with, there being no consideration of "eating out" habits. Moreover, only commodities are surveyed, such
as meat, which is sub-divided into beef, lamb, poultry, etc., but no
dishes are considered. The results are primarily presented in tabular
form, and although there is a written description of the results, no
conclusions are drawn about the differences. It is not easy to carry
out a study of the results over time, as the configurations of the
Standard Regions were changed in April 1970 and 1974 and so regional
statistics prior to and after these dates are not comparable.

Two studies of demand analysis have used the National Food
Survey statistics: that of Matheson and Philpott (1967) and that of
Thomas (1972). The former examines regional preferences of various
meats; its main limitation being that no other commodity is considered.
The latter publication, in direct contrast, considers regional
differences in demand for "food", but does not consider any individual
commodities at all.

6.6. "The Regional Pattern of the
Agric.Econ.Research Unit. no.31.
Lincoln College, Univ.Canterbury,
New Zealand.

Matheson and Philpott posed the question of whether varying
regional consumption patterns are the result of differences in prices,
or regional differences in tastes and preferences, or a combination
of these two factors. They attempted to answer it by:
(a) assuming that regions have the same response to changes in meat
prices and their incomes, so that demand differences arise from
varying tastes and preferences;
and (b) by measuring consumer response (price and income elasticity)
in each region, and the differences in elasticity between
different regions.

Resulting demand levels indicated significant regional
consumption differences, both for meat as a food commodity and for
individual types of meat; while the slopes of the demand curves
showed quite marked differences between elasticities for each of the
meats in different regions.

For present purposes there are two main limitations of
this piece of work: the first being that only meat is considered
when a similar regional demand analysis of all other commodities is
equally desirable; and the second being that the raw data used
relates only to the household situation and therefore extrapolations
cannot be made to refer also to regional preferences within the catering industry.

Manchester University Press.

"The Demand for Food" developed, illustrated and tested methods of determining the effects of certain qualitative household characteristics, specifically social class and region, on consumption patterns and income elasticities. The study was based on budget data, household income, occupation of the head of the household, age and sex of members, locality and other household information collected by the British National Food Survey (NFS) for 1965. Therefore the computer analysis of the demand for food was subject to the same deficiencies, such as sampling error and lack of homogeneous regions, as were the NFS data. Moreover, any findings referred only to the household situation.

From the results, the hypothesis was favoured that location of a household exerts a specific effect on its demands for food, milk, beverages and tea. Indeed, the authors felt that their results suggested that regional preferences for food products do exist but they did not suggest whether these were permanent or transitory. Regional effects may have risen partly because variables correlated with region were omitted from the analysis. It could also have been that, for example, inter-regional differences in milk consumption in 1965 could have arisen from differential regional exposure to milk advertising. Queries of this nature suggest a need for similar investigation over a period of years to substantiate the tentatively drawn conclusion that regional food preferences are the result of inherent differences in tastes and preferences. Not only are the conclusions speculative, but they deal only with the aggregate commodities of food and beverages, (apart from milk and tea).

The regional demand for and consumption of one specific type of food (convenience products) has been documented by a series of publications of the Television Consumer Audit, which began in 1965.


various T.C.A. publications.

The T.C.A. enables advertisers to evaluate the performance of products and brands on a continuous basis by providing a detailed picture of the structure of individual markets, both of advertised foods and drinks, and household products.
The T.C.A. sample from which the purchase data is derived comprises 5,800 households, chosen to be entirely representative of Great Britain, with regional panel sizes sufficiently large to permit separate reporting of nine individual I.T.V. regions (see chapter 4 fig.4.1.). The research technique involves a weekly audit of purchases made in the preceding 7 days, by 400 trained investigators. The physical "pantry check" was designed to reduce reliance on the memory of the panel housewives to a minimum and ensure maximum accuracy of data collection, and to contribute substantially to the continuity of the panel. A wide range of special analyses can also be produced from the basic data obtained about purchases and household characteristics including demographic profiles, sources of purchase, repeat purchasing, brand share predictions, brand preference studies and promotion evaluation.

A major limiting factor of the information available is that it refers only to branded products, the majority of which tend to be convenience foods. The regions differ from those used by other studies, but in addition to this, since much of the research was carried out for specific markets or companies, not all regions are represented in every case.

The most recently published book on the subject of regional preferences (in a variety of commodities in addition to food), (Allen, 1968), contains a wealth of material but lack of supporting and quantifiable evidence make it a dubious source of data for present purposes.


Allen, in a very readable and informative text, discussed the regional "tastes" of the British people in a variety of commodities and habits, including durable goods, dining room furniture, food products, dishes and meal times. He defined a household as "a separate catering unit" and discussed the influence of advertising, tradition, fads and fashions on the "gatekeeper", or household caterer. He examined the correlations between eating patterns and other habits and put forward a number of hypotheses to explain various regional idiosyncracies.

The regional delineations used, differ from the Standard Regions, both Old and New, as well as from configurations used by all other studies.

Although the work contains numerous interesting facts and
explanations, no statistical evidence is presented and as the assessments are subjective and the discussion somewhat superficial; its reliability as a source of hard data is questionable.

The distinction between home catering and "eating out" is very blurred, if defined at all. Nevertheless, being the only publication of this nature it has, on innumerable occasions, served as a rich source of information for the mass media.

(B) LITERATURE REFERRING TO REGIONAL FOOD PREFERENCES IN THE CATERING INDUSTRY

Within the sphere of hospital catering there have only been two surveys to date which attempted to establish patients' actual food or dish preferences. Other studies have merely investigated patients' degree of satisfaction and their attitude to the quality and service of the meals. The sample in a study by Brown et al (1969) was small and numerically weighted in favour of patients in southern England, while the Scottish Hospital Catering School's study (1972) dealt exclusively with Scottish preferences. The findings of these two studies and others of lesser relevance for present purposes are discussed in chapter 9, although their varying aims and methodologies makes comparisons difficult.


Four hundred questionnaires were completed by patients in 21 hospitals in 5 areas: Greater London and the South, the Midlands, North of England, Scotland and Belfast. Pre-specified foods were marked by patients as "liked", "tolerated" or "never eaten". The various foods were rated as to "popularity", i.e. the percentage of people out of the whole sample who expressed a liking for the particular food. Regional tabulations were not prepared but striking regional differences or idiosyncracies were included within the main text.

Unfortunately, the scope of foods was limited and the discussion was superficial and couched in rather general terms. Moreover, the majority of completed questionnaires were received from hospitals in London and the South (160 from 8 hospitals) and comparatively few from Scotland (50 from 3 hospitals) which obviously weighted results and created a bias.
6.11. "Food Preferences of Scottish Hospital Patients". Scottish Hospital Catering School. 1972.

It was felt by the Scottish Hospital Catering School that to cut down on waste, menus ought to contain popular foods, and so one aim of the study was to establish the nature of "favourite" foods. Patients were required to state on a questionnaire whether they had tried, liked, would tolerate or would not eat certain listed food items, and they also had to answer other questions, both of a personal nature and to do with the quality of hospital food. The results of 2773 replies were analysed by computer, and various trends and idiosyncrasies emerged.

Regional dish preferences within Scotland itself became apparent as well as national Scottish likes and dislikes. The results were of course influenced by the need for therapeutic diets, as are all such surveys of hospital patients' preferences. Preferences were merely ranked and no arbitrary values were given to the dishes in order to facilitate more meaningful comparisons of their relative popularities. Of course, the major drawback of the survey was the fact that it referred merely to Scotland, so no direct comparisons with other regions of Britain were possible.

Numerous studies of school catering have been carried out, but almost without exception these refer to the nutritional status of pupils and the benefits, or otherwise, of school food service. No research has been undertaken to discover pupils' preferences in their school meals, despite a recent report of the Department of Education and Science ("Catering in Schools", ISBN 0 II 270323 2, 1975), which in essence says that children should have whatever type of food they want, served in the way they wish. The background literature is reviewed in chapter 8: no source of secondary data can be included here, as to date none exists.

There are two sources of information which deal solely with employee catering and include indications of regional preferences. In 1975 the Industrial Society published the 20th. of their (approximately) annual reports, aimed primarily at documenting canteen costs and prices, none of which deals specifically with dish preferences. In contrast, a Bateman Organization survey (1966), which did consider preferred dishes, is not only limited in scope but is also out of date.

The Industrial Catering Organization, 'Bateman' Ltd., surveyed British eating habits when their researchers reported that caterers were sometimes as much as 20% wrong in their estimation of what the customer wanted. 56,000 employees filled in questionnaires: they included a socio-economic cross section of their employees, a range of ages and both men and women.

Regional delineations coincided with the regional operations of the Bateman Catering Organization and included 'London', 'Southern', 'Northern', 'Midlands', 'Wales', 'Scotland' and 'Northern Ireland'. A national "favourite menu" was constructed from the results and the 21 pre-specified dishes were ranked in order of popularity on the basis of age, sex and region. Significant differences were identified and discussed:

This is the only individual dish orientated study of employees' preferences, but the range of dishes is limited and only the main dish item is mentioned. Although the results are out of date, this survey indicates how a large nationwide organization can acquire this type of information more conveniently than can an individual researcher.


   e.g. 13th survey = 1966
        16th survey = 1972
        20th survey = 1974/5

The prevailing cost of employee food services, the daily number of meals, snacks and beverages currently being served and trends in eating patterns are reviewed in each survey. The percentage of employees daily buying cooked meals, the consumable costs as a percentage of their total income and the expenditure per employee per quarter on all 'canteen' sales are given regionally. In addition the prices of various beverages, complete meals and meal constituents in each region are given. (*)

The regional delineations used in the reports has varied somewhat between publications, but in the 20th., and most recent survey from which most data are taken for present purposes, the configurations are as follows:

region 1.....London Postal Districts.
The regions are therefore unlike those used by any other study, so complicating any comparisons with other findings which it would be desirable to make.

(* Preferences of type of meal and service are indicated by percentage 'take-up' figures, and preferred beverages and snacks are deducable from sales percentages.)

Only a very few studies have been concerned solely with the regional pattern of commercial catering requirements, none of which have investigated dish preferences in depth, being more concerned with distribution of supplies or establishments. The regional concentration of various types of catering outlets does indicate the nature of the food available, which could be a reflection of consumer demand, in part based on food preferences, (see section 6.14.).


In 1960 the Catering Trades Inquiry aimed at providing estimates of capital expenditure and stocks, and an analysis of turnover in catering establishments providing meals, refreshments, drink or accommodation. It formed the basis for a new monthly inquiry with the same aims. The results referred to national figures of the total number of establishments, total turnover and sales, and there was no regional breakdown whatsoever. The 1964 Inquiry was very similar.

In 1969 the Inquiry provided an analysis of the structure of the catering trade in Great Britain and for the first time information was collected on bedroom accommodation. However, institutional catering and small, unlicensed premises were again excluded, but further to this snack bars and restaurants in places of entertainment were also excluded. Tabulated results included analysis of turnover, stocks and capital of all establishments in Britain. There was one regional table: "Establishments, turnover, number of bedrooms by standard region and kinds of business, 1969". Needless to say there was no inclusion of food products or dishes served in the catering establishments reviewed.
6.15. "Convenience Foods and the Caterer". B.I.S. Marketing Research

This report dealt solely with the use of convenience foods in the catering industry. Regional data included distribution of cash-and-carry sales, analysis of convenience food consumption and food purchases by the catering industry. Some discussion was included but there was no breakdown whatsoever into either food groups or individual commodities.


One section of the report dealt with the regional variations in the distribution of restaurants. Although number of outlets, their turnover, their range of size and menu price range were discussed, there was no mention of menu content or choice. The number of foreign restaurants of various types in London was compared with that in the rest of the country as a whole.


In July 1972 Mintel commissioned a survey of take-away food: what was bought and where it was eaten. A much higher buying level was discovered in the northern parts of England as compared to the south. The type of food bought and where it was eaten was analysed in terms of age, sex, social class and also trends were discussed. Unfortunately, a number of regional results were amassed which tended to blur regional distinctions, but at least some differences were apparent.

One series of surveys alone, reported in the Daily Telegraph (1973), dealt with the actual dish preferences of people who eat out for pleasure (i.e. within commercial catering). Similar to other dish-orientated investigations, the scope of dishes was limited and the analysis superficial.


The Daily Telegraph reported the results of four Gallup surveys, in 1947, 1962, 1967 and 1973, all of which posed the question: "If expense were no object, and you could have absolutely anything you wanted, what would you choose for a perfect meal?"

The changing trends of "ideal" meals, presumably eaten "out", were reviewed and some superficial comments made on regional tastes.
A greater number of studies have investigated the 'catering industry' as a whole than have been concerned merely with one sector of it. The earliest such study, containing reliable information, is the series of investigations carried out by Kemsley and Ginsberg (1961). The National Catering Inquiry initiated another series of investigations of consumers' behaviour in the field of catering in 1965 (6.20.).


In 1961 the Central Office of Information published four surveys of consumer expenditure on meals in catering establishments, two of which were carried out in May and September 1949, and the others in March 1951 and June 1956.

The object of all four inquiries was to provide an estimate of personal expenditure on food consumed in catering establishments. However, considerable additional material was gathered during the surveys, some relating to food preferences.

In May and September 1949 the majority of analyses were in terms of income group and included domestic food purchase, shopping habits, eating at work and other meals consumed outside the home. However, apart from the economic aspect of food consumption, "personal attitude to food" was also considered, primarily in terms of health and nutrition, and also the number of people choosing particular foods, tabulated under broad categories. Although the random sample of 3,000 individuals was regionally representative none of the results were so analysed.

In March 1951 analyses of meal expenditure were again carried out, but in addition eating out habits were also considered, in terms of sex, industry, type of meal and place of consumption among the 3,500 individuals constituting the sample.

In June 1956 the food expenditure of 1617 individuals, domestically and within branches of the catering industry, was analysed. For the first time use of meal vouchers was recorded and a small concession was made to regionalization: weekly food expenditure, meal expenditure and number of meals 'out' by type of establishment were considered in terms of 'London only' and 'rest of G.B.'.

The value of these four inquiries lies in the trends which they highlight in terms of nationwide expenditure and willingness to
eat out, at least twenty years ago: an otherwise poorly documented subject.

The National Catering Inquiry was established in 1965 to research information which the catering industry would need both for solving current problems in food and equipment and for planning future developments and strategies. Since that date a number of specific areas within the industry have been studied and the findings published as reports, containing varying amounts of information pertinent to regional food preferences. Much of the research was carried out by "Research Bureau Ltd."

One drawback of the reports is the varying degree of regional analysis of data, which, when it does appear is based on extremely small, unrepresentative samples. Furthermore, discussions of findings are in the most general and superficial terms, and so hardly sufficiently detailed for present purposes.


6.20.1. 'The British Eating Out' (1966)

Many thousand separate questionnaires inquiring into food choice and its influencing factors, were sent to customers and to caterers in each of seven urban centres of Britain, which included Liverpool, Edinburgh, Birmingham, Leeds, Torquay, London and Cardiff. Both the industrial and commercial catering sectors were examined but results were rarely defined to illustrate distinctions between the two. Frequency of "eating out" was presented in a regional tabulation, as were 'type of establishment' and 'type of service' chosen. Regional reactions to "closing times" were also tabulated. The customers' choices of dish constituents were compared with the caterers' opinions on a regional basis; while choice of drink was analysed regionally only on the basis of consumer choice. Equipment, food buying and preparation were also examined regionally, but only on the bases of the caterers' questionnaires.

This report was criticized for lack of information on consumers' socio-economic status and the influence of price on choice, and so a supplementary report was published in 1967, which dealt with these specific points.
6.20.2. 'Food Choice and Price'. (1967). A Supplementary report to 'The British Eating Out'.

Unfortunately for present purposes, the findings were of limited use as the only regional analyses were comparisons of samples in London and Leeds, although they were in terms of dish, and dish item, choice.

6.20.3. 'The British Eating Out On Holiday' (1967)

The results of 1,400 completed questionnaires were presented to various meetings of caterers, and the report was compiled as a result of these meetings. It was intended to reveal interesting attitudes and to underline trends. Holidays taken in Britain, by the British, were analysed regionally in terms of holiday locations. However, results relating to the food consumed were only given in terms of the age, social class or family composition of the holiday-makers: not in terms of regions. Moreover, only the time, quality and degree of variety of meals were considered, not the content.

6.20.4. 'The British Eating Out at Breakfast.' (1968)

Tabulations were included of customers' region of "home residence" and region of "staying away from home." Preference for early morning tea, choice of breakfast beverage and satisfaction with early breakfast arrangements were presented by region, but preferred breakfast dishes were only analysed in terms of catering establishments.

6.20.5. 'The Visitor Eating Out in Britain'. (1969)

Regions were primarily mentioned in terms of visitors' destinations and rarely as regards food. The possible tourist attraction of traditional regional British dishes was hardly mentioned, apart from brief references to haggis and scotch whisky.

6.20.6. 'Vegetable Cookery in Britain'. (1970)

Although individual vegetables were ranked according to their popularity and frequency of service, no mention was made of any regional preferences.


A very superficial consideration of desired type of "pub food" was included, which led to the conclusion that it was at its "best"
in the "south".

6.20.8. 'The British Eating Out at Work'. (1972/3)

Some analyses, such as preference for certain food commodities and subjective estimation of the quality of food, were presented regionally, although only in terms of "south", "midlands" and "north".


The report provided an analysis of meal requirements and the potential for convenience foods and services in the U.K. catering market. A summary of the national catering market (1971) was provided along with various regional tabulations such as population, number of school meals, restaurants and hotels. A discussion of "regional differences" in food likes was included but was of a very superficial nature and not substantiated by statistical evidence.


Two similar surveys had previously been carried out in 1965 and 1967. The object of the 1972 survey was to describe catering units, their products and equipment, and provide a viable sampling frame for further detailed investigations. On a regional basis, all identifiable catering outlets, which served food to the public or a special sub-section thereof, were visited by interviewers. The regional delineations used were those of the Registrar General's Standard Regions. Numbers of units and products used by the caterers were analysed by type of unit and region. Unfortunately, however, products were not analysed regionally within outlet categories.

The varied nature, in terms of quantity, quality and regional delineations, of secondary published data referring to regional food/dish preferences within the catering industry, creates extreme difficulties for comparing findings and establishing contrasts and trends. This is clearly demonstrated in an econometric study of eating out patterns in Britain, (Bryn Jones, 1970).


1970 - 1980". New University Education.

The research was devoted to a study of the economic and social factors which influence the demand for meals bought away from
the home in the decade 1970-1980. For the first time the results of a rigorous analysis of the determinants of the demand for meals away from home were brought together and found to confirm the close relationship between people's income and their expenditure on eating out.

Econometric demand analysis was undertaken, both in terms of family budget analysis specifically related to meals bought away from home, with 'preferences' (by which was meant the non-economic determinants of expenditure) as one of the variables used; and also in terms of analysis of time series. Empirical demand analysis was carried out in relation to a number of determinants: one being location, and specifically region. A third and final section dealt with forecasting needs and problems of the catering industry during the 1970's.

The whole question of regional influences was however ultimately "only examined in the most general terms", as the benefit to be derived from discussing previous surveys, each within its own regional delineations, was "thought not to justify the effort involved". Indeed, the firm conclusion drawn was that London was quite distinct: "for a given increase in income, people living in London will spend proportionally more on meals away from home than people living elsewhere". Although regional considerations were extremely superficial, other determinants of "eating out" such as age, occupation, household composition, income, mobility, etc., were examined in more depth and the conclusions proved to be of background relevance for present purposes.

The findings of the most recent study of eating out patterns (including food preferences) within various branches of the catering industry, were first published in February 1975 (H&C, EDC, 1975/6). Again omission of detailed dish choice means that the findings are too superficial to be of any great significance for present purposes.


"Trends in Catering" reports were based on findings from a continuous study of eating out in Great Britain, compiled for the Hotels and Catering E.D.C. under the guidance of the Catering Industry Study group, with Social Surveys (Gallup Poll) Ltd., being responsible
for the fieldwork and computer tabulations. The first quarterly report, for the period April to June 1974, was published in February 1975.

The aim was to determine the demand for meals and snacks consumed away from home and for take-away meals, all in terms of people, meal occasions and expenditure, and in due time to compare findings and clarify trends.

The survey covered the resident population of Britain as represented by all individuals aged 11 years and over. Each month 220 randomly selected and nationally representative households were interviewed using a fully structured questionnaire, and basic information on patterns of eating out were collected by use of a four-week diary. The annual 2400 sample was sufficient to produce statistical 'breakdowns', relevant to the catering industry, in terms of region, social class, age, family size, season, various lengths of time and type of establishment, which were discussed in light of the prevailing economic climate.

Each quarterly report discussed nine principal features of the national pattern of eating out, as revealed in terms of "people" (i.e. total population covered by the survey), "meal occasions" (full meals or snacks recorded as "eating out") and "personal expenditure" (recorded as spent on meals "eaten out"); and also in terms of catering sectors (purely commercial, at place of work and institutional (in fact primarily educational)). The first annual report included a further nine questionnaire data analyses, while the "meal occasions" category was subdivided into main meals and snacks. Of the nine major analyses, the most relevant to regional food preferences were (a) "what courses did the meal consist of" and (b) "main course was...".

Quarterly compilations of computer tables, in absolute figures and in percentages, were divided into three sections: "person weeks" (the number of people who have eaten out, under specified circumstances, during an average week in the quarter), "meal occasions" (per average week), and "expenditure" (per average week).

Statistics of constituent "courses of the meal" and what the "main course was", as well as other information on type of occasion and establishment, location, payment, et cetera, were included in all three sections.
The five regional delineations were as follows:

- Scotland
- Eastern England
- W. Pennines and Wales
- Metropolitan London
- South East and South West

(All regional data referred to where people live, as opposed to where they consume meals.)

The "regions" were too large geographically to be able to identify distinctly regional trends, and furthermore "regional" data referred merely to "eating out", and not to one particular catering sector.

Moreover, categories of the constituents of the main meal were very broad, consisting only of "meat excluding bacon", "poultry", "fish/shell-fish", "fry/grill", "omelettes/egg", "other dishes" and "snack only." No dessert items or dishes of any other meals were mentioned and so indications of regional dish preferences were very severely limited. Although a revised questionnaire was used for the fifth quarter's fieldwork, the problem of very broad food groupings remained unresolved.

Considerable information was made available on national eating out patterns, but little was regional in nature and even less was pertinent to regional food or dish preferences. A survey of this nature needs completion of several years' research for discernible trends and more relevant regional information to emerge.

6.25. Use of secondary data.

A number of references, which do not attempt to identify regional food preferences, are nevertheless important because they do establish that there is a regional effect upon consumer behaviour in the fields of household food choice and also "eating out". The analyses of Thomas (1972) and Bryn Jones (1970) are most conspicuous in this respect, although as early as 1955 Prais & Houthakker had postulated that "regional factors in consumption...may result from differences...in tastes"; and Ferber, in 1962, having inferred that
there is a specific regional effect on consumer behaviour, like many other researchers, omitted to define or explain it.

The primary problem encountered when drawing upon sources of secondary data is lack of regional homogeneity among the various studies. A few pieces of work use the Registrar General's Standard regions, identical to the present food preferences regions, but the majority derive and use their own regional delineations, none of which make the related statistics readily comparable.

A drawback common to many of the sources of data is the superficial terms in which findings are couched. Regional food preferences are more often discussed in terms of food groups rather than commodities, and often only refer to the primary main dish items, and the resulting lack of detail and exhaustive investigations render much work almost valueless for present purposes.

The National Food Survey Committee provides the most substantial source of detailed data within the scope of household regional food preferences in their annual reports (section 6.5.), and furthermore use the same regions as are employed for present purposes. The Television Consumer Audit statistics (section 6.8.) serve as the second most useful source of household-related data, being both recent and independently collated with reference to discernible areas of Britain.

The most fruitful source of information in relation to the food preferences within the commercial and employee catering industries is that of the 'Trends in Catering' study of eating out (H&C, EDC, 1975/6), (section 6.24.). Similar to both the National Food Survey and T.C.A. reports, the information is recent, but in contrast the 'Trends in Catering' regions are too large and conglomerate to indicate detailed differences between areas of Britain which are usually distinct.

No equivalent sources of secondary information are available in the spheres of nationwide regional school and hospital meal food preferences.
PART II: RESEARCH.
CHAPTER 7

REGIONAL HOUSEHOLD
FOOD PREFERENCES.

7.1. Definition of Household Food Preferences.

The food preferences of a household are defined for present purposes as the foods chosen for consumption by the household caterer (usually the housewife) and subsequently consumed in the home by members of that household. Food consumption has been established to be both a reasonably reliable indicator of preference and a convenient statistic to acquire (Pilgrim, 1961).

The foods obtained for household consumption include food purchases and garden and allotment produce, but exclude meals, soft and alcoholic drink and sugar confectionery purchased and eaten outside the household. For the purposes of the present study a household consists of a separate catering unit comprised of the resident persons who eat at least one meal a day from the household food supply on at least four days of the week (M.A.F.F. definition, 1975).

7.2. Previous studies of regional household food preferences.

The principal sources of secondary published data on household regional food preferences are reviewed in chapter 6, part (A).

The main source of data is the annual reports of the National Food Survey Committee, published as "Household Food Consumption and Expenditure: 19..", by the Ministry of Agriculture, Fisheries and Food (M.A.F.F.), (chapter 6, section 6.5.). The figures for 1973 were available in mid 1975.

Another source of household food consumption data, although limited in its scope, is the Television Consumer Audit (T.C.A.), (chapter 6, section 6.8.), which provides a detailed picture of the advertised foods and drinks markets in various regions of Britain.

A third source of fragmentary and often superficial information on regional household food preferences is to be found in a number of independent and commercial pieces of research. Some studies may be carried out by food manufacturers, wholesalers, retail chains or other interested parties, and so are usually confined to a limited number of commodities; (e.g. I.P.C. Marketing Manual, 1973).

The results of an earlier market research study are to be
found in the 1958 publication, "The Foods We Eat", edited by G.C. Warren (chapter 6, section 6.3.).

Between January and June, 1972, the British Market Research Bureau carried out a "menu survey" of 4,200 homes. Housewives were questioned about all cooking and eating in the home during the previous day, and some of the data which emerged were comparable with those produced by Warren, 1958 (chapter 6, section 6.4.).

7.3. Implications of Previous Studies.

The amassed data of previous research indicate that there are regional differences in household food consumption patterns within Britain, so implying the existence of distinct regional food preferences.

July 1954, when food rationing in Britain finally ended after World War II, marked the beginning of a new period of free conditions in the food market when food preferences could again influence consumption. Up to this date the housewife had been constrained in her choice over a large proportion of her food budget, during fourteen years of restraint and shortage of supplies. It appears that the nutritional pattern of the national food supply, after wartime and postwar changes, may have reached something like stability by 1956 (Hollingsworth, 1961). The present inquiry seeks to discover the pattern of household food consumption in the various regions of Britain since the end of rationing (1954), that is, over the past two decades. An examination of the National Food Survey data over this period would reveal regional differences of consumption, both within the main food groups and individual commodities.

Furthermore, the majority of M.A.F.F. data published to date refer to British regional food preferences prior to entry into the European Economic Community, but the 1973 annual report (published 1975), describes the levels of food consumption, expenditure, prices and nutrition in private households during the first year of membership of the E.E.C., so making some limited comparison of the pre- and post-E.E.C. membership situation possible.

7.4. Methodology of research into regional household food preferences.

7.4.1. Data source.

The present study is primarily concerned with regional food preferences within the branches of the catering industry and so lengthy investigations into the household situation would not be
commensurate with this aim.  

Populations which have been researched in other surveys (M.A.F.F., annual reports; Warren, 1958; Bird & Mills, 1972), were far larger than would have been possible within the scope of the present inquiry, and a summary of necessary data is therefore gathered from published sources. Original data have not been gathered to investigate regional food preferences in the home: secondary sources of published data are relied upon in this chapter.

7.4.2. Limitations of secondary data.

Complete reliance upon secondary sources of data perpetuates the initial individual limitations of these various surveys (as reviewed in chapter 6, section A.).

Additional limitations become apparent when comparisons are attempted between data of various sources: aims, methodologies and sample compositions and sizes differ, the type of information and its degree of detail differs and there is a marked lack of similarity of regional delineations.

The primary drawback of the M.A.F.F. data for present purposes is the fact that the Registrar General's Standard Regions are used and these changed in 1970 and 1974, so eliminating continuity of comparable data. Therefore certain regions (Y&H, NW, and EM, and SE & EA) are amalgamated to facilitate comparisons of time series data: these amalgamations have identical delineations to the present food preference regions (fig. 4.2.) similarly amalgamated.

The present inquiry is concerned with regional preferences of food commodities, not individual brands, which are the primary concern of the Television Consumer Audit. Therefore it is necessary to derive pertinent statistics from the raw T.C.A. data, in order to indicate the regional market percentages for individual commodities. Furthermore, the T.C.A. data refer to the Independent Television regions, (fig.4.1., map 7.), so making comparisons with M.A.F.F. data difficult.

The T.C.A. and other surveys suffer from the constraints of limited investigation into a small section of the household food market; while the results of other pieces of research (e.g. Crawford & Broadley, 1938 (6.1.); Wright, 1958(6.2.); and Warren, 1958(6.3.)), are now out of date.

7.4.3. Chapter content.

This chapter examines regional food preferences in terms of the basic variables of:

- consumption of food groups and commodities (ounces per person per week);
intake of nutrients (percentage of recommended intake per person per day); and household food expenditure (per average week).

A consideration of feeding habits is included selectively within individual profiles of each region's food preferences (section 7.8).

Food consumption, nutrient intake and food expenditure data are drawn primarily from the National Food Survey annual reports (M.A.F.F., 1955 - 1973), and are presented diagrammatically with supporting text. However, more detailed information relating to convenience commodities is derived from the T.C.A. statistics, which is presented in histogram form in appendix 7 but is descriptively included within the text of the main chapter. The information relating to regional feeding habits is drawn from a number of sources.

7.5. Regional Household Food Consumption.

Generally it can be said that carbohydrate consumption all over Britain has fallen since 1955, while protein consumption has risen. This, however, is a very broad statement and might well be expected to parallel a rising living standard. More specifically consumption of meat, cheese and fruit has risen over the last two decades: that of fish, vegetables, cereals and sugar has fallen.

Meat. Figure 7.1.1. shows increasing national average meat consumption between 1955 and 1970, followed by a subsequent fall. Differences are seen inter-regionally: meat consumption is comparatively low in Scotland, but high in London. There is an increasing preference for beef on travelling north from London, and vice versa for lamb (Matheson & Philpott, 1969; fig.7.1.2.). Pork consumption is particularly high in the West Midlands, but exceptionally low in Scotland (fig.7.1.2.).

The cuts of meat chosen also differ regionally: purchases of joints "on the bone" are most prevalent in Wales, Scotland and to a lesser extent, southern England, perhaps associated with possession of a deep freezer. Beef steak consumption is high everywhere except in the South West. Scots purchase most minced beef: the Welsh and Midlanders the least. Veal is only eaten in London, and mutton only in Scotland, the North West and East Midlands. Lamb joints predominate in England and Wales: chops in Scotland. Pork joints are preferred
in London and the South West; chops in Scotland and the North West but fillets in Wales and the West Midlands (MAFF, 1974).

Canned meat is particularly popular in the North, North West and Wales, and corned meat in the North. Cooked bacon and ham are most popular in the West Midlands and Wales (MAFF, 1975; IPC, 1973) and cooked poultry in Scotland (MAFF, 1975). 41% of Scots' households can be classed as "heavy users" of beef sausages (IPC, 1973). Meat extracts are mostly used in the South East and in London particularly (fig. A.7.1.).

Cheese. National average consumption of cheese rose steadily from 1955 to 1973 (fig. 7.1.3.), apart from a slight fall in 1972. Sharp geographical distinctions can be seen, cheese being markedly more popular in the south and Midlands than in the North and Scotland. Cheddar-type cheese is the predominant variety although in the north other British varieties take precedence. Consumption of soft cheese and continental hard cheese are much greater in London and the South East, but low in provincial conurbations (MAFF 1974).

Fruit. Average consumption of fresh and total fruit rose from 1955 to 1971, but dropped sharply in 1972 and 1973 (fig. 7.1.4.). Throughout this period consumption of fresh fruit, particularly oranges and other citrus fruit, bananas and rhubarb has been highest in the South East/East Anglia and lowest in the North. The Scots consume the least apples, pears and soft fruit, and the South East/East Anglia the most. Soft fruit consumption is highest in East Anglia where the light fertile soil is best suited to its production. Stone-fruit is most popular in the South West. The Welsh and East Midlanders enjoy grapes. Fresh tomatoes are most popular in the South East, especially in London. Tinned fruit is popular in the North West and Wales and quick frozen fruit in Wales alone, while fruit juices are drunk mostly in London. Dried fruits are unpopular in Scotland and the North, but are consumed more in Yorkshire & Humberside and the South East/East Anglia (MAFF data). Nuts are popular in London, but not in the rest of the South East, Scotland and Wales, (fig. A.7.1.).

Fish. In direct contrast to the consumption of meat, national average fish consumption has fallen steadily since 1955 (fig. 7.2.1.). However, throughout this period people in the North and Yorkshire & Humberside consumed by far the most fish. White fish is popular in
Scotland, unfilleted herring and shellfish in London and the South East, tinned fish in the West Midlands and South East and canned salmon in the East and West Midlands. Cooked fish is indisputably most popular in Yorkshire and Humberside (MAFF 1975). Frozen fish is popular in Wales (MAFF 1975), but more specifically fish fingers and fish cakes are particularly popular in Scotland, fish fillets in London and fish steaks in Lancashire (fig.A.7.1.).

Vegetables. The national average total vegetable consumption fell gradually between 1955 and 1972 but rose again in 1973: potato consumption fell continuously (fig.7.2.3.). Potatoes have throughout the last twenty years been consistently most popular in the North. Total fresh green vegetables are consumed the most in the southern regions and by far the least in Scotland (fig.7.2.2.). Brussel sprouts and cauliflower are somewhat more popular in the East Midlands, but quick frozen peas and beans in the South East, especially in London. Most canned peas are consumed in the North and most canned beans in Scotland.

Vegetables, other than green ones, are most popular in Wales and London, and least in Scotland, but fresh carrots are consumed most in the North West. Fresh mushrooms, tomatoes and cucumbers find most favour in the South East/East Anglia, and fresh onions, shallots and leeks in Yorkshire and Humberside. Most canned and bottled tomatoes are consumed in the East Midlands and most other canned vegetables in the South West. Most air-dried vegetables are also eaten in Scotland (MAFF 1975). Canned baked beans, very much a convenience 'vegetable', find a market in all regions, particularly in London and northern regions (fig.A.7.1.).

Convenience forms of the potato have become more widely used in recent years. The North West, South West and the East Midlands provide a ready market for instant potato, while most canned potatoes are consumed in London (MAFF, 1975; fig.A.7.1.) and most prepared "chips" in Yorkshire & Humberside (MAFF, 1975). Most crisps and other potato products are eaten in the South West (MAFF, 1975). The market for 'other' savoury snacks, including puffed potato products, has been growing rapidly since 1970, but remains relatively small and primarily in the south (IPC, 1973).

Sugar and preserves. The greatest consumers of sugar and preserves
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are to be found in the West Midlands (fig.7.2.4.). Although consumption has fallen over the last twenty years in all regions, the lowest level has been reached in southern regions. Consumption of sugar alone is also highest in the West Midlands, but lowest in Scotland and London. Scots eat the most jams: the Welsh the least. In contrast, marmalade consumption is lowest in Scotland, but highest in Wales. Syrup and treacle are most popular in the North, but least in Wales (MAFF 1975). 19% of Scots are 'heavy' consumers of chocolate covered bars of confectionery, 6% in the North West particularly enjoy toffees and caramels, while 9% of northerners chew a lot of "gum" (IPC,1973).

Cereals. The national average consumption of all cereals (fig.7.3.1.) has fallen considerably over the past twenty years, although the South East/East Anglia has always had the lowest consumption and Scotland the highest.

This trend is in part due to a significant decline in bread consumption (fig.7.3.2.). Wales, Scotland and the northern regions consume more bread than southern England. Wholewheat and wholemeal bread however are popular in the south: indeed all "health" foods have a higher consumption in the South East than elsewhere (Allen, 1968). Brown bread is by far most popular in the North of England. Most unsliced white bread is consumed in Wales and the South West and the least in the North (MAFF,1975). Fewest sliced loaves are consumed in the south, but most in Scotland, the North West and Midlands (fig.A.7.4.; MAFF,1975). Indeed in the South East only 15% of housewives are considered as 'heavy' users of wrapped bread, compared to a national average of 22% (IPC,1973). The greatest market for dietary loaves is in London: obviously slimmers are concentrated here (fig. A.7.3.).

Due to the decline in home baking, less flour is bought now: in London only 27% are heavy users compared to a national average of 36% (IPC,1973). Cereal products, such as cakes, pastries and biscuits are bought ready-made, and could be classed as convenience foods. Today these are consumed most of all in the South West, most chocolate biscuits are consumed in Scotland and most crispbread in the south (MAFF,1975). 22% of Scottish housewives are 'heavy' users of chocolate and wholemeal biscuits (IPC,1973). Buns, scones and teacakes find greatest popularity in the North (MAFF,1975), and tarts and fruit and mince pies are particularly popular in the Television regions of Anglia, Wales and the South West (fig.A.7.2.).
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Generally, the north of the country can be said to be fonder of desserts than the south. Canned milk puddings find favour in Yorkshire and Lancashire, while Scots and Northerners prefer the home-made variety (fig.A.7.2.; MAFF,1975).

Pasta is considered very much as a "new" food product in Britain: to such an extent that no such category is to be found in the MAFF data up to, and including, the 1973 statistics. However, there is a considerable market for it in London: in the Midlands spaghetti is preferred but in Yorkshire, ravioli (fig.A.7.3.).

Breakfast cereals are consumed most in the North West and Wales (MAFF,1975), although the Scots are particularly heavy seasonal users of hot breakfast cereals (IPC,1973).

Eggs, milk and cream. The national average consumption of both eggs and liquid milk & cream reached a maximum in 1965 (fig.7.3.3. and fig.7.3.4.), having risen steadily since 1955: that of eggs fell progressively while that of milk and cream varied, to return to almost the 1965 level in 1973.

Eggs are most popular in the North and Scotland (fig.7.3.3.), while milk consumption has been lowest in the North, Scotland and also Wales (fig.7.3.4.). Instant milk is consumed most in the East Midlands, while condensed milk finds popularity in the South East, and dried milk in the North (MAFF,1975). Cream is particularly enjoyed in all southern regions but yoghurt in the South East and London only. Ice-cream is a popular dessert in Wales and the South East/East Anglia, but not in Yorkshire and Humberside (MAFF,1975).

Fats and oils. Wales is, and always has been, the region of highest total fat consumption (fig.7.4.1.): Scotland has been just the opposite. The national average consumption of fats rose from 1955 to 1960, fell in 1965, rose again in 1970 and then fell dramatically in all regions, only to rise again everywhere in 1973, except in London and the South East/East Anglia.

Butter consumption in Wales is considerably greater than elsewhere, while most margarine is eaten in the North and the least in London and the South East (MAFF,1975). Danish butter is most popular in the North and West Midlands but New Zealand butter in Wales and the South West, while consumption of UK butter tends to be inversely related to the degree of urbanization. Soft margarine is most
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popular in the northern and Midland regions where butter consumption is low. Purchases of cooking oil are greatest in London, the South East and Wales, and least in Scotland and northern England where the more traditional cooking fats are still preferred (MAFF, 1974). Indeed, lard and cooking fat are mostly used in the bastion of home-baking: Yorkshire and Humberside. Vegetable and salad oils find their greatest market in the West Midlands, and other fats, including suet, find greatest popularity in the South West (MAFF, 1975).

Salt. Salt usage seems to have been consistently low in the North until 1973; otherwise significant regional trends are not apparent (fig. 7.4.2.).

Pickles and sauces find greatest popularity in London, the Midlands, Wales and Scotland (MAFF, 1975; fig. A.7.4.). In fact, 15% of Scots are 'heavy' users of tomato ketchup (IPC, 1973). Most spreads and dressings are consumed in the South East/East Anglia (MAFF, 1975).

Convenience foods. The national average consumption of convenience foods rose dramatically between 1955 and 1970, dropped slightly in 1971, then continued to rise again (fig. 7.4.3.).

The term "convenience food" covers many products, including cooked bacon, ham and poultry, canned meats, meat pies; cooked, canned, bottled and frozen fish; canned bottled, air-dried and frozen fruit and vegetables; cakes, pastries, biscuits breakfast cereals and canned puddings; instant beverages; canned and bottled infant and slimming foods; canned and powdered soups; all other quick frozen products and "instant", "complete" meals (MAFF definition, 1975).

Most convenience foods are consumed in the North and the least in the South West. Scotland provides the largest market for canned soups and Wales for packet soups (MAFF, 1975; fig. A.7.4.).

Frozen foods in general find greater acceptance in the South East, especially London, than in the North East and Scotland (IPC, 1973). 'Complete' dishes are a fairly recent innovation, but have found most popularity in and around London and least in Scotland, East Anglia and the North East (fig. A.7.4.).

Cake mixes are more readily accepted in the South (where 13% of housewives are termed "heavy" users) than in the North. Within this market special offers, competitions and other promotional techniques play a major role in the selling of the branded products (IPC, 1973).
Beverages. Hot beverages are extremely unpopular in Scotland but are most popular in the West Midlands (fig.7.4.4.). The national average consumption rose from 1955 to 1960, then fell considerably, rose by 1970, only to fall steadily again. Tea is most popular in the North West and Yorkshire & Humberside. Coffee is drunk mostly in the South East and London, most 'heavy' users of ground coffee being found in London and of instant coffee in the North and South East (MAFF,1975). There is an above average acceptance of tea bags in Scotland but below average in the South West and Wales. Most branded food drinks are consumed in the West Midlands (MAFF,1975;fig.A.7.4.). There appears to be a rather "upscale" bias towards drinking chocolate and "downscale" toward cocoa (IPC,1973). Hot milk drinks are particularly unpopular in Scotland and the North East, although an above average number of adult Scots drink cold milk (Allen,1968).

Seasonality is a significant consideration in the consumption of soft drinks. Of the fruit squashes, orange is the most popular, followed by lemon, grapefruit and lime, in that order in all regions (fig.A.7.4.). Among adults, 'fizzy' drinks are popular in Scotland, but not in the south of England.

In London in particular (and to a lesser extent in the South East) are found the 'heavy' consumers of aperitifs, sherry, table wines, liqueurs and gin. As might be expected the Scots drink most whisky, while rum consumption is greatest in the North of England. Scotland has a very low consumption of cider and sparkling wines (IPC,1973), but more beer is drunk in the Midlands than elsewhere (Allen, 1968).

Both national and regional trends have indicated a rising consumption of protein foods and a fall in the level of carbohydrate consumption, with a recent decline in fat intake too. Convenience foods have increased their market considerably, especially by appealing to the working wives of the North and the single-person households of London's 'bed-sitter land'.

7.6. Regional Household Nutrient Intake.

In order to discover the nutritional effects of the changing and differing patterns of food intake over the country, regional levels of nutrient intake need brief consideration.

The recommended nutrient intakes per person per day are derived from figures of adequacy estimated by the Department of Health.
and Social Security (1969), (Appendix 2, fig.A.2.2.), and the regional household nutrient intakes, expressed as percentages of those recommended intake levels, indicate that all the regional diets are adequate although they do differ. Figures 7.5. and 7.6. give details of regional intake of nutrients and energy value as a percentage of recommended intake, for the years 1955 to 1973 inclusive.

Figures 7.5.1. and 7.5.2. show that protein consumption increased over the period 1955 - 1973, while carbohydrate consumption declined markedly. Figure 7.5.3. shows the regional intake of energy value to be highest in London. High consumption of liquid milk, carcase meat and fish in London accounts for the above average intake of animal protein. The high butter consumption in Wales and the low consumption of cooking fats in Scotland are the main causes of high and low estimates of total fat intake in these countries. The large consumption of cereals in Scotland, flour and bread in rural areas, and their small consumption in the South East is mainly responsible for differing carbohydrate intakes (fig.7.5.1.).

High milk and cheese consumption in the southern regions, and low averages in the North explain the high and low calcium intake estimates (fig.7.5.4.). The rural areas have low averages for milk and cheese but these are offset by their relatively large consumption of flour and bread.

The high thiamin values in London and the Midlands and low Scottish values (fig.7.5.5.) are mainly the result of high and low consumption of pork and other forms of pig meat.

The high consumption of bread, flour and beef in the Northern diet are the main causes of its relatively high iron content (fig.7.5.6.).

Differences in riboflavin intake (fig.7.6.1.) arise mainly from differences in milk consumption which is particularly low among Scots; and their relatively small overall consumption of meat largely explains their low intake of nicotinic acid (fig.7.6.2.).

The consistently large consumption of fruit and green vegetables in London and the small consumption in Scotland, the North and rural areas leads to the differences in vitamin C intake (fig.7.6.3.). The relatively high intake of vitamin C in the Midlands in 1955-60 was the result of high potato consumption.

The consistently large consumption of dairy products, liver
FIG. 7.5. REGIONAL HOUSEHOLD NUTRIENT INTAKE, per person per day; 1955—1973.

(1) Regional percentage of Energy Value derived from Protein Fat & Carbohydrate; 1960 & 73-4.

(source: M.A.F.F., relevant years)

<table>
<thead>
<tr>
<th>Protein</th>
<th>1960</th>
<th>1973-4</th>
<th>11-0</th>
<th>11-6</th>
<th>11-5</th>
<th>11-2</th>
<th>11-4</th>
<th>11-3</th>
<th>11-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrate</td>
<td>1960</td>
<td>1973-4</td>
<td>49-3</td>
<td>49-0</td>
<td>49-2</td>
<td>48-9</td>
<td>49-6</td>
<td>49-0</td>
<td></td>
</tr>
</tbody>
</table>

(2) Regional PROTEIN intake

(3) Regional ENERGY intake

(4) Regional CALCIUM intake

(5) Regional THIAMIN intake

(6) Regional IRON intake

(No data available on thiamin intake in 1955.)
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and green vegetables in London and the South East, and of carrots in the North West, explain the high vitamin A intakes in those regions, while the small consumption of dairy products, green vegetables and tomatoes are the main causes of the relatively low northern intakes (fig.7.6.4.).

Margarine consumption, consistently large in the North and small in Wales and the South West, explains the high and low intakes of vitamin D (fig.7.6.5.). All dietary intakes of vitamin D are consistently low, but supply of this nutrient is not inadequate as most adults obtain all they need from the action of sunlight on the skin.

The reason for the stability of nutrient intake between regions, in contrast to the wide variations which occur in the types of food eaten, is that consumption of only a few foods diverges markedly from the national average, and these foods tend to be replaced by others of similar type and nutrient content. Various fats are interchangeable as are the various meats: the most variable being mutton and lamb, pork and poultry (fig.7.1.2.); this has little effect on nutrient intake.

7.7. Regional Household Food Expenditure.

Statistics referring to expenditure on food for home consumption can be presented in a variety of ways: for brevity a summary of the data is presented in graphical form (fig.7.7.).

Figure 7.7.1. gives the regional average weekly household food expenditure from 1955 to 1974. Fig.7.7.2.1. gives the value of the food consumed per region adjusted to a common level of food prices, thus reflecting differences in quantity and pattern of food purchased, while fig.7.7.2.2. gives the actual regional household expenditure on food as a percentage of that in all households.

Figure 7.7.2.4. shows the changing regional "price index" of food: this index is derived by valuing the national diet at the average prices paid in each region and expressing each result as a percentage of the cost of the national diet at national prices. The "price of energy" indices, shown in fig.7.7.2.3., differ from the price indices because they take into account the regional variations in consumer choice of food. These indices (fig.7.7.2.3.) therefore display much greater variations than the food price index, being affected not only by variations in the prices paid for food, but also
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(and mainly) by differences in dietary patterns. In any one region these two factors may, or may not be, complementary.

The average level of food prices paid by housewives is highest in Scotland and Wales, especially for fruit, fresh green vegetables, fish and some cereal products and in Scotland for fresh meat and bacon. Food prices have generally been lowest in the South West. As some people in the South West grow their own fresh green vegetables and potatoes, these are well above the average consumption but well below for expenditure, as they are "free". Regional expenditure infact varies directly with degree of urbanization, while the value of "free food" varies inversely.

The "price of energy" index (fig.7.7.2.3.) shows that although housewives in Scotland pay food prices which are above those in the whole of Britain, they obtain their calories more cheaply because of their greater reliance on the less expensive sources of energy such as potatoes, oatmeal and bread. Conversely, housewives in the South East, and particularly London, have the opportunity to buy many foods at prices near the average, but they devote a greater proportion of their expenditure to the more expensive sources of energy such as fresh fruit, green vegetables and carcass meat, so that the cost per calorie of their diet is above the national average.

The proportion of total household expenditure devoted to convenience foods is least in London, is slightly higher in the South East/East Anglia but is highest in the North.

The broad characteristics of regional expenditure on food, as dictated by dietary pattern variations and price differences, remained similar throughout the 1960 - 1973 period (MAFF,1975).

7.8. Conclusions:

7.8.1. Wales.

In Wales purchases of butter, cooking fat, lamb, bacon, flour, sugar and tea are well above the average for Britain, while those of margarine, beef, fish, flour confectionery, milk, cheese and coffee are well below. Consumption of bread and preserves is relatively high.

The contribution of dietary calories from protein is lowest in Wales: infact the low consumption of beef and veal, milk and fish causes the low animal protein intake. The unpopularity of margarine results in low vitamin D values, whilst low milk consumption
accounts for low calcium and riboflavin intakes, although milk does feature significantly in the region's cooking. However, fat intake is very high as butter is markedly more popular than elsewhere, and especially the salty UK varieties.

Joints of meat "on the bone" tend to be purchased in preference to other cuts (MAFF, 1974) and unlike Scotland, made-up meat products tend to be avoided (Allen, 1968). The unpopularity of soup and porridge is also more like England than Scotland (Allen, 1968).

Generally food prices, food expenditure and value of consumption in Wales are above the national average, but the "price of energy" index of all foods is below.

7.8.2. Scotland.

In Scotland consumption of meat is lower than elsewhere; only consumption of beef and 'other meats' (often mince) being above the national average. Lamb and especially pork are very unpopular and little poultry is eaten. Cheese, fish, fruit and green vegetable consumptions are low. Only potatoes reach, and exceed, the national average consumption level. Cereals, bread and especially cakes and biscuits are very popular, as indeed are all sweet things: sour foods are not at all popular. The Scottish housewife tends to be a pastry cook, not a confectioner or baker (Allen, 1968).

Fat consumption is significantly lower than elsewhere, resulting in a relatively low energy intake, but carbohydrate consumption is high due primarily to the high level of cereal consumption.

Vitamin C intake is well below the national average in Scotland due to the low fruit and vegetable consumption, and the low vitamin A intake is attributable to the small consumption of green vegetables. Similarly, low milk consumption contributes to the low calcium and riboflavin intakes while the region's low meat consumption generally, explains the below average intake of nicotinic acid. The great aversion to pork causes the low thiamin intake.

The food price index in Scotland is always higher than elsewhere in Britain, but food expenditure, the value of food consumed and the 'price of energy' are well below the national average, due to the above average purchase and consumption of some of the cheaper sources of energy such as bread, potatoes, margarine and low consumption of carcase meat, fruit and vegetables.

Soup is traditionally a Scottish favourite for economical reasons and the convenient canned soup is now similarly consumed in
great quantity. The consumption of hot beverages, however, is extremely low, markedly below that of all other regions. Breakfast tends to be a fortifying meal but early morning tea and mid-morning refreshments are relatively unpopular in Scotland, where the evening meal is eaten significantly earlier than in the south. Indeed there appears to be a fairly noticeable gradient of evening meal time from the north to south of Britain (Warren 1958).

There is considerable internal variation of food preferences within Scotland: there is some similarity to the North of England but also noticeable continental influences, specifically French and Scandinavian. (Allen, 1968).

7.8.3. North.

Some features of the Scottish diet are also present in the North: notably the relatively low consumption of pork, lamb, poultry, cheese, butter, fruit, fresh green vegetables and hot beverages, and the greater consumption of preserves, margarine and some cereal products. As in Scotland, egg consumption is relatively high. One dissimilarity, however, is the high purchase level of flour in the North due to the continued prevalence of home-baking which is less apparent in Scotland. Also in contrast to Scotland, fish consumption in the North is high, while that of salt is markedly low.

Northern consumption of liquid milk and cheese is lower than elsewhere in Britain and accounts for the low calcium intake. The popularity of carrots explains the high vitamin A intake and the high margarine consumption accounts for the high vitamin B intake.

The average cost per calorie of food in the North is generally below the national average due to the reliance on bread, flour, margarine and sugar as energy sources.

In the North, as in Scotland, 'elevenses' are not popular. It is predominantly in northern regions that the midday meal is referred to as 'dinner' and the evening meal as 'tea' (Warren, 1958).

7.8.4. Yorkshire & Humberside.

Food consumption in Yorkshire and Humberside shares some common features with Scotland and the North: particularly the low consumption of lamb, poultry, cheese, butter and fruit, and the high consumption of preserves, margarine and some cereal products. As in the North, flour purchases are high due to the popularity of home-baking. The very high fish consumption is idiosyncratic of the region.
Vegetable protein intake is generally above the national average in Yorkshire & Humberside due to the high flour and bread consumption, but vitamin C intake is below because of the low consumption of fruit: fresh vegetable consumption is in fact above the national average and "chips" in particular are extremely popular.

In Yorkshire Sunday remains a day for home-baking: consumption of both flour and cooking fat being very high. It appears that the full-time working wife often 'over compensates', and bakes at home as often as her non-working counterpart (Bird and Mills, 1972).

The 'price of energy' index is somewhat below the national average because the average diet contains large amounts of cereals, sugars, margarine and potatoes, which contribute to the relatively high carbohydrate intake. Meals tend to be large and contain considerable bulk: only breakfast is of modest dimensions (Allen, 1968).

7.8.5. North West.

The diet in the North West is in many respects similar to that in other northern areas, the main exceptions being an above average consumption of lamb and a below average consumption of beef and flour.

Vitamin C intake is low because of the low consumption of fresh fruit and green vegetables, and low beef and pork consumption account for the relatively low intakes of iron and thiamin.

Food expenditure in the North West is a little above that in Yorkshire & Humberside as prices are generally higher than in any other English region.

It is in the North West particularly that a considerable number of regional dishes continue to be eaten in the home: Lancashire Hot Pot, black pudding, tripe and onions and a variety of offal dishes. There seems to be a fondness for spicy foods, such as onions, pickled red cabbage and hot ginger cake (parkin), (Allen, 1968).


Pork consumption in the East Midlands, and therefore thiamin intake, is well above the national average; but that of beef, lamb and poultry below. Similar to Yorkshire & Humberside consumption of flour and cooking fat, sugar and fresh green vegetables is high, and of butter, low.

Prices paid for beef, pork, (but not lamb), bacon, poultry, fish and potatoes are usually lower in the East Midlands than the
national average, but on average household food expenditure varies little from the national average, as in the North West and Yorkshire & Humberside.

7.8.7. West Midlands.

There are fairly marked variations in average diet between the two Midland regions: the West Midland diet contains more lamb, eggs, flour, preserves and coffee, although consumption of pork and of fresh green vegetables is well above the national average in both regions.

The high pork consumption accounts for the high level of thiamin intake. Less home baking takes place than in any other region (Allen, 1968), but consumption of sugar and preserves is higher than elsewhere, as is that of hot beverages. The most significant regional idiosyncrasy is the great tendency to sourness in the food and even the beer is more bitter than elsewhere.

Only since 1965 has the price per calorie of food consumed in the West Midlands fallen below that of the national average, although actual food expenditure is very similar to the national average, because consumption of bread and potatoes has not fallen as sharply as in some other regions.

In both Midland regions mid-morning refreshment is very popular and tea, usually very sweet, is the most popular beverage (Warren 1958): here 'elevenes' are known as 'lunch', which is a seventeenth century word (Allen, 1968).

7.8.8. South West.

Consumption of all meats is closer to the national average than in any other region, although beef and poultry are marginally the most popular. Cheese, all vegetables and eggs have relatively high consumption levels. Although the level of flour purchase is high, it is cakes, biscuits and tarts made with local fruits which are popular, and not bread. Fish consumption is below the national average, although many traditional regional dishes do feature fish and seafood. Savoury, as opposed to sweet items, appear to be preferred (Allen, 1968).

The regional protein intake is low: vegetable protein intake is below the national average due to the low bread consumption and that of animal protein is below because of the relatively low meat and fish consumptions. The low vitamin D intake results from
the below national average consumption of margarine.

Food prices and expenditure are lower in the South West than elsewhere in Britain, and so the "price of energy" index is below the national average.

In this region of the country alone is breakfast a reasonably sized meal, where the "farming pattern" of meals tends to be followed. The midday meal also tends to be more substantial than the evening meal (Allen, 1968).

7.8.9. South East/East Anglia.

Consumption of fresh green vegetables, fresh fruit, pork, lamb, poultry, cheese and coffee is well above the national average and purchases of bread, margarine, cooking fat and 'other' meat products well below it. Potato consumption is particularly low.

Intake of vegetable protein is below the national average due to low bread and flour consumption, but that of animal protein is above, as is the intake of most nutrients. The low intake of vitamin D is allied to the low consumption of margarine, but the high milk and cheese consumption explains the high calcium intake. The fall in consumption of sugar and preserves between 1955 and 1973 was in fact greatest in the South East/East Anglia region, perhaps contributing to the greatest regional drop in carbohydrate between 1960 and 1973/74 (fig.7.5.1.).

Food prices in the South East/East Anglia are close to the national average but the 'price of energy' index has been well above since 1965 due to the regional diet consisting of above-average amounts of carcase meat, poultry, fruit and green vegetables but small amounts of bread, margarine, sugar and potatoes.

The greatest percentage of people who have an early morning cup of tea but forego breakfast is found in the South (Warren, 1958). Many southerners refer to their midday meal as 'lunch' rather than 'dinner': the reverse is true elsewhere in the country. The evening meal, termed as "dinner" in over a quarter of homes in the south and as "tea" far less often than in the north, is generally eaten much later in the south: nearer 8pm than 6pm, and is usually the most substantial meal of the day (Allen, 1968; Warren, 1958). Although the Sunday 'roast' remains de rigueur in many homes throughout Britain, the traditional lamb or beef has, to some extent, been replaced by chicken, especially in the south (Bird & Mills, 1972).
In East Anglia there is significantly more bulk in the diet than in the South East: much suet is used for sweet and savoury puddings (Allen, 1968). Home-grown vegetable produce also has a considerable consumption level.

7.8.10. London conurbation.

Meat consumption is higher in London than anywhere else in the country: that of lamb, poultry, pork and beef all being significantly higher than the national average. Fish consumption is also above the national average as is that of cheese and fresh green vegetables. Fruit consumption is higher than elsewhere in Britain. However, consumption of cakes, biscuits, bread, flour, potatoes and sugar is well below the national average, so causing a low carbohydrate intake. Indeed, cereal consumption, and especially that of bread, is lower than all other areas. Cooking fat and margarine consumption are even lower.

Energy intake is high: a greater proportion being derived from protein, especially animal protein, and a smaller proportion from carbohydrate, than in any other area.

High milk and cheese consumption account for the highest calcium and riboflavin intakes in Britain, and the high meat consumption for the highest regional nicotinic acid intake. The consistently large consumption of dairy products, liver and green vegetables explains the high vitamin A intake; large fruit and green vegetable consumption is responsible for the high vitamin C intake; and large beef and pork consumption account for the high iron and thiamin intake levels respectively. Only dietary vitamin D intake is comparatively low, resulting from the unpopularity of margarine.

Between 1960 and 1970 the food price index for London rose from just below to just above the national average, but food expenditure and value of food consumed has been consistently higher than elsewhere. The 'price of energy' index for 1973 shows the average cost per calorie of diet to be 12½% above the national average, due entirely to the London diet containing above average amounts of carcase meat, poultry, fruit and green vegetables, but relatively small amounts of bread, margarine, sugar and potatoes. London is also more receptive to the more expensive foreign foods for home consumption (Allen, 1968).
CHAPTER 8

REGIONAL SCHOOL MEAL PREFERENCES.

8.1. Importance of school meals.

Young people need higher energy intakes than adults and sufficient protein for growth. High levels of calcium and vitamin D are also needed for growth and calcification of bones and teeth, so milk and cheese should be prominent on school menus. The 'Recommended Daily Intakes of Nutrients' established by the Ministry of Health and Social Security (1969) reflect these needs of children (fig.A.2.2.), and the Department of Education and Science recommends that the average school meal should contain 880 Kcals and 29gm. protein (including approximately 18.5gm. animal protein), (DES, 1975). Indeed, for some time inadequate nutrition has been recognized as an obstacle to learning (Galloway & Robertson, 1948; Burnett, 1968).

Nevertheless, however nutritious, the school meal will not be eaten if the food offered is disliked or unfamiliar. Hill (1972) postulates that school meals ensure nutritional health, promote and maintain desirable food habits and provide nutritional education. Evans (1974) agrees with this but is also of the opinion, especially in the sphere of school meals, that:

"although the formation of tastes is important it is at least of equal importance to assess and acknowledge the tastes already formed. The art of menu planning lies in the imaginative and skilful way in which foods that are nourishing and good value for money are incorporated into the menu in a manner acceptable to the clients' tastes."

In many families where both parents are at work, the value of the school meal is related as much to convenience as to need. Today children live in a climate of increased freedom of choice and less formal discipline both at home and at school and are not attracted by transported meals and the authoritarian approach of the past. As a consequence, the school meal service is at a cross-roads as the balance between nutritional and social functions is shifting. School meals have to become competitive. "Consumer appeal is important: menus, decor and equipment should be orientated to today's younsters" (Hollinghurst and Bolton, 1974).
8.2. Factors influencing the feeding habits of children of school age.

8.2.1. Socio-economic.

If growth is used as a criterion of nutritional status, socio-economic differences are revealed by records of heights of school boys of the 13-14 year age group. Those from public schools showed little change between 1937 and 1957, while those of London County Council (L.C.C.) school boys increased steadily over the years. By 1957, the LCC boys were still about 40 mm. shorter than the public school boys (Berry & Hollingsworth, 1963). Even in 1972 heights, weights and body circumferences were greater in the richer groups, but skinfold thickness was greater in the poorer groups, i.e. they were fatter (Eppright et al, 1972). Although today social class is not, in general, associated with highly significant differences in average nutrient intakes, (Cooke et al, 1973), ..."that there may still be room for improvement in childhood nutrition is apparent from recent reports that children of social class 5 born in 1958 were, on average, 33mm. shorter than children from social classes 1 & 2 at the age of 7" (Brit. Med.J.,1973).

It used to be true that higher incomes tended to favour more adequate diets for the children of the family (Mack, et al, 1942), while children living in good farming areas had more adequate diets than those living in poor soil regions. (Reynolds, et al, 1948).

A study in the mid 1950's found a positive correlation between the percentage of children having lunch at school and the percentage of working mothers in social classes I and II, but a negative correlation with population density and size of family. No correlation was found with respect to cost (Sleigh,1958). The charge for school meals did not in fact change for a decade; this probably being an important factor in the steady increase in demand. However, price rises in 1968 and 1970 caused downward trends in the demand for school meals, although by 1972 the effect of price rises appeared to be wearing off (Evans,1974). A subsequent increase in price in 1974 had a similar effect.

8.2.2. Parental influence.

Children's food preferences are not related to their father's occupation, smoking or drinking habits, parents' age or order of birth, but there is a closer relation between the preferences of a child and its father than the child and its mother (Sonoda & Eguchi, 1970(a)+(b)). This may be because the mother chooses and serves foods in deference to
8.2.3. Personal attributes: age and sex.

Young schoolchildren are found to eat more adequate diets than teenagers, and although there is little difference between adequacy of diets of boys and girls at younger age levels, adolescent boys have a more satisfactory diet than do girls (Potgieter & Morse, 1955). It has been found that younger children waste the greatest percentage of their school meals, the older ones the least. Younger children waste most dessert, older ones most vegetables (especially in autumn); although familiarity with vegetables does increase their acceptability (Carver & Patton, 1958).

8.2.4. Supplements to school meals.

Most children do nibble during the day and snacks eaten between meals can provide a source of energy and nutrients and fill a social need, but they do not improve the diets which need improving (Eppright & Swanson, 1955). However, as children's diets become more and more adequate, they voluntarily consume less sugar (Macy, 1942).


The Department of Education and Science felt in 1965 that the standard of school meals was satisfactory everywhere, but found that on the evidence available

"any geographic variation was minimal" (D.E.S., 1965).

In 1966 a Department of Education and Science survey found that food bought by pupils or brought from home has less protein than a school lunch, but a much higher sugar content. Home lunches did not differ markedly from school lunches. There were no signs of malnutrition but mineral deficiencies were possible if not corrected from other sources. The school lunch, at that time costing 12p., was thought to be the best value for money, although some improvements were considered justifiable (D.E.S., 1966).

As assessment of school meals was carried out by Dr. G.W. Lynch in 1968/9. After interviewing 4,382 children about their food intakes and classifying the various diets he concluded that:

"as far as lunch was concerned, children estimated to have a much greater chance of satisfactory lunches were clearly shown to be related to those children who had school lunches. There was a satisfactory range of lunch intake that went from 80% in the North West and in Yorkshire to 95% in the South East of those
children having school lunches and the lunches reached the standard of being satisfactory" (Lynch, 1969(a)). He also found that 25% of a sample of girls and boys in the East End of London regularly fasted for 18 hours each school day (Lynch, 1969(b)). Most satisfactory standards were found in the north of England (46% of lunches provided 80% of the RDIs) and the worst in the South East and South West (only 28% being satisfactory). Secondary school children in all parts of the country, with the exception of East Anglia, had less satisfactory diets than the pupils in primary schools. Percentages of children having no breakfast ranged from 15% in the north to 21% in Wales. 13% of all children in the survey had an unsatisfactory evening meal (Lynch, 1969(a)).

In 1971 Professor Bender (Queen Elizabeth College) surveyed the amount of food eaten by pupils in various schools in the South East of England. In 8 infant schools energy intake was 70% and protein intake 57% of the 1969 EDI. In 18 infant-junior schools energy intake was 69% and that of protein 60% of RDI. In 10 junior schools energy intake was 65% and protein 55%, while in 10 senior schools values were 75% and 61% respectively for energy and protein RDIs. Ten percent of all food was found to be wasted, although this did not appear to relate to the 7.4% of children who had no breakfast. There was a large variation between schools in mineral intake, but overall iron intake ranged between 24 and 45% and that of calcium between 27 and 38% of the 1969 RDI. Average sugar intake was above the RDI at each meal (Bender, Magee & Nash, 1972).

In 1972, 2060 south Dorset school children were interviewed. It became apparent that the popularity of a packed lunch increased with age, but that of the school lunch decreased. The largest percentage going home to lunch (33.3%) was found among the 10-year olds. 41% of 14-year olds were found to "make other arrangements" which included the eating of pastries, fruit, chips or cakes (Kimmance, 1972).

The feeding habits of senior school children (11-18 years) was also investigated in more depth in 1972. Of 565 children, 41% ate school lunch, 31% bought food at lunch time, 20% brought food from home, 4% ate at home and 4% had no lunch at all. On average, the nutrient intake supplied 80% of the protein and 90% of the fat which should be supplied by a school lunch (Richardson & Lawson, 1972). The school meal in the UK is intended to provide half the RDI of protein and one third of the energy.
A survey of 1298 school children in 1972 reported that there was no clinical evidence of nutritional deficiency (Cook, et al, 1973), although enormous standard deviations in the intake of some nutrients were revealed. However, the nutrient intake of an individual would have to be considerably lower than the RDI before giving cause for alarm, as they are 20% greater than average requirements (Bender, 1972).

The National Food Survey Committee in 1972 carried out a special survey of midday meals eaten outside the home by children aged 5-14 years. The greatest incidence of school dinners and of packed lunches was in the South West and in rural areas generally, while children in Scotland had relatively few school dinners. In London school dinners and packed lunches were more prevalent than in the provincial conurbations (fig. A.8.4.). With the exception of income groups D1 and D2 (perhaps high incidence of qualification for free dinners), the number of school dinners per schoolchild was positively correlated with income of the head of the household (HAFF, 1974).

The consumer research carried out by the Liverpool Education Committee (Hollinghurst & Bolton, 1974) found a general preference among children for frozen food. This was discovered by studying plate waste and by the fact that whenever a school changed to frozen food, the number of children staying for dinner increased significantly. The more subjective popularity of the food was discovered in interviews and questionnaires. Furthermore, there was an additional reduction in waste in those schools which changed from the manufacturers' frozen food to food from the Liverpool Education Committee's cook-freeze production unit. "The unit's products incorporate the best of conventional methods and recipes have more specific appeal to the consumer as many dishes are produced for use in the menu..." This again stresses the importance of considering pupil's preferences.

The Department of Education and Science report "Catering in Schools", published in 1975, effectively says that the child should have whatever type of food he wants, served in the way he wishes. This recommendation immediately raises the question of the school-child's food/dish preferences.

8.4. School meal dish preference information.

It appears that the only actual information on pupils' dish preferences in various parts of Britain is available in terms of "surveys" carried out by pupils themselves in individual schools.
These, by their very nature, are limited in scope, highly variable both in sample survey technique and method of analysis, and so not suitable for comparison with each other. Such data unfortunately has only been traced from three schools:

one in Essex - primary - (appendix fig. A.8.5.)

one in Fife - junior high - (fig. A.8.6.)

and a third in Norfolk - secondary - (fig. A.8.7.),

by personal communication with local education authorities.
A similar kind of analysis of secondary school children's preferred dishes in Leeds has been obtained from the Catering Research Unit of Leeds University, (fig. A.8.8.), having been compiled for background work in connection with research into cook-freese systems of meal production.

8.5. Regional pupil preference implications of prior investigations.

For many years the likes and dislikes of school children have been considered as an important aspect of school meals but it would appear that practically no investigation of this has been made. Nearly twenty years ago it was said that:

"it behoves persons who assume responsibility for school feeding in local areas to familiarize themselves with the prevailing food habits of families as a general guide for planning....... Within a framework of nutritive quality.......cognizance of the food likes and dislikes of children contribute much to the success.......of school meals" (Wilson, Fisher & Fuqua, 1959).

In order to ensure adequate nutrition for each child, elimination of wasted food, the development of good food habits and the learning of sound nutritional principles every pupil has to enjoy the food he is given; and this enjoyment seems to be increased if self-selection is possible. Introduction of new foods can only be attempted if there is a willingness to taste them and food habits can only be improved if those hoping to bring about the change are aware of the existing situation.

More recently Judith Evans in her book 'Catering in Schools and Colleges', (1974), has said that:

"in every case care has been taken not only to provide nourishing meals but also to take account of the preferences of the clients. It cannot be stressed too strongly.......that tastes vary from area to area...." and that
in the case of a catering organization which covers a wide geographical area, it has to be remembered that tastes vary from region to region and that what is acceptable in one area will not necessarily be acceptable in another" (Evans, 1974).

8.6. Size of the School Meal Service.

The Department of Education and Science (1972) gives a figure of 5,169,000 children taking the school meal in England and Wales, and 403,000 in Scotland, making a total of 5,572,000. School meal acceptance rate is higher in England than in either Scotland or Wales (section 4.4.) and most meals are produced in the South East where pupil population is also high, (fig. A.4.10).

8.7. Study of regional school meal preferences.

8.7.1. Aim.
Children's school meal preferences in the various regions of Britain are to be elucidated by comparing sample menus and pupils' dish take-up within the constraints of limited choice menus.

8.7.2. Selection of secondary school pupils.
A number of types of educational establishment exist in Britain and the catering facilities available vary among them, (appendix 8, section A.8.9.).

Data was sought only from co-educational local authority maintained comprehensive secondary schools in each food preference region in order to obtain local representation, a cross-section of pupils in terms of social class, sex and I.Q., and so that all the sample menus would be subject to the same economic limitations and minimal nutritional requirements.

8.7.3. Initial Methodology.

One county catering adviser in each of the ten regions of Britain was contacted to request menu samples with figures of dish uptake over a 4 week period, for evaluation of the type of information which as available. A number of personal visits to various County Council offices, schools and their kitchens resulted from these initial contacts.

Very rapidly it became obvious that "dish uptake" figures were not available in this particular captive market situation. For
economic reasons set numbers of dishes were prepared, the total number of dishes corresponding exactly to the number of pupils requiring a meal. Different systems operated in different areas but generally were one of the following:

(a)(i) multi-choice cafeteria system....an individual free choice of 2, 3 or more main dishes, vegetables, desserts and snacks, until the supply of 1 or more item is exhausted. The order in which the pupils enter the dining area is varied daily so that each has the opportunity for a full range of choices as often as possible. Proportions of items prepared differ.

(ii) multi-choice cafeteria system....identical to (a)(i), but numbers of each item prepared are identical.

(b)(i) limited choice system.....free choice (as long as dishes are available) of complete meals. First course choice dictates choice of veg. and in some cases dessert too. Again rotation of pupil entry into dining area. Proportion of meals prepared differ.

(ii) limited choice system.....similar to (b)(i), but same number of all meals prepared. Rotation of pupil entry into dining area may operate.

(c) no choice.............a set meal.

In all systems when compiling menus caterers admitted to considering pupils' preferences as much as possible within the nutritional and economic constraints imposed upon them.

However, this consideration of pupil preferences was most marked in the full cafeteria system where proportions of dish items prepared daily differed. In this situation ((a)(i)) many caterers admitted that more portions of the more popular dishes were prepared. Therefore pupils' preferences are reflected through the experience of the caterer in the compilation of menus and proportions of dishes prepared. The caterer assumes that dishes chosen by the greatest number of pupils or which "run out" most rapidly are the most popular. Caterers felt that a 4 week sample menu period would give a representative
sample of dishes available to pupils.

8.7.4. Method.

A standard letter was sent to the catering organizer for each county education committee throughout England, Wales and Scotland, requesting sample menus with production figures for each dish item prepared daily for at least a 4 week period. Any other relevant material or personal opinion was also requested: in each case from co-educational comprehensive secondary schools wherever possible.

The response was very variable indeed, and it rapidly became obvious that it would be extremely difficult to obtain more than one example of this type of data from some regions. In a number of cases repeated requests by letter or telephone to county or borough councils or even individual schools were necessary: in some instances personal visits had to be undertaken.

Eventually, at least one example of suitable data was obtained to represent each of the ten regions of Britain. The raw data was in the form of production figures of dishes prepared for a full cafeteria system ((a)(i)) against 4 weeks' sample menus from one secondary school in each region: co-educational "comprehensives" where possible. Some other relevant information was also supplied in a few cases.

8.7.5. Analysis of Raw Data.

Raw data was received in a variety of different forms, from kitchen production records to menus annotated with numbers or proportions of dishes prepared.

Firstly all data was converted to the same form: the number of portions of each dish item prepared daily was converted to a percentage of the total number of dish items prepared for that particular course.

for example: day X. vegetables.

<table>
<thead>
<tr>
<th>vegetables</th>
<th>portions prepared</th>
<th>% of total veg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>cabbage</td>
<td>200</td>
<td>50.0</td>
</tr>
<tr>
<td>peas</td>
<td>150</td>
<td>37.5</td>
</tr>
<tr>
<td>turnip</td>
<td>50</td>
<td>12.5</td>
</tr>
<tr>
<td>all vegetables</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Tables were then prepared showing percentage production figures for each dish, for each menu appearance \((x_1,x_2,\ldots,x_n)\). The number of menu appearances over a specific number of weeks was
also noted (y), and average percentage production values (per menu appearance) were calculated (z).

<table>
<thead>
<tr>
<th>dish</th>
<th>Region I</th>
<th>Region II</th>
</tr>
</thead>
<tbody>
<tr>
<td>beef, boiled</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>20/3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$x_1 x_2 x_3 \ldots x_n$</td>
</tr>
<tr>
<td>beef, braised</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>beef, roast</td>
<td>50</td>
<td>50/1</td>
</tr>
</tbody>
</table>

The average percentage production value (z) was then converted to an expression related to what the percentage production value would have been if equal quantities had been produced of each dish item offered.

For example, if 4 dishes were offered daily and equal quantities of each produced, then the average percentage production value of each would be 25%. However, daily dish item production percentages vary. It is assumed that dishes produced in great volume are the popular ones and so if a particular dish (D_1) has a production percentage of 50%, when 4 dishes are offered daily, it must be judged to be a popular one by the caterer. Similarly, in this situation, percentage production value of 10% (for dish D_2) would infer an assumption of relative unpopularity on the part of the caterer.

Therefore the relationship between actual average percentage production value and the expected value (i.e. if equal numbers of all dishes were prepared) gives an indication of the popularity of the dish on the basis of the caterer's experience. This relationship is the production factor: 'pf'.

For example, dish D_1... actual average percentage production value = 50% + expected " " " " = 25%

•• pf = $\frac{50}{25} = 2$.

Dish D_2... actual average percentage production value = 10% + expected " " " " = 25%

•• pf = $\frac{10}{25} = 0.4$.

So, a pf value of more than unity implies a preferred dish

(e.g. D_1, pf = 2)

and a pf value of less than unity implies an unpopular dish

(e.g. D_2, pf = 0.4)
A pf value of unity (1) would imply lack of pupil preference in relation to the other dishes offered on day X.

Tables were produced of production factors (pf) and number of menu appearances (ma) for each dish item in each of the ten regions.

### 8.7.6. RESULTS.

Tables of analysed data appear in supplementary text 8 (tables S.8.1., S.8.2. & S.8.3.) and in summary figures A.8.1., A.8.2. and A.8.3.

Results are given in the form of 'pf/ma', (i.e. production factor/menu appearance). The production factors (pf) indicate the caterer's estimation of pupils' dish preferences. The number of menu appearances (ma) also does this but is influenced by economic and nutritional considerations to an even greater extent. Use of the production factor (pf) for dish preference comparisons, rather than merely the average percentage dish production value, eliminates the influence of differing numbers of dishes being offered as a choice at different schools and also nullifies any effect due to the varying length of menu samples provided for analysis.

### Fig.8.1. Regional Menu Structures (School meals).

<table>
<thead>
<tr>
<th>area from which menu obtained</th>
<th>Glam.</th>
<th>Tayside</th>
<th>Cumbria</th>
<th>N. Yorks.</th>
<th>Lancs.</th>
<th>Lincol.</th>
<th>Staffs.</th>
<th>Suffolk</th>
<th>Herts.</th>
<th>Somerset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of weeks of menu sample</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Number of main dish choices</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Number of dessert choices</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Number of vegetable choices</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Number of potato choices</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: (For direct comparison of regional "menu appearances", ½ of the 'ma' values of dishes in the N. and S.E. need to be considered.)
(The figures for potato were not analysed as they were very scanty and rarely available.)
Some impression of pupil preferences was also gained from comments made by a number of the Catering Organizers.

8.7.7. Discussion of Results.

Conclusions are drawn mainly from the 'pf' and 'ma' values of results, figs. A.8.1., A.8.2. and A.8.3., and supplementary text tables S.8., but wherever relevant, Regional Catering Advisers/Organizers' opinions (derived via personal communication) are included.

Integrated within these conclusions are the results of pupils' own dish preference surveys at individual schools in Essex (appendix figure A.8.5.), Fife (A.8.6.) and Norfolk (A.8.7.), as well as similar information provided by raw data from Leeds University, (A.8.8.).

It is important to remember that findings are primarily based on menus from only one school in each food preference region; conclusions cannot therefore be relied upon to refer to entire regions due to an insufficiency of representative data.

However, menus from more than one school were received from some regions and so conclusions regarding food preferences were also derived from their content.

8.7.7.1. MAIN DISHES. (figure A.8.1. & S.8.1.)

Consideration of production factors ('pf') for the primary constituents of the main dish (fig. A.8.1.) indicates that caterers in the sample schools, except in Wales, the East Midlands and South West, consider meat more popular than fish. Made-up meat dishes only seem more popular than meat in the school in Scotland and East Anglia. Pastry dishes, especially pies, flans and pasties, are more popular than any other main dish in the Scottish and South Western school. Caterers everywhere consider salads to be less popular than any other type of main dish, apart from sandwiches.

Meat dishes.

Dish popularity, as reflected by portion quantities prepared by the schools' caterers, show meat dishes to be most popular in the school in the North West and least in the Scottish school.

Bacon and ham appear to be most popular in the school representing the South East where both production factor and menu appearance are relatively high, although the production factor alone is higher in the East Midlands school. Catering advisers report that
only green bacon is acceptable in the South West in contrast to a preference for smoked bacon in and around London.

Beef and veal popularity seems to be highest in the school representing Yorkshire & Humberside. Lamb and mutton find popularity in the school in Wales, the North West and those in southern regions: indeed the Norfolk school's preference survey (fig. A.8.7.) indicates a greater liking for lamb than either pork or beef.

Pork seems to be considered popular amongst pupils by the caterer in the North West school, and to a lesser extent by the caterers in the East Midlands and Wales.

A preference for poultry is also indicated by the North West sample, although pupils in Norfolk (fig. A.8.7.) appear to be particularly fond of roast chicken.

According to the numerous regional Catering Advisers as well as the school caterers "roasts" are extremely popular in all areas, but particularly in southern regions.

In contrast, offal seems to be most popular in Wales, least in Scotland, and does not appear at all on the sample menus of the North West. Indeed catering advisers in Scotland specifically mention the dislike of offal among the schoolchildren, and the information gained from the Essex school preference survey demonstrates a great aversion to liver as the "most disliked dish" (fig. A.8.5.).

**Made-up meat dishes.**

Made-up meat dishes appear to be most popular in the Scottish and East Anglian schools, but least popular in the school representing the South West.

Beefburgers and mince, which feature prominently on nearly all menus, are most popular in schools in East Anglia and the North respectively. East Anglian Catering Advisers report that some made-up meat dishes, and especially mince, are preferred to the traditional "roasts".

Sausages are mostly enjoyed in the schools in Wales and the East Midlands but appear unpopular in the South East, which indication is corroborated by the Essex pupils' preference study. Sausage rolls are especial Scottish favourites; while fritters are generally very unpopular, their dislike being mentioned by the preference studies from both Essex and Leeds.

Haggis, although it does not appear on the menu sample analysed, is a very popular dish in Scotland according to a number of Scottish
Catering Advisers and the Fife school preference study, as are also Scotch (meat) pies, bridies, and mince — the last of these being preferred to roast dishes.

All savoury dishes, such as diced black pudding in Cumberland Stew or Hot Pot seem to be enjoyed in Cumbria and the Catering Adviser also reports the popularity of Cumberland Sweet Pie, a traditional local dish: school meals' recipe consists of meat and apple in puff pastry. Herb pudding with mutton is apparently also widely enjoyed in the northern schools, while in Northumberland in particular leek or onion pudding with brisket, or peas pudding with ham, appears to be enjoyed although unacceptable elsewhere.

A peculiarity of the "Potteries" in Staffordshire (West Midlands) is "lobby": a popular beef or mutton stew with root vegetables, celery and potatoes, unthickened but served with bread and boiled potatoes. In Lancashire alone is pickled beetroot offered with the Hot Pot.

Fish.
All types of fish dishes seem to be more popular in the schools in Wales, East Anglia, Yorkshire and Humberside, the North West and East Midlands, and especially fried fish. Fish products, and particularly fish fingers, appear to be favoured in the East Midlands and fish cakes in Wales. Many Scottish Catering Advisers report popularity of fried fish, though not of other types of fish. The results of the Essex school preference survey indicates a great liking for fish fingers but a significant dislike of fish cakes.

Pasta.
Data referring to pasta dishes is only available from half of the sample schools but spaghetti bolognaise alone seems popular on the basis of appearances only in East Anglia and the South East. In support of this contention Catering Advisers in the South West and North West report the unpopularity of all pasta except spaghetti bolognaise. In fact, all "foreign" fare seems to find most favour in the South East and East Anglia.

Pastries.
Pastry dishes seem to be most popular in the schools representing Scotland and Yorkshire + Humberside. Pies are featured most often on menus in Scotland and the South West, but appear to be the especial favourites in Scotland and Yorkshire + Humberside; notably meat pies in Scotland, steak and kidney and chicken and ham in Yorkshire and Humberside. Chicken pies also appear popular in the North West school.
Pasties alone seem to find favour in the Welsh school where pastry dishes are least popular. Bridies (Scots' mutton pies) only appear on Scottish menus while Cornish pasties appear most often on menus of the South West. Meat-and-potato pie is idiosyncratic of the North West and Yorkshire & Humberideside, where it appears to be very popular.

Meat puddings seldom appear on any menus, if at all, and Catering Advisers in the South East report a marked decline in the preference for steak puddings over the past 20 years.

Salads.
In each sample school caterers prepare few salads and so infer realization of their lack of popularity, especially in Wales, Scotland, East Anglia and industrial Derbyshire (East Midlands). Scottish Catering Advisers deem salad to be unpopular but in the North West there is reported a small but constant demand of about 15% even in winter. Flan or scotch egg salad seem to be the least disliked in the north and cheese salads in the south.

Sandwiches.
Among the only three schools which offer sandwiches, the one in the South East alone shows any significant demand for them. Indeed, it is only Catering Advisers in the South East region who report any demand for open sandwiches, hot dogs, hamburgers in rolls and other snack items.

Miscellaneous dishes and sundry items.
On the basis of the sample menus it seems that made-up cheese and egg dishes are not particularly popular anywhere, but the northern sample school caterer reports least unpopularity. The Leeds University school preference data indicates a significant liking of eggs for a main course item, and similar information from Norfolk indicates an enjoyment of made-up egg dishes.

"Stovies", a Scottish dish (primarily of potato, sausage and onion), is offered only in Scotland, and according to Catering Advisers is very popular as are all other filling dishes with a high potato content. Of all regional Catering Advisers only ones from Scotland report a high popularity of thick soups and broth, which is borne out by the pupils' own preference study in Fife: southern caterers specifically mention a dislike of soups and even stews. According to Catering Organizers in Lincolnshire, cold meats are often served at home with hot vegetables and this preference is reflected in the school meals, but in other parts of the East Midlands, such as
the industrial areas of Derbyshire, it seems that more filling foods
are preferred.

School menus from the West Midlands seem to be characterized
by a profusion of sauces offered with practically every dish, including
home-made 'H.P.' sauce, mint, piquant, tomato, apple, onion, white,
parsley and egg sauces. Availability of salad cream, chutney and
pickled red cabbage seems certainly to be a noticeable peculiarity.

Northern Welsh menus seem to be rather more "traditional"
in content than those from South Wales and also specifically mention
tartare sauce with fish and chips, apple sauce with pork pie and
mint sauce with Welsh lamb. Most significant is the fact that these
menus are in Welsh.

8.7.7.2. VEGETABLES. (Fig. A.8.2. & S.8.2.)

It is somewhat difficult to give a fair representation of
regional preferences as raw data was available only from schools in
Scotland and the North, the East Midlands and East Anglia.
Nevertheless, it would appear that green vegetables are marginally
more popular than root vegetables in the schools in Scotland, the East
Midlands and East Anglia, but less in the North. In the South West
Catering Advisers report the popularity of all vegetables, especially
fresh ones, while tinned or frozen peas tend to be more acceptable in
the South East.

Green vegetables.
Cauliflower and "blue peas" seem to be most popular in the school in
Scotland and cabbage in the North and East Midlands. Overall, green
vegetables seem to be most acceptable in southern regions, according
to Catering Advisers, and indeed the Fife pupils' study does not
mention any "greens" at all. The "mushy" (dried) peas, seemingly
enjoyed by northern pupils, are disliked by pupils in Essex.

Root vegetables.
Beetroot appears to be the Scottish school's favourite and (fried)
onions that of the Northern school. Carrots are seemingly popular
in the East Midlands' school but also tend to have a relatively high
popularity and frequent menu appearance in the one in the North.
Root vegetables are reportedly unpopular in Yorkshire & Humberside,
according to a number of the region's school Catering Advisers.

Other vegetables.
Baked beans seem to be by far the most popular of vegetables other
than "green" or "root", and this is borne out by Catering Advisers in many regions, especially Scotland, the North West, South West and West Midlands, as well as by the pupils' own preference studies. Apparently in Lancashire all vegetables are disliked with the exception of baked beans.

In Scotland and the East Midlands spaghetti is sometimes used as a "substitute vegetable" and in this role appears popular in Scotland. The Leeds data indicates that rice is enjoyed as a vegetable by a small percentage, while the Norfolk pupils' study shows it to have a significant popularity.

Potato.

No raw data was available for either production volumes or menu appearances of different forms of potato. However all Scottish Catering Advisers report the great popularity of chipped potatoes: indeed one remarked that "any dish with chips is preferred to one with mashed or boiled potatoes, irrespective of what the main dish is". Advisers from the North West, East Midlands, West Midlands and South West also report the striking preference for "chips", and this is corroborated by all the pupils' preference studies. The Leeds data and Norfolk school study also infer a considerable demand for roast potatoes, while the Fife and Essex school preference studies show baked potatoes to have a degree of popularity.

8.7.7.5. DESSERTS. (Fig. A.8.3. and S.8.3.).

In all the sample schools except in the East Midlands and East Anglia heavier desserts appear to be more popular than light desserts. Milk puddings seem to be less popular than the heavier desserts, except in the North West, although even here the difference is negligible. However, in relation to the light desserts, milk puddings seem to be less popular only in the schools of Wales, the East Midlands East Anglia and the South East. Confectionery is seemingly more popular than any other type of dessert in the schools in Wales, East Anglia and Yorkshire and Humberside.

(In this context confectionery refers solely to cakes/gateaux/biscuits.)

Confectionery.

Cakes as a dessert seem most popular in Wales and least popular in the South East, although they are featured most often on South Eastern schools menus.

Biscuits are enjoyed noticeably less than cakes everywhere.
Doughnuts are seemingly the favourite cakes as they have a fairly high 'pf' value in each school in which they are offered, and the Essex preference survey shows them to be more popular than any other possible dessert. Irish apple cake in the Scottish school has the highest individual pf value. According to the Catering Advisers of the Inner London Education Authority, gingerbread, which was once a great favourite in London is now rarely served.

Heavier desserts.

Overall the heavier puddings seem to gain highest favour in the sample schools of Wales, Scotland, the East Midlands and Yorkshire + Humberside.

"Tart" and "flan" seem to be most enjoyed in the Welsh; "crumble", "pie", and "pudding" in the Scottish; "sponge" and "roll" in the East Midlands and "cobbler" in the Yorkshire and Humberside school.

Rhubarb crumble is offered in the greatest number of schools and seems to be enjoyed in each, especially Scotland. The Norfolk pupils' study shows fruit crumble to be the most popular dessert and the Fife study specifically mentions apple and apricot crumbles as especial favourites.

Flans appear to be very popular both in the Welsh and Scottish school.

Fruit pies seem very popular in the Midlands while lemon meringue pie which is available in the majority of regions, seems to find greatest popularity in Scotland, having a 'pf' value of 2.55. The Norfolk and Essex pupils' preference studies record a significant liking for lemon meringue pie and the Leeds data for apple pie.

Most puddings appear on menus in the south but level of popularity seems to be highest in schools in Scotland and Yorkshire + Humberside. Nevertheless all puddings in the southern regions, apart from meringue and Queen of Puddings, have 'pf' values greater than unity. Steamed puddings seem to be especially enjoyed in the industrial areas of the North West, according to the Regional Catering Adviser.

In the South West the Catering Adviser for Gloucestershire finds that boys enjoy heavier puddings while the girls favour biscuits, cakes and buns, although both enjoy pastry desserts.

Jam roly poly appears to be very popular in the East Midlands' school while shortcakes only seem to be enjoyed in the South West's sample school.

Figures of dish production in the school in the East Midlands reflect the extreme popularity of all sponge puddings, although chocolate
sponge and treacle sponge seem to be particularly popular in Yorkshire and Humberside, jam sponge in Scotland, pineapple sponge in Wales and sultana sponge in the East Midlands. In the South East sponges do not seem to be popular and this is corroborated by the Catering Adviser who feels biscuits, yeast products and lighter desserts are preferred. The Leeds data indicates a particular liking for sponge puddings as do the Fife and Norfolk pupils' preference studies.

Strudels are only featured on the South Eastern school's menus, but do seem to achieve a reasonable popularity.

Apple tart gains the highest 'pf' value in the school in Scotland, whereas Bakewell tarts seems to be most popular in the one in Wales. Jam tart is a favourite in the West Midlands school and mincemeat tart in the East Midlands.

Syrup tart finds greatest favour in the Yorkshire and Humberside school. Overall, tarts seem least popular in southern regions and most popular in Wales. In the northern part of the county of Cumbria, according to the Catering Adviser, fruit tarts are known as 'plate cakes' and are very popular: they are served cold, having been iced immediately prior to service.

Light desserts.

Lighter desserts appear to be most popular in the schools in the East Midlands and Wales, and least in that of the South West. Banana custard and ice-cream seem to be especially popular in the East Midlands' school, but unpopular in the south. The Catering Adviser feels that ice-cream is also a particular favourite in the West Midlands, although it does not appear on the analysed menu sample.

Jelly and trifle appear to be favoured in Scotland, in contrast to their marked unpopularity in the North. Yoghurt only seems popular in the East Midlands. The Fife pupils' preference study indicates that trifle is popular, but the Essex and Leeds data demonstrate its unpopularity.

Milk puddings.

The East Midlands school reflects the greatest preference for milk puddings; those of the North and South East the least. That rice and semolina puddings are seemingly most popular in Scotland, and the former appear to be particularly disliked in the South East is apparent from a number of schools' menus.

Miscellaneous.

Cheese and biscuits are offered in the majority of schools and although
they have a high number of menu appearances in most of these, they only seem to gain a degree of popularity in the school in the South West, and this is borne out by the findings of the South West Catering Advisers.

However, cheese and biscuits have a relatively high popularity rating in the Essex pupils' preference study.

Fruit salad appears to be popular in all schools where it is available, especially that of Yorkshire and Humberside, but fresh fruit is unpopular. The Norfolk pupils' study does however indicate a considerable liking for fresh apple, banana and orange.

8.8. Conclusions.

From all sources of information it would seem that only in Scotland is there a demand for soup in school meals. The Scottish preference for mince, made-up meat dishes, pies and traditional dishes such as haggis, bridies and stovies is also apparent. The South East and South West seems to be the stronghold of preference for roasted meats, although other traditional dishes such as meat puddings are declining in popularity everywhere. Beef appears to be preferred in the north and lamb and mutton in Wales and the south of England, while offal, unpopular everywhere, only seems to find a reasonable degree of favour in Wales. Beefburgers, mince and some other convenience foods such as fish fingers appear to be particular favourites in most regions. Pasta and curry now appear on all regional menus but the more usual "foreign" dishes and snack items are more prevalent and popular in southern regions.

"Chips" and baked beans are now ubiquitous favourites. Nevertheless, Scots appear to have a marked preference for anything with a high potato content, root vegetables find most favour in specific northern areas and green vegetables are most enjoyed in the south. Spaghetti, rice and other vegetable substitutes show an increasing gradient of acceptability towards the South East.

The heavier desserts find greatest popularity in the Midlands Wales, North and Scotland. Only strudels find popularity in the South, and this is an example of the acceptance of "foreign" dishes more readily in this part of the country. Confectionery is least popular in the South East, milk puddings most popular in the East Midlands, while cheese and biscuits only seem to be enjoyed in the South West. Fresh fruit, like vegetables, is a southern preference.
Within these broad generalizations of regional tastes within the school catering service, some significant preferences do emerge, even from the somewhat scanty evidence analysed here. To date no serious attempt has been made to elucidate pupils' preferences; surely there is a need for this if children are to be nourished adequately and taught the fundamentals of sound nutrition.
CHAPTER 9

HOSPITAL PATIENTS' REGIONAL FOOD PREFERENCES.

9.1. The importance of Hospital Catering.

"If foods contribute as a necessity to the preservation of life and health, they also produce the greatest part of those distempers to which we are subject — and many times by the ill-use of them, may cause even death itself." A Physician, L. Lemery, 1745.

Hospital feeding has been considered as important for some considerable time ("History of Hospital Catering", chap. 5, section 5.3.). More recently, it was acknowledged at the Hope Hospital Conference on Hospital Catering (1961) that "food in hospital is the most important thing, and the reputation of a hospital is made by its food service."

Apart from the direct benefit which suitable food can impart to the patients' state of health, hospital meal times can also be of therapeutic value by relieving tedium and tension.

Obviously patients are reluctant to eat dishes which they dislike. In consequence, necessary nourishment may be lacking and also the ensuing wastage of food would prove uneconomic.

Dislike of foods can either be affected by the unpalatability of the dish itself or personal preferences. Aspects of the acceptability of hospital meals have been investigated a number of times.

9.2. Previous Studies of the Acceptability of Food in Hospital Catering.

Platt, Eddy & Pellett (1955), having surveyed 152 hospitals in England and Wales, found that as the size of hospitals increased, the food quality decreased and up to 45% of cooked food sent to the wards was wasted. They concluded that "too much depends upon administrative routine and too little on direct observation of the patients to discover what they need, what they eat and when they eat."

A Harlow hospital survey (Anonymous, 1968) discovered that although patients were generally satisfied with the quality and variety of the food, one quarter of them did not find it to be hot enough when it reached them.

Glew (1968) studied the attitude of patients to the food served in the General Infirmary, Leeds. It was found that males were more satisfied with the food than females, and that as age increased,
degree of satisfaction with the food increased. Single females indicated most dissatisfaction. Type of treatment, whether medical or surgical, did not cause significant differences in patients' attitudes to meals.

A King's Fund Report (Raphael, 1969) included some questions on food in their survey of 1348 patients in 9 English hospitals. They found that most patients criticized the lack of choice of dishes on the menu.

A survey jointly undertaken by the Catering Research Unit of Leeds University and the United Leeds Hospitals (1970), concluded that the provision of a choice improved the patient's assessment of the food quality as it would be partly possible to avoid a disliked dish.

A pilot study for the "Good Food Guide on Hospitals" in 1971/72 (Hospital and Health Services Review, Oct. 1972. p.362) also found that food acceptability is increased if patients are able to choose from a menu on the previous day, although very wide variations in standards of both catering and patients' satisfaction were found between various hospitals.

The final report of this survey of 37 hospitals in S.E. Thames Hospital Board Region (Dunne, 1974) agreed with findings of previous surveys. The fewer the number of beds in a hospital, the higher the satisfaction with meals, as had previously been found by Platt, Bidy and Pellett (1963). That older patients were more easily satisfied agreed with Glew's (1968) findings. In addition, appreciably higher levels of satisfaction were found in long-stay wards compared to the admission wards. No direct relationship between the cost of food and patients' satisfaction with meals was apparent. Bulk service meals were found to be less satisfactory than plated service, but the latter in itself did not guarantee good meals. Glew (1968) had previously shown precooked frozen food to be as acceptable to patients as traditional catering methods, but the "Good Food Guide" survey found the level of patients' satisfaction with the frozen food service at two hospitals to be poor, accentuated by criticism of the lack of variety. About 70% of patients considered that they were offered the same sort of dishes as they would eat at home: of those who complained about the meals, the majority claimed to have been served with unfamiliar dishes.

Brown, Carden, Stanton and Stock (1969) sent questionnaires to 287 patients in 21 hospitals throughout the United Kingdom to try and discover which foods were particularly liked. The survey was intended
to rate the popularity of individual foods and not to judge dish quality. National favourites became apparent and some interesting regional preferences were also highlighted. Made-up meat dishes were most popular in Scotland, particularly black sausage and hamburger, (20% more popular than elsewhere). The reverse was true in the North of England where these dishes were 10-14% less popular than elsewhere and ravioli, toad-in-the-hole, bacon-and-egg pie or spaghetti bolognese were shunned by a third of patients. Pasta was most popular among southerners. Scots had a great liking for herring (12% above average popularity), kedgeree (14% above) and fishcakes (16% above), and Northerners for fish fingers. Only Londoners appreciated jellied eels, while Scots most appreciated Scotch eggs (24% above average). Cheese dishes found least popularity in the North of England, where chips were particular favourites. Regional differences in vegetables were found to mirror those found by the National Food Survey Committee (1967):-

"Diet in the South and South East (including London) was characterized by a high average consumption of.....green vegetables, but not of potatoes or other vegetables." Scots consumed few green vegetables but more root vegetables. As far as puddings were concerned Scottish patients liked fruit with ice-cream or custard 15% less than elsewhere, whereas Northerners liked steamed pudding 10% more.

A food preference survey of 2773 patients (41% men) in 124 of the 360 hospitals in Scotland, was conducted by the Scottish Hospital Catering School, Edinburgh in 1972, (published 1973), the aim being to establish preferred foods. It was again found that on the whole women have more food dislikes than men while long-stay patients were most satisfied. Favourite dishes differed among age groups and social classes. Among Scots in general, broth, roast beef, boiled potatoes, (carrots for men, cabbage for women), and rice pudding were the favourite midday meal dishes. For the evening meal fish and chips, fresh tomatoes and pancakes were most popular. Preferred breakfast dishes varied considerably. Within Scotland itself regional differences were found. Made-up meat and fish dishes and blue cheese are most popular in the north-easterm region, and fish and chips and white bread in the west. Cod roe is least popular in the western region. The conclusion was that:

"...local food preferences should be taken into consideration in the planning of hospital menus..." and "...current trends in food preferences throughout Britain...(should)... be assessed by routine surveys."
9.3. Implications of Prior Investigations.

However well prepared the meals in a hospital, if a dish is disliked it will not be eaten, and hospital patients on normal diets differ in their choice of food. If it is considered desirable that patients should be satisfied by the food they receive, then a limited choice of dish should be available (Glew, 1970). It is possible that there is some disparity between what the patient wants to eat (outside the constraints of special dietary treatment) and what the caterer or hospital administrator thinks he wants to eat (Glew 1970). However, whilst taking into account the likes and dislikes of people it must be remembered that hospital caterers cannot cater for the whims and fancies of individuals but should try to strike a happy balance to satisfy most (S.J. Flacks, 1960). Additionally it would seem that unfamiliar dishes are not enjoyed (Dunne, 1974).

Although general hospital patients are not of the same sex or of a similar age, and the duration of their hospital treatment varies, it may generally be assumed that the patients come from the same area, within a certain radius of the hospital. Therefore they could well have regional food preferences in common, as indicated by Brown et al (1969) and the Scottish Hospital Catering School (1973).

9.4. Study of Hospital Patients' Regional Dish Preferences.

9.4.1. Aim.

The aim is to try to identify the regional dish preferences among hospital patients, the existence of which is indicated to be probable by previous studies; and to discover whether hospital caterers are aware of them, within the constraint of a limited choice menu.

9.4.2. Selection of National Health Service General Hospitals.

The constraints of cost and a limited choice menu have to be assumed as limitations within which a caterer organizes his menu cycle. To be able to compare patients' preferences in various parts of Britain, as many variables as possible between hospitals need to be eliminated. For this reason only National Health Service hospitals offering a choice of dishes were considered, as all meals would have to conform to a similar standard of cost, quality, quantity, preparation and presentation.

The cost allocation for patients is based on the hospital price index and is issued to Regional Catering Advisers monthly by the Department
e.g. of provision cost index, for May 1975. (price index = 129.45).
acute patients (& staff) = £3.83 to £4.14, per week.
geriatric patients (& staff) = £3.03 per week  
(psychiatric patients (& staff) + £3.73 " expenditure)
There is no minimum stipulation covering the nutritional
content of meals and so restrictions are of cost efficiency, especially
as it has been estimated that one meal over ordered or over-cooked in
each hospital throughout the United Kingdom for one year costs approx­
imately £1,000,000 (Bearpark 1974).
However the Catering and Dietetic Branch of the D.H.S.S. does issue
publications recommending the Caterer to allow for the various patients' needs relating to nutrients, therapeutic diets, length and type of hospital treatment, feeding difficulties and dietary modification for the observance of religious laws (DHSS, Feb., 1975).

National Health Service patients also provide a cross-section of social classes. To further reduce influencing factors, General hospitals were chosen to obtain arbitrary proportions of age-groups, males and females, and medical conditions.

2.4.3. Initial Methodology.
A letter was sent to each of the sixteen Regional Hospital Boards (fig.4.1., map 8; fig.A.4.10.(e)) outlining the intention of the study and requesting samples of menus with "dish uptake"* for at least one menu cycle, from as many hospitals in their region as possible.
*("dish uptake" represents the number of people choosing a
certain named dish from a menu on one occasion.)
Unfortunately response was poor both in quantity and quality, although a very few individuals did give generously of their time and help. Of the few menus which were received, the majority had no "dish uptake" figures, and even after considerable time, further requests, and in some cases, visits to the Hospital Boards and hospitals themselves, very few statistics were forthcoming.
The initial intention of intra-regional hospital menu comparisons had to be abandoned when it became clear that only one region was represented by more than one hospital. In the case of some regions it proved extremely difficult to obtain menu samples from even a single hospital.
Limitations of time made it necessary to obtain and use menu samples from only one hospital in each of the food preference regions (fig: 4.2.).
(The Regional Hospital Board delimitations (fig.4.1.8; fig.4.4.10(e)) were not used, as comparison of hospital patient preferences with regional preferences in other spheres of catering would have been complicated.)

Eventually, one set of menus with figures of "dish uptake" for a complete menu cycle was received from one General N.H.S. hospital in a named town from each of the food preference regions of Britain (fig.9.1.).

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**Fig.9.1. Dish choice available in hospitals involved in the study.**

<table>
<thead>
<tr>
<th>Regions</th>
<th>Ma</th>
<th>Sc</th>
<th>H</th>
<th>Y+H</th>
<th>H</th>
<th>E</th>
<th>M</th>
<th>RA</th>
<th>Sa</th>
<th>ST</th>
</tr>
</thead>
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<tr>
<td>1967-71 Hospital beds (000)*</td>
<td>25.8</td>
<td>62.8</td>
<td>29.3</td>
<td>42.8</td>
<td>61.7</td>
<td>25.7</td>
<td>41.6</td>
<td>13.6</td>
<td>167.6</td>
<td>37.8</td>
</tr>
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<td>EDIN-</td>
<td>NEW-</td>
<td>LEEDS-</td>
<td>BURN-</td>
<td>LEIC-</td>
<td>BIRM-</td>
<td>CAMB-</td>
<td>WARD-</td>
<td>BRIS-</td>
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<tr>
<td></td>
<td>DIFF</td>
<td>BURGH</td>
<td>CASTLE</td>
<td>LEE</td>
<td>NER</td>
<td>GHAM</td>
<td>RIDGE</td>
<td>WAR</td>
<td>TOL</td>
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<tr>
<td>Length of Menus Cycle</td>
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<td>4</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Period of Menus Cycle</td>
<td>14.75</td>
<td>238.75</td>
<td>157.5</td>
<td>263.75</td>
<td>157.5</td>
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<td>14.675</td>
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<td>3</td>
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<td>3</td>
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<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>


other numbers = number of choices available.)

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**9.4.4. Method of Analysing Raw Data.**

The raw data of dish uptake against menus was received in a great variety of forms and so had to be converted into uniform tabulation, in the following way:-

(i) Dishes listed, and for each appearance of each dish within one
(ii) Frequency of each dish per menu cycle marked, \( (n) \).

### i.e. Region...I Meal...M Dish...D

<table>
<thead>
<tr>
<th>Dish</th>
<th>( x_1 )</th>
<th>( x_2 )</th>
<th>( x_3 )</th>
<th>( x_4 )</th>
<th>( \ldots )</th>
<th>( x_n )</th>
<th>( n_1 )</th>
<th>( \sum n_i x = X_1 )</th>
<th>( \sum n_i y = X_2 )</th>
<th>( \sum n_i z = X_3 )</th>
<th>( \sum n_i x = X_n )</th>
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</thead>
<tbody>
<tr>
<td>( D_1 )</td>
<td>( y_1 )</td>
<td>( y_2 )</td>
<td>( y_3 )</td>
<td>( y_4 )</td>
<td>( \ldots )</td>
<td>( y_n )</td>
<td>( n_2 )</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>( D_2 )</td>
<td>( z_1 )</td>
<td>( z_2 )</td>
<td>( z_3 )</td>
<td>( z_4 )</td>
<td>( \ldots )</td>
<td>( z_n )</td>
<td>( n_3 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( D_i )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td>( \ldots )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(iii) Consumptions listed in columns, against dishes:

<table>
<thead>
<tr>
<th>Region I</th>
<th>R.II</th>
<th>R.III</th>
</tr>
</thead>
<tbody>
<tr>
<td>( d_{D_1} )</td>
<td>( x_1 )</td>
<td>( \bar{x}_1 )</td>
</tr>
<tr>
<td>( n_1 )</td>
<td>( n_1 )</td>
<td>( n_1 )</td>
</tr>
<tr>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
</tr>
<tr>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
</tr>
<tr>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
<td>( \sum n_i x = X_1 )</td>
</tr>
</tbody>
</table>

**where:**
- \( \bar{x}_1 \) = average uptake of dish \( D_1 \)
- \( \sum n_i x = X_1 \) = total of average uptakes of dishes \( D_1 \) to \( D_i \) of R.I.
- \( \frac{\bar{x}_1 x}{100} \) = average percentage uptake of each dish within a menu cycle in R.I.
- \( \frac{n_1 x}{100} \) = average percentage frequency of appearance of each dish on one menu cycle in R.I.
The average percentage uptake of each dish allows for variation in the number of patients choosing from the menu, the length of menu cycles, and the number of choices available on any one day. Using an average value of uptake also helps to reduce bias caused by an unusually large (or small) uptake of an individual dish due to its popularity (or unpopularity) as compared to another greatly liked (or disliked) dish on the same menu. When a dish is chosen from a limited menu, its preference is relative to the popularity of the other dishes which appear on the same menu.

Unfortunately the average percentage uptake remains affected by the varying lengths of menu cycles and also the unvaried nature of some cycles: were a wider range of choices available, the average percentage uptake of each dish would be correspondingly lower. Therefore the average percentage uptakes of the same dish in different regions cannot be absolutely relied upon for direct comparison. This would only be possible if the choice in each region was to be made from an identical menu, offering the same choice of items.

Anomalies can also occur because the frequency of appearance can affect the apparent popularity of a dish. For example:

Over a period of 10 days, creamed potatoes appear on the menu each day and their uptake is as follows:

- 200 portions per day for 8 days = 1,600 portions
- 50 portions per day for 2 days = 100 portions

... average uptake = 170 portions/day

On two of these 10 days, roast potatoes are also offered and their uptake is as follows:

- 150 portions per day for 2 days = 300 portions

... average uptake = 150 portions per day

Tabulated, this is:

<table>
<thead>
<tr>
<th>dish group</th>
<th>dish</th>
<th>region I</th>
<th>EII.</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTATO</td>
<td>creamed</td>
<td>1700</td>
<td>53.13</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>33.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>roast</td>
<td>300</td>
<td>46.68</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>16.67</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTALS:</td>
<td>2,000</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>100</td>
</tr>
</tbody>
</table>

So, the conclusion is that creamed potatoes are more popular than roast and they appear more often within a menu cycle.

Indeed, on the two days that roast potatoes appeared on the
menu, the uptake of creamed potatoes fell dramatically, indicating that roast potatoes are truly the more popular. This deduction can be made in the case of only two dishes: if the uptake of creamed potato fell when two or more alternatives were offered it would not be possible to say which was the preferred item. Such comparisons can only be made between two items at a time, and due to the construction of the majority of menus this type of analysis was not possible.

To overcome this problem a system of simple ranking of dishes on the basis of their apparent popularity as judged by uptake was undertaken. However, the great number of dishes offered and their arbitrary combinations on menus led to estimated distinctions of a purely subjective nature. This system was therefore abandoned in favour of the tabulated form of analysis which was entirely objective.

9.4.5. Results.

The detailed tabulated results of the average percentage uptake and average percentage frequency of appearance of each dish item on the regional menu cycles appear in the supplementary text, tables S.9.1. to S.9.11. inclusive.

From the lengthy tabulations in section S.9., further tables were constructed to highlight regional preferences of certain types of dishes, which are included within appendix 9, fig.A.9.1. to A.9.11 inclusive.

The popularity of a dish can be estimated in terms of its uptake compared to its frequency of appearance on the menu cycle. For example, an average uptake of 10% indicates a greater popularity when the average frequency of appearance of the dish is 1%, as opposed to 20%.

The proportional Protein:Fat:Carbohydrate composition (in gm./100 gm.) of menu items is also included in the tables in section S.9. This composition refers to the edible portion of the cooked, or otherwise prepared, food. It was not possible to obtain the composition of every item, but those which appear were obtained from either McCance and Widdowson (1960) preferably, or from Bradley (1956).

9.4.6. DISCUSSION OF RESULTS.

Despite some drawbacks implicit within the analytical system used, some regional differences in dish preferences among hospital patients were elucidated.
An initial generalization which can be made is that the midday meal is regarded as the main meal of the day in Scotland and northern regions of England, while the main meal is enjoyed in the evening in the South East and East Anglia. This deduction is drawn from the fact that a first course is omitted from southern midday menus and from northern evening menus (figs. A9.2. & A9.3.) at the discretion of the Caterer. This trend appears to be borne out by the menu structures found in hospitals other than those used in the survey.

9.4.6.1. Breakfast. (fig. A.9.1.; table S.9.1.)

Fruit juice only appears on breakfast menus in the South West, South East and East Anglia and in the latter two regions its popularity is underestimated. Stewed fruit, although offered only in two regions, is much more popular in East Anglia than the South East.

Porridge, offered in every region, appears more often than its average percentage uptake would suggest would be necessary, except in Wales and the North West of England. The same is true of breakfast cereals, except in East Anglia, where "Frosties" appear to be the favourite. There is not a wide range of individual cereals offered in sufficient regions for a detailed inter-regional comparison.

Bacon, sausage, egg and fish main course breakfast dishes are available in all regions. Generally the popularity of bacon, sausages and fish is underestimated, but that of eggs (particularly boiled) overestimated, in as much as they appear on menus much more often than their uptake would suggest to be necessary to satisfy patient preferences. Egg dishes are popular however in the North West. Fish as a breakfast dish finds greatest popularity in the East Midlands (particularly fish fingers), and, to a lesser extent in Scotland where fish cakes are most popular.

Offal is extremely popular in Scotland, especially black pudding. Ham is most popular in Yorkshire and Humberside, and pork sausage is preferred to beef in Wales. Southerners appear to favour potato in some form as an accompaniment to their main dish, while fried bread or toast are preferred in Scotland and Yorkshire & Humberside. Tomatoes undoubtedly find most favour in Scotland and mushrooms in the South West.


Fruit juice as a "starter" is only offered in the East Midlands at the midday meal and in the South West at the evening meal, so inter-regional preference comparisons are not possible.
In general, it seems that none of the caterers from the hospitals in the study are aware of which soups are preferred in their particular region: those soups which occur most often within menu cycles are not the favourites. In some regions, the favoured soups at midday are among the least popular in the evening, and vice versa: for example: lentil soup in the North West, spring vegetable in the East Midlands and chicken soup and Scotch broth in Wales. Only in the South West, and to a lesser extent the West Midlands and North West, are the same soups preferred for both midday and evening meals.

Tomato and oxtail soups are particular favourites in the South West, more than in any other region. Soups with a high carbohydrate content such as chicken noodle, potato, leek and potato, and lentil are predominantly served in Scotland and the North of England. Leek soup is most popular in the North West at both meals and asparagus in the Midland regions.

2.4.6.3. Main Healed Dishes. (figs. A.9.4. & A.9.5.; tables S.9.4. & S.9.5.)

Roast meat dishes which are featured on all regions' menus, appear much less often for the evening meal. This is also true of the majority of other meat dishes, but to a lesser extent in southern regions.

Bacon and ham. The highest consumption with respect to frequency of appearance on menus is found in the South East at midday and in Yorkshire & Humberside in the evening. These meats are least popular in Wales.

Beef and veal dishes are reduced in number on evening menus, especially in Scotland, Wales and southern regions. Although these dishes are generally popular everywhere, they are least popular at both meals in the North West. Corned beef is only served with pickle in the West Midlands.

Lamb is least popular in the North West, but is particularly popular in the South East in any form whatsoever. Lamb is also favoured in the South West and Wales, but the number of dishes on evening menus is much less in Wales and Scotland than at midday. Mutton is popular in the South East at midday but in Yorkshire & Humberside and the North West in the evening.

Pork is markedly least popular in Scotland relative to its frequency of menu appearance. In the evening far fewer pork dishes are offered everywhere, except in Wales.
Poultry appears more often on midday menus. Chicken fricassee is least popular of chicken dishes at both meals, particularly in the North West, Scotland and East Anglia. Whenever and wherever roast turkey makes one of its rare appearances on a menu it is very popular.

Offal dishes, in contrast to those of other meats, appear more often on evening menus, particularly in the West Midlands and the South West. Liver and bacon is the most commonly offered of these and has a high popularity everywhere. Apparently black pudding was once part of the East Anglian menu, but was not accepted by patients (Chivers, 1975).

Made-up meat dishes appear much more frequently on evening menus and contribute to a high carbohydrate intake at that time. Beefburger, most popular in Scotland, is offered in all regions except the South East. Scottish menus feature most made-up meat dishes at midday, as do East Midlands menus in the evening. In a number of regions, particularly in the south, mince is a common menu item which has a low popularity. It is interesting that haggis only appears in Scotland, and Lancashire Hot Pot is only served in the traditional way, with beetroot, in the North West.

Fish. Cod, especially fried, is most popular in the West Midlands, whereas in Wales plaice is most popular at both meals, but cod only at midday. In Yorkshire and Humberside haddock is preferred while only in East Anglia do herring and mackerel appear on menus. Of the fish products, which tend to predominate on evening menus, fish cakes are most popular in East Anglia and the East Midlands but fish fingers in the Midland regions at midday.

Pasta is also considered more of an evening dish by caterers. It is not very popular in any region and least of all in the South West, although West Midlanders do seem most fond of it.

Pastry dishes have a particularly high popularity in Wales and the North, and are also popular on the rare occasions when they appear on West Midland menus. Pasties and flans appear more often on evening menus, the former being particularly popular in Scotland, the North and Midlands. Cornish pasty finds most favour in the South West, and of the two regions which feature "Quiche Lorraine", it is more popular in the South East than the West Midlands. East Anglia, similar to more northerly regions, has a low acceptance of dishes with "foreign names" (Chivers, 1975).
Cottage (or Shepherds) Pie is most popular in the West Midlands at both meals and lamb pie only appears on South East menus, where it is popular along with all other types of lamb. Meat & potato pie, although popular in Yorkshire & Humberside, the North West and East Midlands, is an unknown dish in the southern regions. Steak and kidney pie finds popularity in all regions at midday but only in Wales at the evening meal. Only in Yorkshire & Humberside is pork pie served with pickle. Vol-au-vents only appear on lunchtime menus in the south where they are popular, but they are less popular in the north where they only appear on the evening menus.

Puddings (suet) do not appear on any menus in the South East, but are relatively popular in the Midlands and Wales.

Salads frequently appear on menus of all regions, especially cold meat salads, but all are markedly unpopular. In northern regions salads tend to be preferred in the evening and the East Anglian menus seem to follow this pattern as salad is only available in the evening. Cold meat and hot vegetables can be obtained in the East Anglia sample hospital, as a result of patient demand (Chivers, 1975).

Sandwiches are most definitely an evening item and furthermore only appear on menus in Yorkshire & Humberside, the North West, the Midlands and East Anglia. Nowhere are they as popular as their frequency of appearance might suggest that the caterer thinks them to be. Although meat sandwiches are featured most often, they seem to be no more popular than any other type of sandwich.

Miscellaneous dishes. Cheese, egg and other light dishes appear predominantly on evening menus everywhere. At midday, although not particularly popular, cheese dishes find most favour in the South West. Egg dishes, which are even less popular, are particularly disliked in the North West. However, egg dishes do become more popular in the evening in every region, particularly Scotland, the North and South East, while cheese dishes are enjoyed in the North West but avoided in the South West, Scotland and Midlands. The Midlands and South East offer most miscellaneous dishes for the midday meal and also in the evening, when they are joined in this by East Anglia. Again, it is interesting to find a traditional Scottish dish, "Stovies", only featured in Scotland.
Cooking Methods.

Casseroles are popular in all regions, especially Wales and the Midlands, but find least favour in the North West at midday. Fricasses are also least liked in the North West, and also in Scotland, while they are preferred in the West Midlands. The Welsh are fond of fried foods, of which fact caterers appear to be aware: but in Yorkshire & Humberside fries are not at all popular. Grills are fairly popular everywhere and in Yorkshire & Humberside in particular. Fries seem more popular at midday and grills in the evening. Poaching, as a method of cooking, at both meals is most popular in the West Midlands.

Roasted dishes are definitely most popular at the midday meal in all regions except East Anglia. However, in the evening, "roasts" are only popular in Wales, Yorkshire & Humberside and the South West. Sauté dishes are also most popular at midday.

Stews tend to be considered as a midday meal dish, especially in the North, although they do seem to be enjoyed in the evening in Yorkshire and Humberside.

"Foreign dishes" (curry, pasta, etc.) have a very high menu frequency at both meals in the West Midlands, but their uptake is no greater than elsewhere. Although many of these "foreign dishes" appear on menus in the South East at midday, they are only popular at the evening meal.


Green vegetables are definitely most popular in the South East while root vegetables find greatest popularity in the north, and to a lesser extent in Scotland. Carrot and turnip have the greatest uptake in the North West, although green vegetables appear most frequently on the menu: conversely, spring greens have the greatest uptake in the South East where a root vegetable appears most often.

Unfortunately no vegetable choice was offered on the East Midlands menu and so this region cannot be included within a consideration of the results. However, where sufficient regional data is available, it seems that there is a different pattern of vegetable preference within any one region at midday and evening meals, although generally it can be said that a puree of any vegetable is unpopular.

At midday broad beans are popular in the North, brussel sprouts in Scotland and cabbage and green beans in Wales, but all these
vegetables are least popular in the North West. In the evening, contrary to this, broad beans remain least popular in the North West. Brussel sprouts and cabbage are most popular in the South West and least popular in East Anglia and Wales respectively at the evening meal. Brussel sprouts and parsley sauce and marrowfat peas seem to be popular specialities of the North West alone.

Wherever they are served runner beans tend to be enjoyed at midday but spinach is avoided, especially in the evening. Both peas and carrots are less popular than their frequent menu appearances might indicate that caterers believe them to be, but a combination of the two is everywhere more popular than either of the vegetables individually.

Swede, mixed vegetables and tomato are all disliked by the Welsh, but are enjoyed in northern regions and East Anglia. Celery only seems to be favoured in East Anglia and savory rice only in the South East.

Baked beans are obviously considered to be more of an evening vegetable, especially in Wales, southern regions and Scotland.


Roast potatoes are indisputably the favourites among the Welsh at both meals, and to a lesser extent among South Westerners. Creamed potatoes are preferred in northern regions and boiled potatoes in the West Midlands, and in the South East in the evening. However, creamed potatoes do appear so often on menus that their frequency could cause distortion: indeed, in all regions, they are less popular than their frequency of appearance might suggest them to be.

Saute potatoes find favour in Wales, the North and Scotland and the West Midlands too at the evening meal. "Chips" are particularly popular in Yorkshire & Humberside and the North West at both meals: in fact are popular in all regions when they are available. The less frequently offered types of potato, such as scallop, croquette and duchesse are fairly popular when they appear on menus, duchesse being especially favoured in southern regions. However, not only are parsley potatoes popular in the South, but also in Scotland.


Light desserts are most popular in East Anglia and the South East at the midday meal, but in all regions their popularity increases
in the evening. Egg custard is most popular in the South West, and cream caramel in the West Midlands, South East and East Anglia.

Canned fruit is favoured in the Midlands at midday and in the South East in the evening, while fresh fruit is unpopular in northern regions at midday but in all regions in the evening. Stewed fruit is preferred in East Anglia and the East Midlands at midday but in the North and North West in the evening.

Milk puddings are unpopular at lunchtime but although available in far fewer regions on evening menus, at this time of day their uptake is greater. East Midlanders seem to dislike ground rice, rice and semolina which are most popular in the southern regions. The East Midlanders' preference is for sago and tapioca, both of which find least popularity in Wales. Macaroni is unpopular everywhere it is offered, while all other milk puddings are enjoyed in Wales in the evenings.

Puddings of the heavier sort are extremely popular in all regions at midday, except the South East and South West. In the evening they occur much less often on menus but their southern popularity increases. Charlottes only feature on East Anglian menus and apple dumplings only on those of the South West, but both are popular in these regions. Eve's pudding is most popular in the North, and Queen of Puddings in Scotland, while bread and butter pudding and baked jam roll are enjoyed wherever they are available. Of the sponge puddings, chocolate, fruit, jam and syrup are favourites in Wales and syrup sponge in the North. Although not popular in the south at midday the popularity of sponges increases at the evening meal.

Pastries, that is tarts, pies, etc., are very popular in every region at both meals and are only slightly less frequent in appearance on evening menus.

Crumbles are a bastion of northern midday meals where they are enjoyed more than flans which are more often offered in the Midlands. Flans are favoured more in the North West in the evening and "fruit flan" is an especial favourite in Wales and East Anglia. Pies are generally served with custard except in Scotland where ice-cream is the accompaniment. Apple pie is a favourite East Midlands midday dessert and lemon meringue pie an evening favourite in the North. All pies are very popular in Yorkshire & Humberside in the evening. Tarts are most popular in Wales where they are most frequently served at midday, but appear most on North Western menus in the evening. Again the Southerners' preference for tarts only matches that of northern
England in the evening.

**Miscellaneous desserts.**

Ice-cream only finds popularity at either meal in the South East, although Scots do appear to enjoy it at the evening meal.

Trifle is popular in the West Midlands and in Yorkshire & Humberside at both meals, but in the south and North West only in the evening and in Scotland and the North at midday.

"Fruit-in-jelly", particularly popular in the North in the evening, is more popular everywhere than plain jelly, which only South Easterners enjoy.

Cakes and gateaux, which appear mainly on evening meal menus, are mostly offered in Wales and the East Midlands. Chocolate eclairs are most popular in both these regions and chocolate gateau is enjoyed in Scotland when available.

Cheese and biscuits generally represents in all regions at least 20% of all sweets offered within the midday menu cycle, and well over 20% of the evening cycle. However its uptake rarely exceeds 1% as it is unpopular everywhere. Only in Scotland at the evening meal is any preference whatsoever registered, and here it is interesting that its frequency of menu appearance is very low.

**9.5. Conclusions.**

It is not possible to make regional distinctions between the popularity of quite a number of dishes as they only appear within the menu cycles of two or three regions.

One fact which recurs throughout is that dishes which make infrequent appearances on menus often have relatively large uptakes while dishes which appear daily have low average percentage uptakes. Of course a number of dishes cannot be featured often because of economic limitations imposed upon the caterer.

Many dish preferences are much influenced by the time of day at which the main meal is eaten. As a result more soup and meat dishes are consumed at the midday meal in northern regions while soup and "heavier" desserts are preferred in the evening in the south.

Nevertheless, tentative conclusions can be drawn as to regional food preferences of hospital patients both from the findings of previous studies and the indications which emerge from the present research.

At breakfast fruit juice appears to be a southern, and
Porridge is a northern preference. Indeed, porridge is the most popular breakfast dish in Scotland (Scottish Hospital Catering School (S.H.C.S.), 1973). Egg dishes are popular in the North West, fish in the East Midlands and offal in Scotland, although in all regions caterers seem to underestimate the popularity of bacon and sausage. Some form of bread is preferred as a main breakfast dish accompaniment in Scotland and northern regions but potato in the south.

Thick soups with a high carbohydrate content are particular favourites as "starters" to a main meal in Scotland and the North of England. Tomato and oxtail soups appear to be preferred in southern regions, leek soup in the North West and asparagus in the Midlands.

"Roasts" (and other meat dishes) seem to be considered more as midday dishes in northern regions, but as equally suitable for the evening meal in southern regions. Bacon and ham seem to be least popular in Wales, and beef and veal least popular in the North West. Lamb is most popular in the South East, while pork in any form is distinctly very unpopular in Scotland. At a main meal offal dishes seem to gain most favour in the West Midlands and South West. Made-up meat dishes, and especially mince, are most popular in Scotland, which fact is substantiated by Brown et al (1969) and the S.H.C.S. (1973).

Cod appears to be the preferred fish in southern and midland regions; plaice in Wales and haddock in Yorkshire & Humberside. Fish cakes are a Scottish favourite, both at a main meal and at breakfast: the findings of Brown et al (1969) agree with this and also the fact that herring is enjoyed in Scotland. Fish fingers are a northern and Midland preference.

Pastry products are particularly enjoyed in Scotland, the North and midlands in the evening and puddings are relatively popular in the Midlands and Wales.

Salads are comparatively unpopular in all regions and are only eaten in the evening in the North. However, there is a significant demand for cold meat and hot vegetables in East Anglia.

Caterers greatly overestimate the popularity of sandwiches which are considered to be an evening meal item, but are not available in the extreme north or south of the country.

Cheese dishes are least liked in the North of England (Brown et al, 1969), while egg dishes are particularly disliked in the North West, in contrast to their popularity there at breakfast.
"Foreign" dishes appear to gain most acceptance in the South East, as Brown et al (1969) also discovered; although some are popular in the West Midlands at midday.

It is interesting that traditional regional dishes such as haggis, scotch egg, Lancashire Hot Pot and pickled beetroot, Cornish pasty and Yorkshire meat-&-potato pie are most popular in their region of origin: this is substantiated by Brown et al (1969).

Both the present findings and published sources (Brown et al, 1969 and the S.H.C.S., 1973) indicate that green vegetables are most popular in the south, and root vegetables and potatoes in the north and Scotland. The traditional "mushy" peas of the North West and Yorkshire & Humberside remain most popular in these regions. Chips are decidedly preferred in the North (Brown et al (1969) also found this), roast potatoes are the Welsh favourite and boiled potatoes are preferred in the West Midlands.

Lighter desserts are preferred at the evening meal in all regions, but especially in the south. Heavier puddings are predominantly a northern, and milk puddings a Midland, preference. Most pastry desserts are preferred in the north, except tarts which are quite definitely a Welsh preference. Cakes are also most popular in Wales. The unpopularity of fruit and ice-cream in Scotland was also discovered by Brown et al (1969), although the S.H.C.S. (1973) found ice-cream and fruit to be favourite desserts.

Despite a few anomalies between various sources of data, generally there is considerable agreement of findings and some distinct regional food preferences are attributable to patients in general National Health Service hospitals.
CHAPTER 10

THE EMPLOYEE CATERING INDUSTRY.

10.1. Definition, scope and size of the Employee Catering Industry.

The employee (or industrial) catering industry encompasses all catering facilities which specifically provide "on-site" food service in factories, offices, shops and other places of work.

A proportion of work-day meals are eaten within the commercial catering sector in cafes, restaurants, et cetera, (some by the use of luncheon vouchers), but, by definition, these are not considered within the scope of this chapter.

The traditional and often used term for an employee catering outlet is a "canteen", but of late this term has acquired a somewhat undesirable connotation and increasingly "staff restaurant" is substituted. However, "canteen" is usually retained to refer to a manual workers' catering unit, while 'staff restaurant' tends to refer to that of office/shop employees.

The industry is divisible into:-
(a) food services provided by the employer
& (b) food services provided by outside catering contractors, to whom the employer pays a fee.

There is no completely reliable estimate of the present size and value of the employee catering market, as figures vary according to source but the National Catering Inquiry (NCI, 1973) estimates that the market value of consumers' spending in the industry amounts to £175 million, of which meals alone account for £115m. Employers' subsidies, of about £125m. bring the inclusive market value to £300m., as employee catering is a non-profit making industry.

The number of actual meals served per annum in 1970 was 867 million, but no increase is expected in this number by 1980 (Koudra, 1974). However, in the next decade, according to a pilot study by the Bateman Catering Organization and Mass Observation Ltd. (1972), the contractor market will more than double. According to the GIRA estimates (1971) 25% of all employees' meals are served by catering contractors.

The employee catering sector accounts for 18% of the total number of catering industry establishments in Britain, and the regional breakdown is as follows: (fig.10.1.)
Fig. 10.1. Regional percentage of catering establishments which serve employees only. (Attwood-Schlake, 1972).

<table>
<thead>
<tr>
<th>Sc</th>
<th>N</th>
<th>NW</th>
<th>Y&amp;H</th>
<th>Wa</th>
<th>EM</th>
<th>WM</th>
<th>SW</th>
<th>S, L+SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>16</td>
<td>9</td>
<td>19</td>
<td>19</td>
<td>12</td>
<td>23</td>
<td>19</td>
<td>15</td>
</tr>
</tbody>
</table>

The largest proportion of staff canteens (or staff restaurants) are found in the South, and of works canteens in the North, (fig. 10.2.) (Attwood-Schlake, 1972).

Fig. 10.2. Regional number of Canteen Units by type of Canteen. (Attwood-Schlake, 1972)

<table>
<thead>
<tr>
<th></th>
<th>GB</th>
<th>N</th>
<th>Mids</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>staff restaurants</td>
<td>51</td>
<td>46</td>
<td>38</td>
<td>70</td>
</tr>
<tr>
<td>works canteens</td>
<td>31</td>
<td>40</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>canteens serving both staff &amp; workers</td>
<td>18</td>
<td>14</td>
<td>28</td>
<td>13</td>
</tr>
</tbody>
</table>

10.2. The importance of employee feeding.

The satisfactory feeding of employees helps to ensure a healthy and fit workforce, results in better work than if the operatives were hungry or malnourished and in turn produces profitable industry. The growing realization and acceptance of this proposition since 1800 is outlined in chapter 5, section 5.4.

"The industrial canteen... must be seen as the nucleus of a wide and all-embracing system of industrial and social welfare whose benefit to society can be incalculable.... Industrial welfare has become a science which is closely linked up with the science of Human Biology......... The industrial canteen has its part to play as a nucleus of a wider life for everybody." (Curtis-Bennett, 1949).

10.3. Approach to the Investigation of Regional Food Preferences in Employee Catering.

Employee catering is substantially non-profit making for the employers, but even so they have to compete with alternative food services to attract an optimum level of custom to minimize "losses" (or subsidies).

Published surveys of catering facilities for workers show
that the customers want fast service and "value for money". This latter demand encompasses such things as low prices, good cooking and dishes for which there is a preference. Economies of scale, subsidies and good management contribute to the maintenance of "low" prices: kitchen staff are responsible for the quality of dishes produced, but only research into preferences can establish what dishes people actually like to eat.

Some research has in fact examined aspects of dish choice among employees but the data are of a variable nature and little deals with actual food/dish preferences. This is examined in section 10.4.

Further research within the industry itself is necessary (section 10.5.)

One fact rapidly emerges during discussions with industrial caterers: dish choice may not only vary by region, but is noticeably influenced by type of employment. An obvious example quoted innumerable times is the contrast between the preference of a Northern manual worker in heavy industry for steak and kidney pudding, a liberal helping of potato and an equally "filling" dessert, compared to the southern secretary's fondness for a salad and perhaps a yoghurt. On the basis of this obvious occupational influence upon dish choice, food preferences are therefore examined not only by region, but also within broad occupational groupings which are:

(a) heavy industrial workers (section 10.5.5.1.)
(b) light industrial workers (section 10.5.5.2.)
(c) retail shop assistants (section 10.5.5.3.)
(d) administrative/office staff (section 10.5.5.4.)

Initially, both geographically widespread catering contractors and companies which organize their own catering facilities were contacted to request sample menus with figures of dish uptake, representing as many regions of Britain as possible.

The response was highly variable, but generally companies were reluctant to release either sales records or related information. However, visits to several companies did ensue and from these some necessary data were forthcoming.

Primarily these statistics were obtained from companies which operate their own canteens, as the majority of catering contractors were not prepared to undertake the necessary collection of data from a number of their outlets.

After very many initial contacts and innumerable repeat requests, sufficient sets of information had been gathered to make
inter-regional comparisons possible, although not all regions were represented within each occupational grouping.

Nevertheless, the possible deductions from menus and dish uptake statistics were limited by numerous influencing factors, and so a system of interviewing experienced industrial caterers was decided upon in order to obtain informed, although subjective opinion based upon intimate working knowledge of employee feeding. (Such information is unlikely to be obtainable from any published source). A number of companies were approached and relevant experienced personnel interviewed according to a pre-structured questionnaire, (section 10.7.).

Regional food preferences within industrial catering therefore emerge from analyses of "dish uptake" statistics and menu contents, reinforced by informed opinion from experienced caterers within industry, and a little information from published sources (section 10.4).

10.4. Published Information.

10.4.1. Where workday meals are eaten.

Nationally, the greatest proportion of people who eat out at work eat in an employee canteen (41%), although a substantial number choose to eat in a commercial restaurant (29%), cafe (17%) or public house (6%). There are significant regional variations however; the greatest proportion using their canteen in 1965 was in Wales, the North West and West Midlands, and the smallest in the South West where alternative catering facilities were preferred. A pub was most popular in the South East and a hotel in Scotland, (fig.A.10.1.), (NCI,1966).

By 1972, of those working people who had catering facilities available, 69% tended to use them at any time, although patronage was lower in the Midlands than elsewhere, (fig.A.10.2.), (NCI,1973).

In 1972 it was estimated that of the people using canteens, 65% would eat at least a snack in them almost every day, 9% three or four times a week, 15% once or twice a week and 11% less than once a week, (NCI,1973). Although probably over 60% of all employees in industry are provided with catering facilities at work, fewer than one third are regular users of main meal services, (Koudra, 1974), which agrees with the 'Trends in Catering' estimates of regional percentages of main meals eaten at a place of work, (fig.A.10.4.).

10.4.2. Employee Expenditure.

In 1956 the average expenditure on a workday main meal in
London was 2 shillings (10p), but in the rest of Britain 1/10 (9p); while an average snack cost 7d. (3p) and a cup of tea 2d. (1p) nationwide, (Kemsley & Ginsberg, 1961).

By 1965 the average price of a main meal in London had risen to 4s7d (23p) and elsewhere prices varied regionally (NCI, 1966) (fig. A.10.3.).

In 1974/5 canteen main meal cost varied little between regions, but the cost of a snack was highest in London and lowest in the West Pennines and Wales (fig. A.10.4.) (N.C.E., 1974/5).

The Industrial Society, in their regular surveys of "Catering Prices, costs and subsidies", quote prices charged for various food items and dishes in different regions (fig. A.10.5. and fig. A.10.6.) Whereas in 1967 a canteen meal in Scotland was cheaper than in London, by 1974/5 London had become cheaper although on average the North West of England (area 4, fig. A.10.5.) has throughout charged lowest prices. The Industrial Society also found that employees in London spend most on main meals. Most expenditure on beverages occurs in the South, on cold snacks in the Midlands and Wales and on confectionery in Scotland (Ind. Soc. 1974/5) (fig. A.10.5 & A.10.7.).

10.4.2. Subsidies. (Employer expenditure).

Most caterers believe that the subsidy paid by employers is regarded as a 'perk' - if it is thought about at all - by the average industrial worker (NCI, 1973).

The costs of the industrial catering subsidy, of about £125 million per annum (NCI, 1973) are described by the Industrial Society as "losses" incurred on provision of catering services to all levels of staff. The subsidy on consumables and labour alone is generally highest in London and Scotland (fig. A.10.8.).

In 1965, The Manufacturers and Supplies Food Advisory Council found that the overall annual subsidy per employer (including material consumed, salaries, wages, overheads such as rent for canteen space, free meals, etc.) was nearly £15 per employee. In 1972, this figure was probably nearer £25 (NCI, 1973).

Wages and costs both rise annually, but the employee pays only 2½% of his daily wage for a canteen meal: only fractionally more than was paid a decade ago, due to the employers' subsidy (NCI, 1973).
10.4.4. Employees' Requirements of Meals at Work.

Employees eat to satisfy hunger, cease discomfort and to enjoy a release from the pressure of work for as little money as possible (NCI, 1967).

It seems that those who eat out at work are not particularly concerned about the size of the menu, the atmosphere of the restaurant or the size of the helpings and they are only marginally interested in presentation. Fast service is one of their main requirements and therefore nearly all canteens (93%) are "self-service", (NCI, 1966), although about a third of these are "counter service" (fig.A.10.9.) (H&EDC, 1974/5).

Self-service is most usual in Scotland and waiter service in the southern regions.

A greater number of snacks than meals are obtained from a trolley service (especially in southern England) or a vending machine (especially in West Pennines and Wales, the South East and South West), (H&EDC, 1974/5).

The majority of canteen main meals are eaten in 20 to 40 minutes; most short meals are consumed in the South East and South West but a long time is spent over a meal predominantly in London, (presumably these are primarily executive "business luncheons", H&EDC, 1974/5), (fig.A.10.10).

10.4.5. Type of food.

Canteen/staff restaurant food has to contain an element of variety and surprise in order to prevent "diminishing interest" causing increasing criticism.

Nevertheless, three-quarters of those with canteens at work claim to be getting what they want, and are generally happy about quality, variety and value for money (NCI, 1973).

However, the amount of food does vary regionally to some extent. The biggest eaters are to be found in the Midlands (78% eat at least 2 courses); fewest actual meals are consumed in Scotland, and snacks are most popular in the South (NCI, 1973) and Eastern England (fig.A.10.17), (H&EDC, 1974/5). In London is consumed the greatest percentage of main meals at a place of work (fig.A.10.4.), (H&EDC, 1974/5), but the greatest proportion of main meals during a night shift are eaten in the North (fig.A.10.11). By far the greatest number of between meal "nibblers" are found in London, and the southern regions (fig.A.10.11).
10.4.6. **Beverage choice.** (fig.A.10.12).

The greatest number of beverages from vending machines are drunk by southern employees, while in Scotland are drunk the greatest number served manually, (Ind.Soc.1974/5), (fig.A.10.12.)

Most machine-vended tea is drunk in the South and most machine-vended coffee in Scotland. Machine-vended cold drinks are selected most in northern areas and milk in the Midlands and Scotland. Manually served soup is most popular in London, but machine-vended is preferred in Scotland. Other beverage sales only reach significant proportions in London: all other regions are more conservative in their tastes (fig.A.10.12).

10.4.7. **Dish Choice.**

In 1965 it was established that soup followed by a meat dish with peas was the meal most often selected at a place of work, but none of the findings were analysed regionally (NCI, 1966).

In 1966 the Bateman Catering Organization also found soup to be the favourite 'starter', although closely rivalled by fruit juice; with fruit salad, fruit tart, steamed sponge pudding, milk pudding and jelly & ice-cream being the preferred desserts. Steak and kidney pie emerges as being most popular in London (fig.A.10.13) and cottage pie in the North. Roasts are the favourite everywhere, although the Scottish preference seems to be for chicken. Hamburgers and bacon & egg appear to be northern preferences: fried fish and salmon are more popular in Scotland than elsewhere within this particular Organization, but Scotch eggs are most popular in the Midlands. Preference for curry is highest in the Midlands and for spaghetti bolognaise in London. The relatively high ranking of salad (fig.A.10.13) is probably due to the poll taking place at the height of the salad season (Bateman,1966).

The National Catering Inquiry (1975) established that "meat pies and Cornish pasties are more popular in the North than they appear to be in the South and they seem to like peas more in the Midlands than they do elsewhere". Further to this little regional information emerged. However, it was reported that there is a general drift away from "stodge" towards lighter meals - and indeed salads did appear more popular in the South than North, particularly among females, (fig.A.10.14.).

Peas are indeed the favourite vegetable, although a sizable
proportion enjoy carrots in the South (14%) and cabbage in the Midlands (22%) : in the North all vegetables seem unpopular (fig.A.10.15).

The Trends in Catering 1974/5 annual report (H&C EDC, 1975) confirms that soup is the most popular "starter", but shows that this is particularly so in Scotland, while "other starters" are most popular in the West Pennines and Wales. A main course is eaten by the majority of employees, especially in the South East and South West, where a sweet or cheese is enjoyed by over 60% of canteen-users compared to only about 40% in Eastern England (fig.A.10.16).

A hot main course is preferred by the majority of people, but particularly in southern and eastern England (fig.A.10.17). Meat for the main course is predominant in all areas, but particularly the West Pennines & Wales, where most poultry is also eaten. Fish or shellfish is most popular in southern regions, but a fry or grill is preferred in Eastern England. Londoners eat most egg dishes, but "other dishes" have greatest uptake in areas other than southern England and Scotland (H&C EDC, 1974/5).

10.5. Study of regional food preferences of employees, grouped by type of occupation.

10.5.1. Aim.

The aim is to try to establish the food preferences of employees in various parts of Britain and to investigate the influence of type of occupation upon dish choice.

10.5.2. Method.

As noted in section 10.3. data of dish uptake against menus was extremely difficult to obtain. In fact light industrial employees alone are represented in all ten food preference regions (fig.10.3.), and even so only one company's catering sales records are available per region.

Data referring to administrative staff was only forthcoming from 3 out of the 10 regions. Furthermore dish uptake figures were not available for all dishes in all instances: for example, although main dish statistics were received in each case, only 50% of light industrial companies included dessert statistics (fig.10.3.).

All companies which responded to the requests for data stipulated retention of their anonymity and so data were analysed by region and by occupational grouping only: not by company.
Fig. 10.3. Regional availability of dish choice statistics of employees

and methods of data analysis.

<table>
<thead>
<tr>
<th>no. of regions out of 10 from which data is available.</th>
<th>% of regions represented by data referring to choice of: 'starters'</th>
<th>main dishes</th>
<th>vegetables</th>
<th>desserts</th>
<th>analysis by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>heavy industry</td>
<td>7</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>% dish uptake</td>
</tr>
<tr>
<td>light industry</td>
<td>10</td>
<td>100%</td>
<td>50%</td>
<td>33%</td>
<td>% dish uptake</td>
</tr>
<tr>
<td>retail shop assistants</td>
<td>6</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>no. of menus appearances</td>
</tr>
<tr>
<td>administrative staff</td>
<td>3</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>% dish uptake</td>
</tr>
</tbody>
</table>

10.5.3. Data analysis.

The statistics were received in a great variety of forms which necessitated standardization.

Only the data referring to retail shop assistants' preferences (section 10.5.5.3.) in various regions were analysed in terms of menu appearances: actual dish uptake statistics were not available but all data of dish menu appearances were received from branches of the same chain department store which has an identical nationwide catering policy, and so were comparable.

Statistics of dish uptake against menus were available for the analysis of the preferences of employees in light and heavy industry and administration (sections 10.5.5.1.; 10.5.5.2. & 10.5.5.4.). As far as these statistics are concerned the number of days' menus represented by the regional samples varies considerably. As use of a few days' menus from each region would greatly limit data content, the varying sizes of samples were used and this negated any deductions which could have been drawn from frequency of menu appearances.

Nevertheless, although not all dishes have an equal opportunity of appearing in each menu sample, average percentage uptakes of dishes are comparable.

Another drawback of the data is that the number of choices available to customers also varies regionally, from 2 to 7. In order to try and reduce the unevenly weighted percentage uptake levels caused by this factor, an average selection number is decided upon (usually the most usual one) and the percentage uptakes of dishes not
chosen from this number are corrected. Each percentage uptake is multiplied by a correction factor in order to represent a more probable proportion of choice, based on the selection number.

Example: To convert a 30% uptake out of a choice of 4 dishes, to a percentage out of a selection number of 3, the correction factor employed is 1.33.

*.. a 30% uptake out of a choice of 4 dishes
is equivalent to

a 40% uptake out of a choice of 3 dishes. (30% X 1.33 = 40%)

This, of course, assumes that when the number of dishes to be chosen from is reduced, each remaining dish receives the same additional percentage uptake. In the actual canteen situation this would not necessarily be so, but it is hoped that this is a sufficiently meaningful approximation to enable comparisons to be made within this unavoidable margin of error.

10.5.4. Results.

The tabulated results of the analysed original raw data appear in dish item detail in the supplementary text in tables S.10.1 to S.10.7. inclusive.

The tabulated results in terms of food groups appear in figures A.10.18 to A.10.21 inclusive.

10.5.5. Discussion of results by type of occupation.

The availability of only one sample menu from each region means that findings can only be regarded as possible indications and conclusions based on these are necessarily tentative.

The most noticeable inter-regional differences to emerge from the original data are discussed in terms of various types of occupation (sections 10.5.5.1. - 10.5.5.4. inclusive) and in terms of broad generalizations of the preferences of all types of employees in the concluding section 10.8..

10.5.5.1. Heavy industrial employees regional food preferences.

(fig.A.10.18.: table S.10.1.)

On the basis of percentage dish uptakes, meat dishes appear to be most popular in the West Midlands, made-up meat dishes in Yorkshire & Humberside and fish in the North West sample. Roast beef, lamb, pork and chicken are all very popular in the West Midlands, while
offal seems to find most favour in the North West. Made-up meat
dishes, especially pies, are favourites in Yorkshire & Humberside,
although these "filling" dishes appear to be as popular among heavy
industrial workers in the South as in the North. Lancashire Hot Pot
and Cornish pasties are markedly less popular in their regions of
origin than elsewhere.

Fried cod appears to be extremely popular in the North West
and reasonably well-liked everywhere. Haddock (preferably fried) is
the favourite in the Yorkshire & Humberside, and plaice in southern
samples.

Curry is featured on all the sample menus, but other "foreign
fare" is only popular in the South East, where even the names of
dishes tend to be more elaborate than the more simple ones of other
regions.

Salads appear to gain a reasonable level of uptake in all
companies, but particularly in those in the North West and East
Anglia. Egg dishes seem to be very popular in the North West sample,
and cheese dishes in that of the South East.

The desserts which appear on menus nationwide are mostly
hot milk puddings and sponges, pies and tarts with custard. Whips,
jellies, fruit and cream appear to be rarely featured, especially on
the menus representing Yorkshire & Humberside and the West Midlands.
Cheese and biscuits, when available are seldom chosen: indeed the
Welsh caterer specifically mentions that at least two-thirds of all
desserts are hot and 'filling'.

10.5.5.2. Light industrial employees regional food preferences.
(fig. A.10.19.; tables S.10.2. - S.10.5. inclusive.

'Starters' (table S.10.2.). Soup, and particularly scotch
broth and potato soup, is preferred by the employees in the Scottish
company: elsewhere tomato soup and minestrone are more popular.
The Welsh sample shows fruit juice to be reasonably popular.

Main dish (table S.10.3.) Meat and fish main course dishes
have the highest percentage uptakes in the Welsh sample: alternatives
are seldom available. Roast meats are featured in practically all
regions: roast beef and lamb appearing to be most popular in the
North, pork in the West Midlands and chicken in the North West sample.
Stew and dumplings seems to be a particularly Northern favourite,
while ham is clearly most enjoyed in Wales and veal is featured in
London.
Made-up meat dishes appear most popular in the South East and Wales, although pies alone attain their highest uptake levels in the northern company, where dumplings again find favour. Panakeltty, a traditional Northern dish is only featured in the North where it is very popular: similarly haggis appears only on a Scottish menu.

Of the fish dishes, cod, especially fried, seems most popular in the North, West Midlands and South East companies, while haddock is preferred in the Yorkshire & Humberside company: according to the caterer in Yorkshire, fish is demanded often on the menu and is very popular. Hake appears only on the Welsh menu and plaice only on those of Wales and southern regions. Fish fingers are outstandingly most popular in the East Midlands company. Curry and pasta both attain their greatest uptake in the South Eastern company although the popularity of the former is also considerable in that of the North West.

Miscellaneous cheese and egg dishes appear to be preferred in the South West, although 'stoved potatoes' (a traditional Scottish dish) are very popular among the only employees to whom they are offered: the Scots.

A hot snack, as an alternative to a hot 'main dish', is available only in the Welsh company but is chosen by about a third of the workers.

Vegetables. (table S.10.4.) Few meaningful conclusions can be drawn from a sample of only 3 regions, but it does seem that peas, cauliflower, carrots, baked beans, chips (particularly in the West Midlands), and to a lesser extent roast potatoes are popular everywhere. Peas seem to be the Northern and Midland favourite and cauliflower that of East Anglia.

Desserts. (table S.10.5.) Of the five regions from which dessert statistics were forthcoming, the heavier desserts, most of which are served with custard, attain highest uptake levels in the Welsh and Scottish companies. Milk puddings also seem to be preferred in Scotland. The percentage uptakes of lighter desserts are generally minimal, especially in the North West.

Although no dessert uptakes were available from the company in Yorkshire & Humberside, the caterer notes that fruit pies and sponge puddings are very popular - in fact all portions which are produced are always taken up - while lighter dishes are enjoyed far less. Similarly, in the East Midlands' company it is reported that there is little demand for "fancy" sweets or cheese and biscuits: steamed and
baked puddings and apple pie are much preferred.

10.5.5.3. Retail shop assistants regional food preferences, (fig. A.10.20.; table S.10.6). (data supplied by regional branches of a chain department store)

Judging by the frequency of menu appearances of different soups, it is evident that tomato soup is the most popular nationwide, closely rivalled by minestrone. Garden vegetable soup is most popular in the South West branch, mushroom and asparagus in the southern branches and thick soups made from pulses, in Scottish branches.

Meat dishes appear most often on southern menus although made-up meat dishes are conspicuously absent in the South East. Roast meats are generally popular but pies are seldom featured on southern menus. Lancashire Hot Pot (served in the traditional way with pickled red cabbage) is featured only in the North West branch and Scots pies only in Scotland, although Cumberland sausage appears only on a menu in the South West branch. One caterer in Scotland finds that 'stodgy' foods are most popular, such as mince or stews, and always served with a generous helping of potato; and similarly in the Yorkshire & Humber-side branch more 'filling' foods are apparently preferred.

Fish dishes are most prevalent on menus in the North West branch, while the absence of haddock on southern menus is most noticeable. The caterer in the South West finds that only a proportion of the staff like 'fish-in-sauce' and so serves the sauce separately to the fish.

Within a four-week period curry is featured once in all 6 regions, and so is a pasta dish, although in the Scottish branches alone is macaroni cheese available rather than spaghetti bolognese. It seems that in the Yorkshire & Humber-side store "foreign" dishes are not enjoyed, and neither are spicy foods as milder flavours are preferred. 'Yoghurt lunch' (a cold snack-type meal) is available nearly everyday in the South West, every other day in Wales, but not at all elsewhere.

Salad is available least often in Wales and the North West, but practically everyday elsewhere. Cheese salad and egg salad are particular favourites in the North West store, luncheon meat and
sausage roll salads in Scotland, "meat" in the South East store and pork in Yorkshire & Humberside. The caterer in the North West branch finds that the ratio of salad to hot meal uptake is 20:80% in winter, but the reverse in summer, while in Scotland the ratio of hot to cold meal is reported to be 80:20% year-round.

Lighter desserts are definitely considered by caterers to be most popular in Wales, where "cake" is featured very much more often than in other regions. Ice-cream, however, seems to be particularly enjoyed in branches in both Scotland and the North West, and in the latter branch milk puddings are more often available. The "heavier" puddings (usually served with custard) appear most often on South East menus, where fruit tarts in particular seem to be favourites: in the Yorkshire & Humberside branch sponges appear to be preferred. It seems, however, in the North West store that any hot dessert served with custard achieves a high uptake and is preferred to a cold dessert. Similarly in Scotland, sponges and tarts with plenty of thick custard, are particularly appreciated.

Apparently, although cheese and biscuits, fresh fruit and yoghurt are available everywhere daily, only a minority of the staff choose one of these to conclude their meal, although they do seem marginally most popular in southern branches.

10.5.5.4. Administrative employees' regional food preferences.

(fig.A.10.21.; table S.10.7.)

In all three regions from which statistics were forthcoming, meat dishes are chosen by about a quarter of the office staff who use their canteen facilities.

Made-up meat dishes appear to be less popular in the company in the North than in the West Midlands or South East, while pies are particularly favoured in the West Midlands company.

Fish dishes have highest uptake levels in the West Midlands while made-up fish dishes seem most popular in the Northern company.

'Foreign' and miscellaneous dishes are markedly most popular in the West Midlands, while salad, perhaps surprisingly, is chosen by the greatest proportion of customers in the Northern company.

It is very noticeable that on all the administrative staff restaurant menus, a much greater proportion of the dishes have either elaborate or 'foreign' names. Many of the dishes have accompanying sauces and the percentage of actual foreign dishes is much greater.
than on canteen menus. The addition of coffee to conclude is idio-
syncratic of the administrative staff restaurant meal.

10.6. The inadequacies of statistics relating to menus necessitate
an alternative method of examining employees' regional food
preferences.

Limited data of dish uptakes against menus and the tenta-
itive deductions to be gleaned from sample menus alone, are insufficiently reliable bases upon which to draw conclusions regarding
regional food preferences.

Experienced individuals within the industry have subjective
opinions regarding the tastes of their customers and can therefore
supply extra information which is possibly not apparent from statistics
alone.

Contract catering companies may be retained by client
companies in various parts of the country, for whom they operate
kitchens, produce successful menus and serve food of a required
standard, and may therefore have experience of regionally suitable
menus.

Large manufacturing companies and chain retail store concerns
either employ a catering contractor or operate their own catering
department. Depending on the size and geographical scope of the
organization, its own catering department may have wide experience
of foods acceptable in the various places of work.

Structured interviews with head-office representatives of
both large contract catering companies and organizations with their
own extensive catering operations can therefore elucidate regional
food preferences and idiosyncrasies discovered through the personal
experience of these informed individuals.

10.7. Industrial Caterers' Structured Interviews.

10.7.1. Method.

The head offices of a number of contract catering companies
and large organizations' catering departments were contacted, the
purpose of the research explained and interviews with suitable
individuals requested.

The initial response was minimal. Second and third requests
had to be made over a considerable period of time: eventually 50%
of the catering contractors agreed to the proposed interview, but
only 20% of the catering departments of large manufacturing and retail organizations. However, some companies did include some menu samples or subjective impressional information with their interview refusal.

Each interview was structured similarly with the aid of a questionnaire of key points for discussion (fig.A.10.22). These points included geographical location of catering facilities, type of workers being catered for, policy regarding food supplies and menu content and meal availability, and subjective opinions regarding aspects of food preferences.

10.7.2. Results.

The tabulated results of the interviews appear in fig.A.10.23.

Discussion of these results includes additional material imparted during the interviews. For example, one nationwide organization (company I of fig A.10.23) which manages its own staff catering provided the sales figures in fig.A.10.24.(b) which relate to the regions delineated in the map, fig.A.10.24.(a)

Each interview took place at the respective company's head office with either a Sales or Marketing Director or Manager, and lasted between 1 and 3 hours. Company anonymity was requested in every case, and so companies are referred to by a code letter.

10.7.3. Discussion of results. (fig.A.10.23.)

Self or Contract Catering. About three-quarters of the companies interviewed carry out their own catering operation: and the remaining one quarter are contract catering companies.

Type of workers being catered for. The majority of workers being catered for are employed in light manufacturing industry or have an 'office job'. It is primarily catering contractors who provide a food service for heavy industry, while the chain retail stores (such as companies J & K) operate their own catering department. For many companies the proportion of office-worker customers is minimal compared to that of manual workers.

Geographical location of units. Nearly 50% of all catering operations have a nationwide spread of catering outlets, while less than a third cater within one region only. Experience of regional tastes within staff catering outlets is therefore extensive.
Average meal price. The average meal price derived from the whole sample is 27np. Although it seems somewhat higher than this (at 31np.) when the food service is operated by a catering contractor.

Hours during which meals are available. Catering contractors appear to be retained when a 24 hour meal service is required. Only 50% of self-catering operations provide a food service at all times. Meals are only provided for retail store assistants between mid-morning and mid-afternoon (e.g. companies J & K).

Food supplies. Few industrial caterers produce their own food supplies: this system applies primarily to companies involved either in the manufacture, wholesale or retail distribution of food such as companies G, J & K. The proportion of contract caterers who produce their own food is also small (about 25%): company D has its own 'cook-freeze' central production kitchen from which supplies are distributed to client companies' catering outlets. Only one company (Q) relies totally on local food suppliers: the vast majority of the catering operations use local suppliers for perishable goods or local produce which is essential for certain regional dishes.

Menu content. Nearly all the head office coordinators of the catering operations claim to allow the individual unit managers considerable freedom as regards menu content, within certain pre-determined guidelines of cost. The one company, D, which limits this flexibility does so because their central food production kitchen produces only a limited number of dishes.

Regional food preferences in Britain. The interviewed caterers unanimously agree that regional food preferences do exist within Britain, although companies B, Q & R think that they are uncommon. Company P, however, feels that differing food preferences are more connected with social class structure than geographical region.

Regional food preferences within Industrial Catering. The majority of the catering operators examined by interview feel that food preferences are reflected within industrial catering, although about half of them feel that they number but a few examples. Only one company, P, thinks that no regional differences in taste are apparent. However, company C feels that food preferences tend not to be regionalized at lunchtime as traditional local fare is eaten mostly in the home, and therefore mostly in the evening.
Regional Preferences in Food Commodities within Industrial Catering.

Four-fifths of catering operators find that there are regional preferences in food commodities, but two-thirds find these to be few. Companies C,D,I and J feel that preferences are apparent particularly in the case of bakery products, the standard and variety of which increases as one travels north through Britain.

Company C finds that the popularity of soup is increased north of Birmingham and company I finds greatest consumption of soup in Scotland, where companies C,H,G,I,J and T agree that there is a marked preference for thick soup.

"Roasts" are most popular in the Midlands (Co.K) but mince and mince pies are preferred in Scotland (Co.C&H). Similarly black pudding, stews and meat balls are popular in Scotland (Co.T). The northern preference is for more solid food such as meat pies or puddings (Cos. C,G, & H), although some 'stodgy dishes' are enjoyed in the North of England and Scotland (Co.E). Employees in the south prefer drier foods and in the South East dishes with elaborate or 'foreign' names are much more acceptable than elsewhere (Cos. C & H). Company G finds that Hungarian goulash sells well in the South, but will only be eaten in the North if it appears on a menu as "brown stew". "Foreign" food is most popular in the South East: curry consumption is greatest in London and the uptake of pasta is at least 50% more in the South East than in Scotland.

Blander sausages are preferred in the North in comparison to the highly seasoned ones enjoyed in the South (Co.H.), while the recipe for Shepherds pie varies regionally as more potato is used in northern areas (Co.K.). Braised heart is popular in London but not elsewhere (Co.G.). Smoked bacon is preferred in the South but unsmoked, green bacon in the North, particularly Lancashire (Co.H). A subsidiary of company G, which is involved in food technology, records higher levels of acceptability of TVP (texturized vegetable protein) in the North than in the South, although in Scotland acceptance is negligible.

"Fish-in-sauce" is a southern preference whereas in the north fish is mostly preferred fried in batter (Co.G). Rock salmon is primarily eaten in London, while in the rest of the South East smoked mackerel, cod, plaice and trout are enjoyed. Haddock is preferred in Scotland and northern areas, particularly Yorkshire, where it is only eaten if skinless.

Within the Birmingham conurbation the demand for "chip
"butties" is great (Co.K) while in Yorkshire & Humberside chip butties made with baps are preferred (Co.T). Bakery goods such as cakes and pastries and bread and jam (Co. H) find most favour in Scotland, while plainer fare like bread and toast is favoured in the North West (Co.I). Liberal helpings of gravy, to be mopped up with bread, are popular in Yorkshire (Co.D), and throughout the midlands and northern England bread and butter is essential with all dishes (Co.G).

More pickles and sauces are definitely consumed in the north as the purchasing orders of a number of companies reflect, especially Co.G. Co.C proposes the existence of an hypothetical 'onion line', extending from Hull to Bristol, to the north of which raw onion is readily eaten. Furthermore, pickled onions in the north are preferred white and crisp, but in the south soft and brown, (Co.C).

In the South salads sell all year round, but only in the summer in the North (Co.G.). The North West, and particularly Lancashire, is the stronghold of 'mushy peas' and pease pudding (Cos. C & H). However, all manual workers enjoy tinned processed peas while office staff prefer frozen peas (Co.I). There is a northern preference for butter beans but an exclusively southern acceptance of courgettes and other 'unusual' vegetables (Co. G). Company K has found that in the Midlands baked potato with cheese is enjoyed as a meal on its own.

Ice-cream as a dessert has a low consumption in all areas within industrial catering because, unlike most dishes, it is rarely subsidized. Cheese and biscuits are only chosen by office staff (Co.E). Suet and milk puddings are favoured in the north and sponge puddings (in winter) and yoghurt in the south (Co.G). Company H apparently finds an unusually high demand for bilberries and an aversion to blackberries in the Manchester conurbation, while a preference for cream is especially marked in Devon (Co. T).

Slimming foods are demanded mostly in the South (Co. J). More convenience foods are used and accepted in the south, while northerners prefer "home-type cooking" (Co.C).

Companies C, E and G find a greater popularity of tea in the north and of coffee in the south, although consumption of all hot beverages is lowest in Scotland (Co.I; fig.A.10.23.).

Mid-morning snacks are more substantial in the North, where factory workers in Co.G create a great demand for bacon sandwiches in particular. Indeed, a number of companies (and particularly Co.E) think that quantity rather than quality is considered to be of paramount
importance in the north, although in all regions there are very rigid ideas of what is "value for money" within industrial catering, and much vocal opposition meets any slight price increase, however much the meals are subsidized.

Regional preferences in traditional dishes. Most companies mention Scotland as being the stronghold of traditional regional fare; such dishes as haggis, porridge with salt, mutton pies, stovers, bridies, Lorne sausage being enumerated by companies H,I,L,M,N & O. The North West appears to be another area where local dishes find considerable favour: Co.H mentions Lancashire Hot Pot with pickled red cabbage, as well as black pudding; Co.D mentions Liverpool 'scouse' (a lamb or mutton stew); Co.L mentions meat-&-potato pie; and Co.G mentions tripe and onions, which also has a limited appeal in London though not in the rest of the South East.

In Yorkshire Co.H finds 'Yorkshire mince' to be popular: i.e. mince with Yorkshire pudding. Co.A only finds traditional fare to be popular in the north, and although Co.J agrees with this, it is company policy not to encourage the featuring of traditional dishes as this is not considered to be economically beneficial.

Co.F in contrast to this finds that regional preferences in dishes are carried by employees to different locations of employment throughout Britain. Furthermore, Co.L finds traditional fare to be so popular that they have had to build two separate central 'cook-freeze' kitchens: one to serve the needs of the south and the other to cater for the different tastes of their employees in the north.


The first and most obvious conclusion is that within the field of employee catering preferences exist which are governed by the occupation of the customers, and possibly their social class.

Not only the type of menu, its content and length, but also the nature and decor of the catering outlet varies according to the customer's type of occupation. Even the name of the outlet differs: heavy industrial works still generally eat in a "canteen" as do the majority of workers in light industry. Retail shop assistants and office workers eat in a staff restaurant, while the higher management levels enjoy the benefit of a "dining room" : furniture, table appointments and type of service vary accordingly.
The actual food served also differs: industrial workers are offered (indeed they demand) plain, familiar dishes, simply cooked and ungarnished but served in generous portions. There are some regional variations on this theme: in the south of England a few 'foreign' or unusual dishes may be acceptable to this type of worker, while in the North these are disliked, an exception being the reasonable level of acceptance of curry in the West Midlands. Traditional regional dishes are favoured most in the north of England and Scotland.

Retail shop assistants are a little more adventurous: a few unusual and foreign dishes are acceptable (again particularly in the South), although the better-known, simple fare is generally preferred. However, more elaborate names can be given to dishes, and plates need not be as plentifully filled as those of industrial workers: probably because shop assistants are usually female. For this reason also slimming foods and salads find a ready market within the shop assistants' staff restaurant.

Menus offered to administrative (office) staff, and particularly management, contain a greater number of dishes to choose from, many of which have long, elaborate, often "foreign" names. These dishes are often described as more "sophisticated". Sauces, garnishes and dressings abound in this type of catering operation, in which quality is predominant over quantity.

These differences are not merely reflections of social class structure: obviously a man who is engaged in heavy manual labour all morning is going to want, and need, a larger, more 'filling' and sustaining meal than a person who has been stationary behind a desk.

Many caterers claim that individual catering units are idiosyncratic in their biases for certain dishes, and that preferences cannot be assumed on the basis of regional location. However, over and above these individual differences, certain regional preferences do emerge.

**Dish preferences.**

As far as 'starters' are concerned the most obvious regional difference is the great popularity of soup (especially if thick) in Scotland.

Of the main dishes, "roasts" are very popular everywhere, but they seem to be especially so in the Midlands. Pies, especially containing meat, are northern favourites: in Scotland they are preferred
if based on minced meat.
Indeed, any minced product, preferably including a large amount of potato, is enjoyed in Scotland, while 'stodgier' pies and puddings are enjoyed in the North and Midlands, and sliced meats and drier foods in the South. Made-up meat dishes are enjoyed in Scotland and northern areas of England, while offal finds greatest favour in the North West. There appears to be a preference also for lamb in the North West, for poultry and pig meats in Wales.

Cod and plaice are enjoyed most in the South East, the latter also being a Welsh favourite, along with hake. Haddock is preferred in Scotland and the North, and particularly in Yorkshire. Skate, sole, whiting, other less usual fish and sea-food appear mostly on southern menus. Products such as fish fingers and fish cakes are enjoyed most in the East Midlands.

Foreign dishes, in all types of employee catering outlets, are most popular in London and the South East. Curry is the exception as it has a high acceptance in the West Midlands. An elaborately named dish only sells in the south: to sell well in the north it has to be given a simple and familiar-sounding name. Although spicier foods are apparently preferred in the south, it is in the Midlands and North that pickles are most popular.

Egg and cheese dishes appear to be preferred in the South West, although a number find favour in Scotland, especially if they contain potato.

Salads are predominantly favoured in southern regions, especially by female workers, although they do attain reasonable uptake levels in the northern regions in summer.

Chips are favourites nationwide, although in the south more unusual types of potato often provide reasonably popular alternatives.

Peas are generally most popular, especially in the Midlands, while "mushy" peas are the favourites in the North West. Green vegetables tend to be southern favourites, while root vegetables find greatest favour in the north. More unusual vegetables usually only sell reasonably well in the south.

The heavier desserts, such as pies, tarts and sponges with custard are the undisputed favourites within employee catering, particularly in northern regions. Lighter desserts do find a market in the south, among female workers, and in office workers' restaurants. Cakes, to finish a meal, are markedly a Welsh preference. Milk puddings are also reasonably popular, especially in the Midlands and the North.
West. Cheese and biscuits find little favour, especially in canteens: in southern staff restaurants they are tolerably popular.

Most beverages from vending machines are drunk in the South; most served manually being consumed in Scotland. Coffee is markedly more popular in the South, while tea predominates in the North.
CHAPTER 11

REGIONAL FOOD PREFERENCES
WITHIN COMMERCIAL CATERING.


The commercial catering industry is defined for present purposes as consisting of the sale of meals and refreshments by hotels and other residential establishments, restaurants, cafes, snack bars, fish-and-chip and other 'take-away' food shops, store restaurants and public houses.

The scope of the industry appears to vary according to source (fig.A.11.1), but generally includes the establishments enumerated within the present definition.

Figures relating to the size of the commercial catering industry in terms of turnover also vary according to their source (fig.A.11.2), but in 1974/5 the total annual sales of meals and refreshments in all commercial catering businesses in Britain amounted to £1,223.0 million (H&CEDC, 1975). This estimate is divisible both in terms of percentages of trade within sectors of the industry (fig.11.1) and in terms of regional expenditure (fig.11.2).

fig.11.1. Percentages of trade within the purely commercial market, 1974.

(source: H&CEDC, quarterly report, July-Sept, 1974)

<table>
<thead>
<tr>
<th></th>
<th>&quot;take away&quot;</th>
<th>pub and pub</th>
<th>hotel, motel</th>
<th>cafe, snack bar</th>
<th>others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meals: %</td>
<td>24.5</td>
<td>14.3</td>
<td>20.3</td>
<td>23.1</td>
<td>17.8</td>
</tr>
<tr>
<td>expenditure: %</td>
<td>15.4</td>
<td>15.2</td>
<td>24.4</td>
<td>17.0</td>
<td>28.0</td>
</tr>
</tbody>
</table>

Taken together, the "take-away" and cafe/snack bar establishments provide nearly half of all meals and snacks in the purely commercial market. The considerable portion of catering provided by the "hotel" category (in fig.11.1.) reflects the influence of holiday trade, as "Trends in Catering" finds that this sector accounts for only 10% of expenditure in the April-June period of the year. However, the "hotel" sector provides over a third of all meals in the commercial market, while the "take-away" and cafe/snack bar sector cater for at least two-thirds of the snacks trade. "Pubs" provide almost equal proportions of meals and snacks. It is worth noting that even during the "holiday season" of July-September quarter, 23% of all meals/snacks in the
purely commercial sector are workday meal occasions, the meals being eaten in various types of establishments, (H&C, EDC, 1974).

Regionally, expenditure within the total commercial catering industry breaks down as follows:

**fig.11.2. Regional Percentages of expenditure within the purely commercial market.** (source: H+C, EDC, 1974/5, annual report)

<table>
<thead>
<tr>
<th>Year: 1974/5</th>
<th>Scotland</th>
<th>E. England</th>
<th>W. Pennines + Wales</th>
<th>London</th>
<th>SE &amp; SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>28</td>
<td>21</td>
<td>27</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

The regional concentration of the commercial catering industry and its various types of outlets is graphically represented in Appendix 4, figs. A.4.10. (a) + (f) and A.4.11.

11.2 APPROACH TO THE INVESTIGATION OF REGIONAL FOOD PREFERENCES WITHIN COMMERCIAL CATERING.

The commercial catering industry is diverse in nature and financially large in size. However, although its continued viability depends largely upon customer satisfaction, very little independent research has investigated what the customer actually wants. The elucidation of regional food preferences within commercial catering is therefore achieved by a combination of a literature search and from information extracted directly from within the industry itself.

Preliminary meetings with individuals from various sectors of the industry make evident the fact that statistical data relating to uptake of individual dishes are rarely available. Furthermore, in the few cases of businesses which do record their sales in detail, representatives are extremely reluctant to release this information as it relates to commercial enterprises. However, it is apparent that many caterers have some definite opinions of dish preferences, based on their experience within the industry, which they are prepared to divulge by personal communication on the condition of retention of company anonymity. Therefore, any references to individual companies need to be in broad, descriptive terms.

The investigation of regional food preferences within commercial catering is therefore carried out by a number of methods:

- **Method (A)** Published information, supported by informed opinion from within the industry. (11.3)
- **Method (B)** Interviews with experienced members of geographically widespread commercial catering companies, within Britain. (11.4)
Method (c) Individual commercial caterers' questionnaires: to highlight local tastes and idiosyncrasies, uninfluenced by the national pattern of perceived preferences. (11.5)

Method (d) Detailed study of a specific locality, in terms of both caterers and their customers, to identify the preferences of different types of customer. (11.6)

11.3. (A) Published Information. Supported by Informed Opinion from Within The Industry.

11.3.1. Frequency and Propensity of Eating Out.

In 1949, 52% of a sample of people said that they "never" ate out, and by 1951 this percentage had only dropped to 51%. In 1956 about a third of Londoner's did not eat out, but elsewhere in Britain the proportion remained at about a half (Kemsley & Ginsberg, 1961). By 1965, however, the majority of the population was eating out, at least occasionally, although for about a third of the population this remained a rare occurrence (National Catering Inquiry (N.C.I.), 1966).

In 1974 the greatest percentage of meal occasions which take place in the purely commercial sector per week occurs in London and Eastern England: the least in Scotland (H&C. EDC, 1975), (fig.A.11.5.).

The effect of regional location on the propensity to eat out is quite impossible to determine because of the contradictory evidence available. For example the Horticultural Marketing Council's Survey (1962) records that in Scotland the propensity to eat out is very much below average, and in the North West of England it is markedly above, which is in complete contrast to the Index of Marketing Trends (1966) where these positions are reversed. On the other hand, the Crawford Survey (1958) shows the proportion of people eating out to be generally higher in London. Bryn Jones (1970) hypothesizes that as the propensity to eat out must increase with the distance travelled, then because of the degree of commuting to London, this region must reflect a correspondingly higher proportion of its people eating out. Certainly the National Catering Inquiry's (1966) comparison of seven major towns tends to confirm this, but whilst it would be convenient to advocate the importance in London, taking all available sources into account, there is really little evidence to indicate how regional differences affect the propensity to eat out.

11.3.2. Expenditure.

In 1956, after rationing ended, the amount spent per capita
on eating out in London, was about twice that spent elsewhere in Britain (Kemsley & Ginsberg, 1961), and this predominance of expenditure in London has continued ever since (fig.A.11.4),(F.E.S., various years).

In fact, whether one considers eating out in relation to household income, income per head, the food budget or total budget, the curves for London are always distinct and lie above all the others. Clearly on this evidence, the income elasticities in London are much higher than anywhere else in the country, and so, for a given increase in income, people living in London would spend proportionately more on eating out than those living elsewhere (Bryn Jones, 1970). However, between 1969/70 and 1973/4 (fig.A.11.4.), the percentage of food expenditure on meals away from home, increased least in the North West and Yorkshire & Humberside, but most in the South West.

By 1965 the average price paid for a meal out was found to vary regionally in specific urban areas, although the majority of higher priced meals were consumed in London, the West Midlands and the South West (N.C.I.,1966). By 1974/5 the average cost had not risen markedly (fig.A.11.5.), (E&C.EDC,1975).

11.3.3. Attitude to Eating Out.

The National Catering Inquiry Supplement (1967) found that cost is an important factor which limits frequency of eating out, but it is not simply a question of money not being available: rather eating out is not given priority over other activities. Furthermore, if a meal is subsidiary to the other evening's activities, its cost may be considered out of proportion to the enjoyment and time it involves. However, when choosing a place to eat, cost is such a high priority that the initial choice in terms of price range is determined by the husband, but that within this range the wife has freedom of choice.

Among those for whom eating out is not a common activity the conflict between the husband's opposition to, and wife's preference for, eating out, is most marked.

Personal experience and individual recommendation seem to be the bases upon which most people decide where to eat, although the decision is also governed considerably by predictability.

Good cooking, cleanliness and efficient service are all required of an "eating out" establishment, although a "flamboyant procedure and appearance" can deter the custom of particularly the C, D and E social grades (N.C.I.1967,(a)).

When eating out in a restaurant, the type of service preferred
shows only slight variations regionally although by 1975 self-service had become more popular in all regions.

The length of time spent in consuming a meal varies regionally. Meals lasting over an hour occur most often in Scotland, while over half the meals eaten in London last between 30 and 60 minutes, (fig.A.11.7), (H+C.EDC, 1975).

11.3.4. Food Products Chosen by Caterers.

In 1971 the consumption of convenience foods by commercial caterers amounted to £152.3 million (B.I.S.1971) and in 1973 to £426 million (Catering Times, June 6, 1974). The regional usage is significantly greatest in London and the South East (fig.A.11.8), because labour is scarce and eating out tends to be more of a necessity and less of a luxury. Lower consumption is found where fresh foods are more readily available (B.I.S., 1971).

In contrast, however, London and the South East has a comparatively small share of total cash-&-carry sales to caterers, probably due to the high cost of land in the South East.

Canned, dried and frozen fruit and vegetables have made considerable inroads into the position previously held by fresh produce, especially in areas isolated from production centres. Independent commercial caterers tend to use about 50% fresh produce but some of the multiple hotel and restaurant organizations use very little (Hunt & Jamison, 1967).

Increasing numbers of caterers in all commercial sectors are using convenience food products, multi-portion entrees, complete dishes and meals for three main reasons: the shortage and high cost of skilled kitchen staff, availability of seasonal foods and a high average standard of food expected by the customer (personal communication: Craigmiller, 1976).

Figure A.11.9. (Attwood-Schlackman, 1972) indicates the regional percentage usage of individual food products by caterers and illustrates the predominance of convenience commodities.

Sixty-five percent of Welsh caterers still use raw, unpeeled potatoes but in London and the South East a quarter use instant, mashed potato. Prepared and frozen chips are also much used, especially in London, the South, North and Scotland. In the South East and South West more caterers (well over a third) use frozen rather than tinned peas.

Usage of oven-ready poultry is highest in southern regions
and lowest in the North West. Fresh meat pies and sausages are used more than are frozen ones in all regions, although frozen produce, including multi-portion entrees, attain their highest usage level in the South East. More northern and Scottish caterers use beefburgers than precooked meats: this position being reversed in other regions.

None of the traditional English meat products sell at all in Scotland where meat pies have to be mutton or minced beef based, and where the local baker is still important. Sliced Lorne sausage and hashed vegetable pies are idiosyncratic best-sellers in Scotland. Pork in any form is very unpopular and the ratio of pork to beef is 1:9 in Scotland, compared to 3:7 in the rest of Britain (personal communication, national manufacturer and distributor of frozen meat products, 1975).

A large distributor of frozen fish and seafood to the commercial catering industry finds that only small scampi sell well in Scotland: large ones in London and the South East. Scottish caterers never purchase cod or plaice, which are southern preferences, nor fresh crab which is landed locally.

The South West and Scotland have the largest market for smoked salmon. King prawns are sold primarily in urban conurbations, often to Chinese restaurants, while the ordinary prawns are particularly good sellers in and around London (personal communication).

Prepared pastry, cake and pudding mixes are used by more caterers in the South East and West Midlands (fig.A.11.9) while about 50% of caterers use margarine, especially in the North and South West.

More caterers fry in liquid oil in the south and Wales but in the north solid fat usage still predominates.

Tinned fruit usage is highest in the South West.

Tinned pasta usage is greatest in the South East (11%), but lowest in the East Midlands (1%). Nearly 70% of Welsh caterers use eggs but less than 50% do so in the North West and East Midlands.

Loose tea is preferred to tea bags, although about a third of caterers in Wales and the South East do use the latter. The highest usage of real coffee is in the South East (32%): instant coffee is used mostly in all regions.

Sugar usage is highest in the South West and lowest in the West Midlands. Most use is made of wrapped cube sugar in Scotland, Wales and the South East, of demerera in the South West, and of vending sugar in the North (Attwood-Schlackman, 1972).
11.3.5. Food Choice by Customers.

11.3.5.1. Take-away food.

Convenience foods are not only available to the caterer but to the customer too. Indeed, one of the most convenient foods is "fish & chips", which was the initiator of a growing market for ready-to-eat "take away" meals, which has recently accelerated due to the Value Added Tax on served meals. This has also been aided by the Chinese and Indian restaurants extending their businesses to take-away food customers. ("Take-away foods" are defined as hot, cooked foods intended for immediate consumption somewhere other than at the point of purchase.)

In the period 1960-70 total take-away food sales doubled: fish & chip sales paralleled this trend while cooked chicken consumption tripled, perhaps because fish prices rose by 50% during this period but that of chicken by only 6%.

There is a much higher buying level in the Midlands and North of England, particularly Yorkshire than in other parts of Britain, (fig. A.11.10).

Of course, the kind of purchase is dependent in part on the type of outlet regionally available (Appendix 4 fig. A.4.11.), but it is interesting that in Yorkshire, the popularity of take-away food has resulted in substantial numbers of people buying chicken. Chicken is also well represented in Scotland. Chinese food has a generally higher buying level than does Indian, and is particularly strong in London and the South East (fig. A.11.11.). The foreign dishes are heavily weighted to the younger age group: fish & chips maintain their hold on the older generation and social group E, while curry seems to be a markedly AB taste.

There are regional differences in the type of fish preferred by fish & chip shop customers. In the south cod is found to be the best-seller, followed by plaice; rock salmon finds its biggest market in London; hake is popular in South Wales and Liverpool; and haddock in Scotland and northern areas. In Yorkshire haddock is the favourite but is preferred without its skin (Priestland, 1972). The accompanying chips also vary regionally: in the north they are dry, in the south they tend to be greasier, and in the Midlands the chips are preferred "soggy," i.e. not well cooked. Even the colour of the vinegar sprinkled on the fish-and-chips varies: in the South a dark colour is preferred, in the Midlands it is paler and in Scotland, colourless (personal communication: magazine "food" writer ).
Very often "take-away" food is almost synonymous with "take-home" food, judging by where it is eaten, especially in Yorkshire and the North West. Eating in the street and in cars seem to be highest in Lancashire and Scotland respectively.

11.3.5.2. Vending. Vended food products show no recognizable regional differences. Only beverages vary in as much as more coffee is consumed per capita in the South: Northerners remain loyal to tea. Birmingham and the East End of London are idiosyncratic in as much as in these two areas only sterilized milk is accepted in vended tea.

11.3.5.3. Fast food. Fast food is not always synonymous with "take-away" foods, and includes cafes, snack bars, various chain "restaurants" of the lower price range and often store restaurants too. Fast food outlets cater for people for whom time is at a premium, and ideally each seat "turns over" many times a day.

11.3.5.4. "Pub" food. Of the 60% of the adult population using pubs, in 1969 only 21% of them ate in them, (N.C.I.,1970). However, the total pub catering market grew from £61 million in 1969 to £200 million in 1973, to include restaurant-style menus (Catering Times, June 6, 1974). In the North, Midlands and West country approximately 41% of pubs serve food: in the South 59%. A greater percentage of southern pubs (19%) serve both hot and cold "snacks" than in the Midlands (17%) or North (10%), although pubs with hot snacks predominate in the Midlands (24% compared to 20% in the South, and 13% in the North). Cold snacks are found in few Midland pubs (10%) but in more in the South (19%) (Attwood-Schleckman, 1972).

The majority of pubs serve food primarily in the middle of the day, but 30% of customers eat in the evenings and weekends; the latter being more popular in the North. In the South, a third of pub customers would prefer more salads and cold buffets, compared to only a quarter in the North. A further 30% of southerners preferred grills, and tend to be more critical of their food, although southern pub caterers use more convenience foods (N.C.I.1970).

11.3.5.5. Speciality Restaurants.

Health Foods.

A number of health food stores now have restaurants attached to them although these do predominate in southern regions (i.e. south of Birmingham), where about two-thirds of the business takes place. However, although East Anglia has a dearth of such establishments, there is a greater number in the South West. Health foods have had
very little impact in both Wales and Scotland, but health food stores/restaurants in the North of England are often extensions of a herbalist's business: indeed more herbal remedies are sold in the North where vitamins are particularly good sellers.

Unsweetened fruit juices are very popular in the South East while pulses (especially lentils and split peas) are enjoyed more in the North. Only recently have wholemeal flour products begun to sell well in the North, although they have been enjoyed in the South for some years.

The total health food market in 1974/75 amounted to about £25 million, although only in the past two or three years have vegetarian meals become available in some commercial restaurants, other than those which are specifically health-food orientated. A decade ago it was impossible to obtain a vegetable dish in a catering establishment: in the South in particular, caterers gradually became aware of the market for these (personal communication: Marketing Director, a nationwide Health Food Chain).

Foreign Restaurants.

There are some regional variations from the national average of foreign restaurants but these tend to show that this is substantially conditioned by the type of restaurants actually available (fig. A.11.12), (National Catering Inquiry, 1966). More foreign restaurants are available in the South (17%) than in the Midlands (12%) or North (11%) (Attwood-Schlackman, 1972).

Steak Houses.

Steak houses are most popular in southern regions, where their percentage of the catering trade closely rivals that of hotels. In London, however, most business by far takes place in restaurants. Hotel trade predominates in Eastern England, while in the northern regions, Scotland and Wales, hotels and restaurants share the business more evenly between themselves, to the detriment of steak houses (H+C, EDC, 1975: fig. A.11.20).

The steak houses solve the problems of uncertainty for many potential "drivers-out," in as much as the meal, the time involved, the service, the menu and cost are all clearly understood and predictable. However, the rigidity of the menu can be a drawback (N.C.I. supplement, 1967).

11.3.4. Dish Choice by Customers.

11.3.4.1. Morning Beverages.

In 1967 a Birds Eye report, "First Thing Thirst", established
that the preferred first drink of the day is tea, nationwide (fig.A.11.13 (a)).

The regional preference for early morning tea declines gradually from the South of England up to Scotland, although it is most popular in Wales (fig.A.11.13 (b)), (NCI, 1968). However, to accompany their breakfast, the English drink more coffee than the Welsh or Scots: in fact in London three people out of every four choose coffee for breakfast, (fig.A.11.14), (NCI, 1968).

Tastes in tea are found to vary regionally. In Scotland many people enjoy tea without milk, probably because the water is relatively soft and so the brew is light in colour. In contrast, in England, and especially in and around London, the hard water produces a darker brew which is then lightened by the addition of milk. The preferred type of milk to be used in tea in the Midlands is "sterilized"; in Scotland "pasteurized", and elsewhere "homogenized" (personal communication: Scottish Hotel School.).

11.3.4.2. Main meal dish choice: nationwide.

In 1947, 1962, 1967 and 1973 Gallup produced a menu for a "perfect meal" (presumably to be eaten "out"), derived from a cross-section of Britain, (fig.A.11.15).

Tomato soup has throughout remained the favourite soup and chicken and vegetable are second choice.

Prawn or shrimp cocktail has replaced sole or plaice as the most popular second course and is particularly popular in the south. Most spectacular has been the replacement of chicken by steak. The potato preference is now for "chips with everything", although in 1973 20% did not mention potatoes at all as part of their 'perfect meal'.

Choices are at their most diverse in the selection of a dessert. The most popular, apple pie and trifle, are mentioned by less than 1-in-8 of people.

Forty percent would finish with cheese in 1973 and 1967, compared to 26% in 1947.

Coffee drinking has risen from 42% in 1947 to 60% in 1973, while preference for tea has fallen to 9% from 32% in 1947.

11.3.4.3. Regional main meal dish choice of customers and caterers (National Catering Inquiry, 1966).

The most popular first course choice (fig.A.11.16) in all
regions is soup, although its popularity is overestimated by caterers in the North West and South West. Hors d'oeuvres and shellfish are both more popular among diners than caterers seem to be aware, especially in Scotland.

For the main course (fig.A.11.17.) meat is markedly the most popular choice, particularly in the South East. Most customers in the South West choose mixed grill but caterers rate it as most popular in the North West. Fish and shellfish both find most favour in the West Midlands, although the caterer's rating of these is negligible.

Regional vegetable choice (fig.A.11.18) indicates that although peas are marginally most popular, caterers vastly overestimate their popularity, especially in northern areas and Scotland. In Wales, in fact, brussel sprouts are most popular although caterers do not realize this. Most caterers overrate the preference for cabbage although in Yorkshire & Humberside customers mention it as their first choice. Caterers everywhere underrate the popularity of cauliflower, although it has a marked customer preference in Scotland. Green beans (most popular in the South East), carrots (in the North West), asparagus (in the West Midlands) and broccoli (in the South West) are all more popular among customers than caterers appear to realize.

In the case of sweets and desserts there is a national trend away from cooked sweets and puddings towards fruit salads, cheese and lighter desserts. In the West Midlands and Yorkshire & Humberside only, is the preference for pies and tarts slightly ahead of fruit salads, while in Scotland ice-cream seems more popular than elsewhere. Regional variation in dessert choice is less than that in other courses of a meal (N.C.I.,1966).

Of the main meal beverages, coffee is more popular than tea in all regions, especially in the North West and southern regions. The South East and Scotland are obviously the strongholds of wine-drinking with meals, where beer is least popular. Since 1965 wine has become more popular in all regions, but especially in the South, while in the North, junior and middle executives still very often prefer bottled beer, even as a pre-meal drink (personal communication: P.R. Dept: large catering group).

11.3.4.4. Regional meal numbers, cost and choice, (H&C, EDC,1975).

Obviously average meal costs are higher than snack costs (fig.A.11.21), but the differential is most marked in Scotland. Londoners eat most full meals out but pay rather less than the national
average meal price.

Soup is most popular in Scotland, being chosen rather than any other first course (fig.A.11.22.) in all regions, except in London where an alternative seems preferable.

The majority of people consume a main course, particularly in the southern regions and in Scotland.

A sweet or cheese is eaten by fewest people in Eastern England, but is most enjoyed in the South West.

A hot main course (fig.A.11.23) is preferred by the majority of people in all regions, but particularly in Eastern England. As was found in 1965, meat is the predominant main course choice, although in Eastern England it is closely rivalled by fish dishes which are least popular in Scotland and London. In all regions, poultry is chosen by well under 20% of people. A fried or grilled dish is most popular in London and least in Eastern England. Everywhere only 3 or 4% of people choose egg dishes. Other types of dishes are chosen most in the West Pennines and Wales, but fewest by far in the southern regions.

Snacks, in place of a main meal, are negligible, especially in Scotland and Eastern England.

It is interesting that the volume of food eaten out also varies. In the North West, an expensive meal in a five star restaurant is likely to consist of four courses and coffee, whereas in and around London three courses and coffee is more likely, (personal communication, P.R. dept., large catering group). In the northern regions the criterion of a "good meal" is often the quantity consumed, whereas in the South it is more often the quality which is important (personal communication: Sales Dept., large Catering Company: H.Q. in Cheshire).

Conclusions derived from Published Information.

There has obviously been a growth in "eating out" over the last twenty years and general availability of popular catering has made the meal "out" experience possible for even the less well-off sectors of society.

Cost limits frequency of eating out in all regions, and although such considerations as the quality of cooking, type and efficiency of service are important, no especially marked differences of requirements emerge.

Commercial caterers in the South East of England use by far
the most convenience foods, especially frozen products. Scottish caterers differ most from the rest of the country, particularly in their meat purchasing patterns, and in terms of made-up meat products.

The market for "take-away" food has grown enormously in recent years, especially in Yorkshire where the popularity of chicken is beginning to rival that of fish & chips. The growth market is that of "pub food"; indeed some meals available, especially in the South, are comparable to those of middle-market restaurants.

A few foods do emerge as having a regional bias of popularity but regional differences are primarily broad generalizations. The National Catering Inquiry (N.C.I.) samples are small and limited to only one urban area per region and so are not truly representative. The "Trends in Catering" regions are large and the only analysis of dish choice is in terms of food groups for the main course. Published information therefore reveals very limited information on regional food preferences within commercial catering.

11.4. (B) COMMERCIAL CATERING COMPANIES' STRUCTURED INTERVIEWS.

A lack of exhaustive data necessitates direct original research within the commercial catering industry. However, from discussions with various food manufacturers and suppliers and representatives of commercial catering businesses themselves, it is evident that data such as "dish uptake" and "sales records" are not available, if in fact they are kept at all. Therefore, relevant information must be derived from experienced individuals within the industry, all be it of a subjective and impressionistic nature.

11.4.1. Method.

In order that information obtained would be in a comparable form, a questionnaire was devised to facilitate a structured interview. The questions inquire into the nature of the organization and its market; the number, geographical location and type of location of catering outlets (i.e. units); the meals available and their price range; company food supply and menu policy; and of course interest in, perception of, and response to, regional (and traditional) food/dish preferences. (An example of the questionnaire is to be found in Appendix 11, fig.A.11.24).

In order to gain comparative regional information, twenty-eight large nationwide (or at least geographically widely spread) companies concerned with various sectors of commercial catering were
initially contacted to request an interview with relevant head office personnel. The aim of acquiring informed opinions on regional food preferences was explained.

A fifty percent response rate of companies agreeing to the proposed interview was received after the first request, and this rose to nearly eighty percent following a second interview request.

The interviews took place at pre-arranged times in the offices of the company representatives, who were either the Managing Director, Marketing or Sales Director, and each lasted for between one and three hours.

11.4.2. Results.

After all the interviews had been carried out the responses were tabulated, (fig.A.11.25, sheets 1,2,3 + 4), and each company was designated with a letter of the alphabet for identification to facilitate discussion of the results, as the majority of organizations specifically requested to remain anonymous.

11.4.3. Discussion of Results of Commercial Catering Companies

Structured Interviews.

11.4.3.1. Type of Units within Organizations. (fig.A.11.25, sheet 1)

Of the 22 organizations under investigation, 10 are hotel chains, one is a hotel and restaurant group, 3 are purely restaurant chains, 3 consist of instore restaurants and the remaining 5 are multi-faceted catering operations. Popular catering is to be found in companies B, C, D, E, R, S, T, U and V, while the more expensive commercial sector is featured in companies B, C, E, and H predominantly.

11.4.3.2. Types of Market. (fig.A.11.25., sheet 1)

About one quarter of the organizations primarily serve the tourist and holiday market, and rather less are intimately associated with various forms of travel, but over a third serve the "business" world. Another quarter pursue the leisure market while a further quarter of them claim to have a more "general" appeal and draw custom from numerous sectors of society. Rather less than a quarter capture the day-time trade of office-workers and shoppers.

11.4.3.3. Number of Units (fig.A.11.25., sheet 1)

Purely hotel chains consist of less units than do multi-faceted organizations or restaurant groups.
11.4.3.4. Geographical location of units in Britain. (fig.A.11.25 sheet 1)
100% of the organizations have units in England, but about a third do not operate in Scotland and about a half not in Wales, although a little over 35% have a nationwide distribution of outlets.

11.4.3.5. Types of Units Location. (fig.A.11.25. sheet 2)
As would be expected the organizations catering for the holiday market locate their units in appropriate areas, while those which are tourist and travel-orientated are to be found along major roadways and at travel termini. Only one organization, company A, has developed the conscious policy of siting outlets outside town centres, in order to attract the "leisure" market: otherwise location is predominantly urban (to serve the needs of business and commerce) or varies according to specific needs. City "pubs" usually have a brisk midday trade, and cater for working people predominantly, while country pubs are much busier in the evening and mostly attract the leisure market.

11.4.3.6. Price of Meals. (fig.A.11.25. sheet 2)
Least expensive meals are found in the "in-store" restaurants and in the popular catering sector of multi-faceted organizations.

11.4.3.7. Meals Available (fig.A.11.25. sheet 2)
All the hotel chains provide breakfast, lunch and dinner as well as snacks, but restaurants primarily serve midday and evening meals. Units catering for the needs of shoppers and office-workers only serve food during the hours of the average working day.

11.4.3.8. Is food a primary or secondary function of units?
(fig.A.11.25. sheet 2)
In hotels, catering is important, but subsidiary to the function of providing accommodation; "in-store" restaurants are subsidiary to the prime store retail activity; and similarly catering establishments associated with the travelling public are subsidiary to the travel function. Meals are only a primary function of restaurants and cafeterias, although recently they have represented an increasingly substantial portion of turnover in "public houses".

11.4.3.9. Supply policies. (fig.A.11.25. sheet 2)
At least three-quarters of organizations have a policy of
nominating food suppliers, although about half of these do allow individual unit managers to buy perishable produce locally at their own discretion. Less than 20%, however, operate a central supply policy, while only about 10% allow unit managers to purchase all food supplies individually if necessary from retailers of their own choice. The advantage of nominated suppliers seems to be economic in as much as contracts for agreed prices and qualities can be centrally negotiated and similar standards maintained nationwide (as was stressed by company C). A selection of nominated suppliers allows individual managers a degree of flexibility and initiative which motivates them and can increase customer satisfaction and profits, as company E in particular has discovered.

Company C finds that central control of purchasing does encounter a problem in butchery as carcasses are cut in different ways in the various parts of Britain. The company, giving methods of cutting beef hinds, as an example mentions that within the environs of head office the "London and Home Counties" cutting method is the accepted one. For example, the "leg" cut in London, is called the "shin" in the Midlands, the hind shin in the West, North East and Liverpool; but is divided into "hind nay" and "hough" in Edinburgh.

11.4.3.10. Menu contents. (fig.A.11.25. sheet 3)

Approximately half of all organizations produce standard menus, or at least, a specific selection of dishes from which the manager must compile his menus. There is a great variation in policy regarding menu content, but in only about a third of companies is menu content allowed to vary significantly between units. Standard nationwide menus are predominantly found in "popular" branches of catering, while more variety is evident between hotel chain units: partly influenced by regional considerations but also affected by the wishes and skills of the chef. According to the multi-faceted organizations menu standardization is economically prudent in "popular" catering, but in hotels an individual "identity" is an advantage, so varying menus tend to be encouraged.

11.4.3.11. Degree of freedom of individual unit managers. (fig.A.11.25. sheet 3)

Centrally controlled supply policies and standardized menus obviously limit the autonomy of an individual unit. Indeed, the freedom of individual managers is severely limited in popular catering,
but greatest flexibility is given to hotel managers in all types of organizations. It is interesting that most freedom is allowed where type of location for units is variable so that managers need to arrange their facilities to meet local demands, as in companies I, J & R.

11.4.3.12. Regional Commodity Preferences, and Companies' response to them (fig.A.11.25. sheets 3 & 4).

Approximately 50% of organizations admit that regional preferences in at least some food commodities do exist within commercial catering, while about a quarter specifically mention that these are most apparent in Scotland.

Bakery products are specifically singled out for mention in this context. The fast-food restaurant chain, company R, a subsidiary of a large baked-goods manufacturing combine, is ideally placed to stipulate that in Scotland the bread/cake sales mix is in the region of 25%/75% respectively, in the Midlands it is 50%/50% and in the South, 65%/35%. Companies B & R find that the Scots enjoy a higher consumption of cakes and shortbread than other Britons. The experience of company R also indicates that Southerners prefer lightly coloured bread, Midlanders favour well-baked or even "burnt-looking" bread, while in Newcastle and environs the traditional "stottie", a large round bag-type loaf 14" across by 3" thick, continues to be popular. Companies A and T find that in popular catering in the Midlands, bread, butter and tea are demanded with every meal - "even salmon mayonnaise or curry!"

Savoury pastry products are most enjoyed in the Midlands: indeed company R reports that all "oven-cooked" foods are most popular in the Midlands and North. The Scotch mutton pies and briddles are extremely popular in Scotland, but demand elsewhere is negligible: pork pies, in contrast, are the southern favourites which have minimal sales in Scotland.

North West England and Scotland share a preference for "griddle" products, such as potato bread, wheaten bread, soda bread and small, thick pancakes. Only in Devon and Cornwall do "farmhouse teas" of "fluffy" scones, jam and clotted cream sell well; and company T agrees that only in the South West are the "hand-crimped" and therefore labour intensive, traditional Cornish pasties in demand. Elsewhere these pasties also sell well, but the recipe differs: indeed in Manchester company R finds that a "jumbo" pasty, two or three times the normal size, is a best seller. Company R has also found that since
the advent of Value Added Tax (8% on served meals) "take-away" sales have flourished, particularly in and around Newcastle where hot bacon sandwiches are a favourite. (Nevertheless, company R does stress that regional preferences are probably apparent within their "operation" because they seek to capture the more traditional market of housewives and so structure their menu accordingly. Other "fast food" chains may aim at a younger market and so may feature fewer traditional items.)

Company V, although pursuing a standardized menu policy, also finds a Scottish preference for Scotch pies, cakes and griddle products, in addition to which there is a great demand for bread rolls (large baps), rather than loaves, in Scotland. Company S finds that filled rolls are favourite snacks of licensed premises in the North West, and that the fillings are often unusual and more "adventurous" than in the South.

Fish also shows marked regional differences: company U in particular stresses that cod cannot be sold in Scotland or along the North East coast of England, only haddock; and that the Scottish preference is for "breaded" rather than "battered" fish. Companies Q, S & T find that cod only sells well in the south, but although haddock is the favourite in Yorkshire, it will only be eaten if skinned prior to cooking. Hake seems to sell best in South Wales and the North West, according to company Q. In East Anglia fresh fish is preferred: indeed company T cannot sell the frozen product in this region, while company Q finds that rock salmon sells well in London. Companies H, S & T find that local grilled plaice and sole are popular throughout the South, although the high price of the latter tends to restrict sales. Nevertheless, sales of restaurant chain Q show that grilled Dover Sole is preferred in the south, and deep fried Dover Sole in the north.

Meat dishes in the eating out situation show few regional differences of popularity. Company S notices that lamb is a particular favourite in the North West, Welsh lamb being specifically requested in parts of Cheshire, while only mutton finds reasonable popularity in Wales. In the south, beef is perhaps chosen more often in restaurants: company S feels this is because lamb can be bought more cheaply than beef for home consumption. However, when beef is chosen in the North, thicker cuts of the meat are preferred, and although 'a steak' is a nationwide best-seller, Northerners seem to prefer the larger 16 oz.
'T-bone' steaks as opposed to the "medium" or "standard" sized rump or sirloin steaks chosen by Southerners. Company C finds that north and midland England shows a preference for forequarter cuts of meat, and southern areas a preference for hind-quarter meat, these cuts being more expensive at the retail level in their respective regions. In the North West collar bacon is the favourite, while in the south there is a recent trend away from smoked and toward green bacon. The sales records of company H hotels reflect the marked unpopularity of pork in Scotland, but a preference for pork and gammon in Kent in particular.

Company D in particular reflects on its menus the Lancashire liking for tripe and onions and other offal dishes, even in more expensive commercial establishments, while Lancashire Hot Pot's regional popularity has become obvious within the operations of companies B, D & S. Similarly companies find that northerners favour the heavier "carbohydrate" dishes such as steak and kidney pudding, although this particular dish is finding increasing popularity in the south currently. Company S finds that dishes accompanied by sauces are more popular in the south, and if they are to be eaten at all in the north, the sauce has to contain plenty of cream.

Foreign dishes find little favour in northern regions, Wales and Scotland, except in the expensive establishments. The impression gained by the majority of companies is that in the Midlands and north more traditional English fare is enjoyed, while in the south and particularly London, tastes are more cosmopolitan. The exception to this is the popularity of curry in the Midlands and parts of Yorkshire which especially company T finds: in fact company C features curry-flavoured soup in Birmingham. Pasta dishes appear on northern menus to provide a choice, but their uptake is not as good as in southern areas.

Company D, part of a multi-faceted organization, also operates "foreign" restaurants, and finds that although Italian restaurants, for example, are well patronized in and around London, there is little demand for them in other regions. London restaurants, other than speciality, foreign ones, feature such dishes as pizza and moussaka, as there is a greater demand for them than elsewhere.

Vegetables reflect some generalized differences in as much as garden peas and green vegetables seem to be preferred in the south, and carrots, buttered cabbage and sprouts are northern favourites:
indeed company D hypothesizes that broccoli, spinach and celery are never served north of the "Wash". Company S agrees that carrots are popular in the north. However, companies D, S and U all find that "mushy" peas are idiosyncratic of northern regions and company D has been specifically asked to serve them for a banquet in Lancashire.

Regional preferences do not exist between different types of potato, and the chip is ubiquitous in all commercial sectors, although company A finds that dry chips are preferred in the north and greasier ones further south. A popular catering subsidiary of company D does admit that although the price of a portion of chips is identical nationwide, their one concession to regional differences is that a larger portion is served in Birmingham as customer satisfaction in that particular operation is found to relate directly to the quantity of food served.

"Starters" reflect few regional preferences in any type of commercial catering, except perhaps the great popularity of soups, especially thick ones, in Scotland, as noticed by company B. The restaurant chain, S, recalls that about a decade ago prawn cocktail was the "fashionable" starter in the south: its popularity spread northward and now it is enjoyed nationwide. A similar pattern is being repeated more recently by pate and avocado pear, both of which company H find to be southern favourites.

According to company S, a very liberal garnish of mustard and cress sells dishes, especially "starters" more successfully in the north than south. Company H's sales records indicate that egg dishes, seafood and fish "starters" are popular in East Anglia and that "escargots" sell best in the Edinburgh area.

Desserts, like "starters", evidence minimal regional differences. Company S comments that pastry desserts used to be enjoyed nationwide, but over the past decade their popularity has declined, especially in the south and in the expensive establishments. However, there is some indication that suet puddings are undergoing a revival in some hotel and restaurant operations. One particular dessert, specifically mentioned by company S as being very popular in the south but "unknown" in the north, is grecian figs. Company D finds that sweet pancakes with lemon are greatly favoured in Lancashire where, in contrast, savoury pancakes and waffles are both unpopular.

In the commercial situation the cheese board does reflect some differences regionally. Company V notices that north of an
east-west line through Sheffield red cheddar is preferred, and below it, white. In northern areas the local cheeses are popular, such as Lancashire, Cheshire or Derbyshire, but in the south more unusual and foreign cheeses are preferred, according to company S.

"Pub" meals are very similar all over Britain, companies A, D and S find. The only idiosyncracy which company S notices is the Lancashire liking for "pork crackling", which is potato crisps with bacon rind.

Regional food commodity differences are most noticeable in the lower price range meal operations, and if the company perceives and responds to them, allowance is usually made in menu content. However, all organizations stress that such regional modifications are negligible and are discouraged as they tend to be uneconomical to operate. Company N in fact has a conscious policy of actively discouraging any regional differences.

11.4.3.12. Traditional Regional Dishes. (fig.A.11.25. sheet 4)

In contrast to the commodity situation, traditional regional fare is only noticeably featured on the more expensive menus, primarily in hotels. However, in some of the more popular branches of catering, as found in companies C and D, standard menus may allow for one or two "daily" or "local" specialities to be inserted at the individual unit manager's discretion.

The majority of operations which do offer traditional local dishes, feature haggis and a few other Scottish specialities: this applies to companies C, H, J, K, L, O and P. Company C's Scottish hotels feature Scotch salmon, Tweed kettle, Musselbrugh pancake, Venison soup, Partan Bree, trout in oatmeal and Scotch beef. Company O specifically mentions black pudding, Crowdies and oatcakes as only available in Scotland.

In Lancashire, companies C, D and T offer tripe and F and S promote the "Barnsley Chop", a "special" grilled double lamb or mutton chop. Company S finds traditional Lancashire Hot Pot to be a very popular supper dish, while company C offers a range of unusual local specialities, including potted crab mousse, Norcambe style squid, Lancashire broth, local game pate, fresh trout 'Ribble' stuffed with black pudding, scallops poached with mussels in white wine and cream sauce, Cheshire jugged hare and Manchester tart.
Company T specifically offers black pudding in the Midlands, bread pudding in Gloucestershire, "home-made" pies in Kent and meat-and-potato pie in both Yorkshire and Lancashire. Company C offers Yorkshire mutton broth, steak-and-kidney pie with bubble-and-squeak and roast game Yorkshire style in Yorkshire and Humberside, and company F features "braised duckling, Yorkshire style, with Port wine sauce, redcurrant jelly and orange", and "escalope of pork, Yorkshire style" on menus of two of their neighbouring Yorkshire units.

Clotted cream teas and Cornish pasties are specifically mentioned by companies 0 and R as being featured in the South West, while company C offers "Wiltshire Downe", Wiltshire style Gammon Slice, Salisbury steak with fried onions, coarse Dorset pate, pork chop Viney (with Dorset blue cheese), fresh local fish and local fruit. A variety of fish is also a successful speciality of company F, who, in contrast, found a promotion of jellied eels not to be successful in London. However, fish (North Sea dabs) appears on company C's menus in the North, along with "Whitby Sword" (fillets of beef, pork and lamb in sauce) and Mixed Grill Cleveland, which contains black pudding.

Traditional Welsh dishes which appear on menus of company C include Cawl Cymreig (local broth) and local trout and lamb, while in East Anglia are featured chicken breast filled with liver pate; chicken and Suffolk smoked salmon; steak, kidney and oyster pudding; and lambs liver, melted cheese and asparagus tips.

Local cheeses are included on various menus, such as stilton in company F's Melton Mowbray hotel.

11.4.3.14. Perceptions of Regional Food Preferences in Commercial Catering. (fig.A.11.25. sheet 4)

Only one of the organizations in fact feels that real and significant differences in regional food preferences do exist within large commercial catering companies, although in the region of 20% of organizations did think that a few differences exist.

About 15% felt that regional preferences are only evident in the more expensive sector, while twice this number thought the exact opposite. A further 15% approximately felt traditional regional food could only be featured as a tourist attraction, while the feeling that these differences are rarely an economically viable proposition for chain organizations and are primarily featured by individual commercial caterers pervaded most interviews.
11.4.3.15. Catering Companies' Awareness of Research into Regional Food Preferences. (fig.A.11.25, sheet 4).

About two thirds of the organizations interviewed are aware of no research whatsoever into regional or traditional food preferences in commercial catering.

One fifth of companies mentioned the recent English and Scottish Tourists Boards traditional regional dish schemes, although these are not really research: more a compilation and promotion of local dishes. A fifth of organizations are aware of the "Trends in Catering" survey of eating out, initiated by the Hotel and Catering E.D.C., while some 10% have seen at least one of the National Catering Inquiry reports, sponsored by 'Smethursts Foods'.

One organization, B, mentioned food manufacturers' individual marketing research, while a large national hotel chain, G, is currently operating its own promotion of regional dishes in the form of a "regional cook competition". In-store restaurant chain, T, is in fact initiating a system whereby individual unit managers have to keep exact daily records of their dish sales, weather, tempo of store retail trade and local events which could influence their sales. The scheme is intended to establish local demands and seasonal trends and cater for them in order to maximize customer satisfaction and company profits. This sole organization feels that exploitation of regional preferences has very attractive economic potential.

11.4.4. Conclusions.

Commercial catering companies consciously locate their individual units in the type of area most appropriate for the market at which they are aiming. The majority of such organizations operate a system of nominated food suppliers, of which a substantial proportion (especially in the more expensive sector) allow unit managers to buy perishables locally, often at their own discretion. Discussion during the interviews reveals that ingredients for the regional dishes which are featured are predominantly bought locally, by the unit managers, within standard specifications established at head office.

Chains which allow menu content variation between units are definitely in the minority (30%) in the sample. Standard nationwide menus with negligible regional variation are the policy of practically all popular catering organizations and many of the hotel and restaurant chains too. The most noticable concessions to traditional local dishes are found in the more expensive establishments, often
listed as "speciality" dishes. Only one in-store restaurant chain and one hotel chain actively encourage the featuring of regional fare.

The region in which most allowance is made for regional differences in taste is Scotland, where even popular catering chains allow differences in one or two items: primarily bakery products. The foods which generally evidence most regional variation are bakery products, fish, types of cuts of meat and meat dishes. Vegetables show few marked regional preferences: and of both "starters" and "desserts" regional variation is negligible.

Traditional regional fare is featured predominantly in Scotland, the North West and South West, and to a lesser extent in Yorkshire, Wales and East Anglia.

The caterers who are aware of research or publications concerned with regional food preferences, or themselves take an interest in the subject, are definitely in the minority. An opinion which emerged from the majority of organizations is that a policy of consciously allowing for regional preferences is not economical for chain concerns: a substantial number of company representatives felt this to be a more potentially successful formula for individual independent hoteliers or restaurateurs.

Nevertheless, structured interviews with experienced head office personnel of commercial catering companies do highlight the fact that some regional differences do exist - both in terms of food commodities and actual dishes.

11.5. (c) INDIVIDUAL COMMERCIAL CATERERS' QUESTIONNAIRES.

The opinion that individual commercial catering enterprises of the upper price scale market, can, and do, most successfully offer regional dishes of their specific locality is held by a great number of large catering organizations, not only in the commercial sector, but also in industrial and institutional catering.

Investigation of these independent hotels and restaurants is necessary to either confirm or refute this common belief. Independent catering establishments represent a substantial proportion (22%) of the average annual sales of all commercial catering concerns, and so their contribution is hardly insignificant (GEP estimates, 1974).

11.5.1. Method.

Concurrent with the research into regional dishes served in individual catering units, both the Scottish and English Tourist Boards
were launching promotions of their respective country's traditional foods, called "A Taste of Scotland" and "Taste of England" respectively.

Limitation of research resources rendered personal visits to individual caterers throughout Britain impractical and so a technique of postal questionnaire was adopted. As the Scottish and English Tourist Boards had already compiled lists of establishments (both "chain" and independent) which claimed to offer some regional/traditional fare on their menus, co-operation of these two Tourist Boards made possible the use of these names and addresses. Although the Welsh Tourist Board had not undertaken a similar scheme, a comparable list of establishments was made available.

The questionnaire was constructed similarly to that used for the catering companies' structured interviews, so that some comparisons would be possible if necessary. The questions related to the meals served and their prices, supply policy, type of market, examples and popularity of regional fare, and personal opinion regarding food preferences within the commercial catering industry throughout Britain. (An example of the questionnaire is given in the Appendix, fig.A.11.26). Each questionnaire was accompanied by a letter of request for completion, explaining the purpose of the study.

The random sample of establishments contacted, and the regional response rates, were as follows:

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**Fig. 11.3. Individual caterers' regional response rates to postal questionnaires.**

<table>
<thead>
<tr>
<th>Registrar General's Stnd. Regions</th>
<th>SE</th>
<th>EA</th>
<th>SW</th>
<th>WM</th>
<th>HM</th>
<th>Y&amp;H</th>
<th>NW</th>
<th>N</th>
<th>Sc</th>
<th>Va</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of catering establishments offering traditional regional food</td>
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<td>57</td>
<td>163</td>
<td>59</td>
<td>45</td>
<td>37</td>
<td>62</td>
<td>104</td>
<td>391</td>
<td>22</td>
<td>1161</td>
</tr>
<tr>
<td>No. receiving questionnaire (sample)</td>
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<td>11</td>
<td>33</td>
<td>12</td>
<td>9</td>
<td>8</td>
<td>12</td>
<td>21</td>
<td>39</td>
<td>11</td>
<td>201</td>
</tr>
<tr>
<td>% receiving questionnaire</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
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<td>50%</td>
<td>17%</td>
</tr>
<tr>
<td>No. completed questionnaires</td>
<td>23</td>
<td>6</td>
<td>15</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>14</td>
<td>14</td>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>% response rate of sample</td>
<td>51%</td>
<td>55%</td>
<td>45%</td>
<td>58%</td>
<td>44%</td>
<td>50%</td>
<td>42%</td>
<td>67%</td>
<td>36%</td>
<td>36%</td>
<td>48%</td>
</tr>
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The levels of response were satisfactory at over 33% in all regions, the lowest rates being in Scotland and Wales, and the highest (67%) in the North of England.
11.5.2. Results.

The individual responses to the questionnaire are tabulated in Supplementary text 11 (table S.11.1., sheets 1 - 6 inclusive), and a regional breakdown is given in fig.A.11.27, sheets 1 & 2. Additional information, which some respondents provided, is included within the discussion of the tabulated results. (Some of the percentage response to questions 4 and 6 add up to more than 100% because some respondents marked more than one alternative answer.)

11.5.3. Discussion of results of individual commercial caterer's questionnaire.

(Fig.A.11.27, sheets 1 + 2; Supplementary text table S.11.1. sheets 1-6)

11.5.3.1. Type of establishment. About three-quarters of establishments which completed the questionnaire are independent, except in Yorkshire and Humberside where only chain hotels responded. The majority of respondents are hoteliers except in the South East, East and West Midlands, and North West where a greater number are restaurateurs.

11.5.3.2. Meals. Few restaurants serve lunch or dinner only: the majority offer both. In all regions it is in the hotels that the whole range of meals is available.

11.5.3.3. Price. Nationally, well over half the meals eaten out in hotels or restaurants cost between £2 and £3.50 per capita, and about 25% do in fact cost more than £3.50. Particularly in the South East, East Midlands and Wales it seems that the higher priced meals prevail. The majority of lower priced establishments in the sample (offering meals for under £2) are to be found in the North and Scotland, and also the South East.

11.5.3.4. Food Supplies. The vast majority of responding caterers procure their food supplies from a number of local suppliers, although nearly a quarter also rely on national operators. Of course, only the chain units use nominated suppliers. The greatest reliance on local produce is found in East Anglia, the Midlands, North West and Wales. Only in the North West, South West and Scotland do caterers patronize regional suppliers. National food suppliers find their greatest market in the East Midlands and Yorkshire and Humberside.

11.5.3.5. Regional Dishes. In the majority of regions the independent caterers mention more regional dishes as appearing on their menus than do managers of 'chain' establishments. Yorkshire and Humberside is an exception because no independent units completed the questionnaire,
While in Scotland both independent and chain units enumerated a similar number of regional dishes.

The somewhat tentative conclusion to be drawn from this is that independent caterers do offer more regional dishes, while managers of the chain concerns have limits within which only one or two "specialities" can be featured. This trend becomes more evident from a study of various sample menus and from comments made by various caterers themselves.

A list of the most commonly featured local dishes featured on commercial caterers' menus appear in fig. A.11.28.

The English regions tend to class traditional English fare as regional food, probably due in part to the English Tourist Board's promotion of "A Taste of England." Similarly, of course in Scotland and Wales, national dishes of these two countries are referred to as "regional", although some dishes are indigenous of specific areas.

Nevertheless, within the English regions some truly local fare is available, although it is most abundant in the North and North West. The majority of northern caterers specifically stated that they find a definite preference for the local dishes among the local people, as they are now rarely served in the home; and also that visitors to the area are eager to sample the indigenous fare.

Fish and seafood appear to dominate the menus of establishments in the South West and East Anglia but menus of the South East generally feature less local fare.

Many caterers of the southern and Midland regions do stress that the truly local dishes are primarily to be found in the North, North West and Scotland. The completed questionnaires reflect this bias, in as much as caterers in these areas, and also in the South West, do enumerate the greatest number and variety of local dishes, which are featured on their menus.

11.5.3.6. Market for regional fare. Nationally it seems that regional fare is chosen more by foreign visitors than by locals or British tourists, although in the North West there is a considerable market for it amongst local people.

11.5.3.7. Popularity. Regionally, the highest percentages who think local fare is "very popular" are found in East Anglia, the North and South West. Least popularity is registered by caterers in the West Midlands. Both Scottish and Welsh caterers, especially the independent ones, feel that when they are available, regional dishes are very popular:
in Wales amongst the tourists, but in Scotland among both tourists and locals.

A significant number of caterers find that specifically regional fare is more popular at the midday meal than in the evening.

11.5.3.8. Personal opinion. Sixty percent of commercial caterers who think that regional food preferences exist in Britain feel sure that these are reflected within the commercial catering industry. In the South East, however, this trend is recognized by less than half the individual caterers.

11.5.3.9. Evidence. Only a quarter of individual caterers are aware of any recent research or publications concerned with regional tastes and few of these adjust their menus in light of this knowledge.

11.5.4. Conclusions. The independent hoteliers or restaurateurs are most likely to purchase from local food suppliers and primarily in the North, North West, South West and Scotland produce a great number and variety of popular local dishes, for which there is a substantial market among all types of customers. It is also the independent caterers who are most flexible and allow published information to influence their menu structures. A great number of managers of "chain" units feature a few regional dishes as a "speciality", often as a tourist attraction, while the independent caterers have a firmer conviction of the preference in local fare, mostly produced from local, fresh produce.

11.6. (D) EATING OUT HABITS OF "LOCALS" AND "VISITORS" IN A SPECIFIC LOCALITY.

11.6.1. Tourism in British regions.

A number of commercial catering companies feature regional fare in areas where they believe it can be offered as a tourist "attraction" (11.4) mostly in Scotland, the North West and South West, and so they must believe that visitors to an area wish to sample the local dishes.

Individual caterers offer most local fare in the North, North West, South West and Scotland (11.5): all these areas in fact enjoy a high level of tourist activity, both British and foreign, (fig.A.11.29 & A.11.50).

The British holidaymaker on the whole seems quite satisfied with the food he is given, although only 8% of those who return to the same place give food any kind of priority in their choice of resort,
(NCI, 1967), although dish choice is more limited in the North West and Midlands than in the South. At the evening meal, 36% of people on holiday in Scotland (and the majority are Scots) prefer a "high tea": in the North West this figure rises to 44% compared to 27% in the North East.

Of the foreign visitors to Britain, 6% must look forward to the pubs and inns, but only 1% to British food. The majority of visitors eat out in restaurants, (fig.A.11.31).

23% of foreign visitors enjoy traditional English roast beef, 20% fish-and-chips, and 17% english cheeses, but only 1% enjoy haggis. However, the visitor finds that outside London, he can eat best in Edinburgh, Glasgow and Stratford-on-Avon, and although many visitors think fish and sea food in Scotland are the best in Britain, few regional dishes of specific areas are mentioned (NCI, 1969).

An in depth study of a specific area should elucidate influencing factors of the popularity of local fare, and whether caterers are correct in assuming that tourists (both British and foreign) enjoy British regional fare more than the indigenous population.

The locality to be chosen would have to be a tourist area, preferably with potential for even more tourist activity. There are four main development areas in Britain with a major tourist potential: Scotland, Lakeland, Cornwall and rural Wales and Snowdonia (NCI, 1969). The chosen area should preferably be one with high level of agriculture in order to ensure availability of local produce. In addition the area should be lacking a preponderence of chain organization outlets which tend to offer standard menum nationwide, and also be without employee catering, as the dishes of both catering sectors could influence local tastes.

These requirements are best fulfilled by a tourist area of rural, agricultural North Wales (in which 9% of British holidays are taken) and which still contains many specific areas of tourist potential (personal communication, Gwynedd C.C., 1974); i.e. the district of Dwyfor in the county of Gwynedd, North Wales. Tourism contributes 15.3% of Gwynedd's direct income, and 17.9% (the largest contribution) comes from agriculture (Instit.Econ.Research, Bangor Univ., 1974).

11.6.2. Investigation of Eating Out Habits of Locals and Tourists in Dwyfor, North Wales.

(a full and detailed report of the survey, with tabulations, is available in the supplementary text)
The study took place during a two and a half month period, July to September, 1974.


Of the 156 establishments providing facilities for "eating out" in 1974, 54 (i.e. 35%) had come into existence during the period mid 1963 to mid 1974 (derived from planning permission application records, Dwyfor D.C. Planning Dept.). As the local resident population of the district had not increased over this period, it must be assumed that any growth in the Catering Industry relates to the increase in tourism. Indeed, the Hotel & Catering Industry of this area is the second largest beneficiary of tourist spending (Instit.Econ.Research, Bangor Univ., 1970).

11.6.2.2. Eating Out Habits of "Locals"

Of the 17 parishes which comprise Dwyfor district, 6 with greatly varying concentrations of tourists, were chosen for door-to-door interviewing of householders. A random 7½% sample of households of permanent local residents were interviewed in each parish, which represents 4.1% of all Dwyfor households (i.e. 361). Questions asked referred to household composition, frequency and location of eating out, seasonal variation in eating out habits, dish preferences of household members and average per capita price paid for a meal "out". Responses were analysed not only by parish, but by household composition and by socio-economic group, based solely on type of dwelling: detached (A), semi-detached/terrace (B) and council (C).

In 84.3% of Dwyfor households, at least one individual eats out more than once each year, apart from at work. The greatest proportion of households (26%) eat out less than once every month: 22% eat out on average once a month and 13% once a week or more. A larger proportion eat out more in winter than in summer, due to the crowded conditions imposed by the tourists during the "season".

Of those who eat out, 40% tend to eat "the same sort of food as would be eaten at home", whereas 60% "like something different". It is the women who are usually more adventurous, liking "a change". 50% of local people pay just under £2 per meal per capita: 15% pay over £3, but only 1% over £5.

Of the "preferred dishes", steak is most popular, being chosen by 58% of men and 42% of women. Women, however, appear to prefer fish (69% compared to 32% of men), and also seafood, which is very much a socio-economic group A favourite. Lamb, a traditional regional dish,
is only mentioned by one elderly couple, who claim to eat this dish only because it was available at a reduced "pensioners' rate". Duck is preferred by women (by 60:40%) and by socio-economic group A, while chicken is preferred by groups B and C. Salad is also a female preference, by a 9:1 ratio. Mixed grill, however, is a man's favourite; 80% chosen by men. More women than men prefer "Italian" food, but the situation is reversed in the case of Chinese dishes. French and Italian dishes are mostly mentioned by socio-economic group A, and Italian and Chinese by group C, while group B individuals tend generally to be most conservative.

11.6.2.3. Eating Out Habits of "Visitors", compared to that of "Locals".

Postal questionnaires investigating type of food service, customer expenditure, volume and type of seasonal trade, and popularity of dishes among various types of customers, were sent to 35% of catering establishments in Dwyfor, all of which served meals as opposed to snacks. A 50% response rate provided a 17% sample.

It appears that trade increases on average by 118% in the "season", and that average "spend" per capita meal is £2-18 in summer compared to £1-99 in winter. In summer little over 10% of custom is provided by permanent local residents, but about two-thirds in winter.

About a third of establishments claim to notice a difference in eating habits between "locals" and "visitors". Local people appear to prefer to dine later (after 8pm), and on average pay less for their meal. Some differences are noticeable in dish choice (fig.A.11.32).

Particularly noticeable is the fact that more "locals" than "visitors" prefer foreign dishes when out to eat: presumably these are available to the visitors in their home regions. In contrast, it is the visitors who prefer the regional speciality of Welsh lamb: locals can enjoy this in their own homes more cheaply. Similarly, more visitors choose fish and seafood dishes produced from locally caught produce, which again the locals can eat at home, although are less inclined to prepare this than they are lamb, (as indicated during the door-to-door interviews).

11.6.2.4. Conclusion.

A decade prior to the study no French, Italian or Chinese restaurant existed within the district nor within an accessible distance by car, and the majority of establishments were serving "home-cooking".

In response to the questionnaires, a number of caterers report that
more variety is demanded on menus during the "season": presumably by the "visitors". The tourists cause a demand for catering; there follows a growth of the industry (35% in 10 years) and the eating habits of permanent local residents are influenced by this, in terms of frequency, price and dish preference (as menus become more varied). However, the visitors maintain a demand for the local fare, but the local residents want "a change" to this when they eat out.

It does seem therefore that caterers are correct in their assumption that visitors to an area (both British and foreign) enjoy regional fare in commercial catering establishments more than does the indigenous population, if the implications from this one tourist area of Britain can be extrapolated to apply to the whole country.

11.7. FINAL CONCLUSIONS.

Sales of food in the commercial catering industry amount to an enormous trade, both in terms of numbers of meals served and expenditure on them, currently totalling about £1½ thousand million, a quarter of which is generated in London alone.

During the past decade or so, there has been a trend by caterers (especially in London and the South East) towards using increasing quantities of convenience food products; and by the customer toward more convenient forms of eating out such as 'self-service' (in London and Scotland), 'take-away' food (in Yorkshire), 'pub' meals (in the South East) and steak houses (in southern regions).

It would appear that there are now as marked differences in food preferences as published information shows that there have been in the past. On a nationwide basis the convenient steak has replaced roast chicken as first choice, seafood has become more popular than fish as a "starter", the 'chip' is now ubiquitous, and aperitifs, wine and liqueurs are much more prevalent than 10 or 20 years ago.

Published data reflect the generalizations that soup is particularly favoured in Scotland (especially if thick), poultry is favoured in Wales and fish is enjoyed most in eastern areas of England. Green (and more unusual) vegetables are preferred in the south and root vegetables in the north, while there seems to be a trend away from heavier to lighter desserts, especially in southern regions, apart from a liking for ice-cream in Scotland.

Commercial caterers find most regional differences in bakery products, the variety and quality of which seems to increase on travelling
Heat dishes show some differences in as much as lamb is particularly enjoyed in the North West and Wales (the only region where mutton is eaten), beef is chosen most in southern restaurants, and pork is extremely unpopular in Scotland. Offal finds most favour in Lancashire. Forequarter cuts of meat are preferred in the north and Midlands and hind-quarter cuts in the south. Large portions and "filling" dishes are a marked northern preference, while sauces over meats are preferred in the south. In fact, all "foreign fare" is more popular in southern regions: in London in particular tastes are markedly more cosmopolitan.

Apart from the idiosyncratic "mushy" peas of the North West, vegetables show few marked differences except that green vegetables seem more popular in the south, root vegetables in the north, and unusual and 'foreign' ones are rarely served north of the Wash. "Starters" and desserts vary little regionally.

In the case of traditional regional dishes, all evidence indicates that these mostly appear on menus of the more expensive independent hotels and restaurants, predominantly in Scotland and the North of England and in specifically tourist areas. Traditional fare is most popular among the indigenous populations of Scotland and northern areas, but find a substantial market among tourists and holidaymakers (both British and foreign) in all tourist areas. It would also seem that the tourist demand for varied menus can influence the eating out habits of the resident population of an otherwise somewhat isolated area.

Few commercial caterers (either in multiple-unit companies or independent establishments) are aware of research into regional food preferences, but it is the latter who predominantly feature local fare and consider it an economically viable proposition to promote. However, one or two isolated examples of commercial chain companies pursuing a policy of featuring locally preferred foods do exist, and others finding that at this time of mass production and standardization, regionally varying menus with individual identities have an increasingly vital role to play in the formulation of a meal experience which is pleasing to the customer and profitable for the caterer.
PART III: CONCLUSIONS.
In chapter 7 regional food preferences in the household (or domestic) situation are examined primarily in terms of food groups and commodities. Chapters 8 to 11 inclusive consider detailed regional food preferences within the school, hospital, industrial and commercial sectors of the catering industry, predominantly in terms of dishes and dish constituents.

A number of the findings cannot be assumed to be entirely reliable due to an insufficiency of regionally representative data, but possible preferences are at least indicated within the various catering sectors. However, where the same tentative conclusion emerges from the majority of catering sectors, existence of a valid regional food preference (or aversion) is inferred.

12.1. Regional food preferences in catering sectors.

Regional food preferences, as indicated by food consumption statistics and informed opinion, appear to be most prevalent within household catering: indeed caterers from all sectors of the catering industry are of the opinion that regional tastes are most marked in the domestic situation (personal communication, 1973-1976). Pupils' school meal preferences appear to reflect the home influence as do the dish choices of hospital patients. There is a degree of overlap between the employee and commercial catering sectors as many workers eat in a commercial establishment, and so the preferences which emerge from an examination of employees' regional feeding habits are in part similar to those in the home but also reflect tastes in a commercial situation.

The smallest number of actual regional distinctions are apparent within the commercial catering industry where some caterers (especially those within multiple unit organizations) seem to dictate a nationwide similarity of available food, although there appears to be a very recent realization of the existence of and the demand for regional fare both by the customer and the caterer.

12.2. Regional preferences - first course.

School meals do not begin with a first course, but in hospital
and employee catering soup is the unrivalled favourite, especially in Scotland. A preference for thick soup with a high carbohydrate content is idiosyncratic of Scots: clear soups are more usual in southern regions of England. Within the commercial catering industry practically no reliable regional distinctions are discernible as regards first courses, especially in the more expensive market.

12.3. Regional preferences - main dishes. (Fig A.12.1.)

Significant regional preferences for, or aversions to, various main course food commodities and dishes within various catering sectors are tabulated in figure A.12.1.

Generally it appears that meat dishes are most popular in southern regions and fish dishes in the north, particularly Yorkshire and Humberside. Made-up meat dishes are preferred in Scotland and made-up fish dishes in the East Midlands. Cheese and egg dishes find little favour in any regions, but "foreign" fare is preferred in the South East while the bastion of traditional regional dishes appears predominantly to be northern Britain.

12.3.1. Regional preferences - meat dishes.

Beef is a northern preference in all catering sectors except the commercial in which it is selected by many customers in the South East. Veal consumption is negligible throughout Britain except in London.

Lamb consumption is greatest in the South East, North West and Wales: in the latter two regions its commercial popularity is also very high. There is a preference for mutton in the same regions, although commercially it only seems popular in Wales.

Household consumption of pork is highest in the West Midlands but in the catering industry it appears to be a markedly Welsh preference. In Scotland there is a most definite and irrefutable aversion to pigmeat in any form. Bacon and ham are southern preferences in schools and hospitals but Welsh preferences among employees and in the household situation.

Poultry appears to be a southern and Midland household preference but industrially and commercially it reaches high consumption levels in Wales and Yorkshire and Humberside (especially from "take-away" food outlets in the latter region).

"Roasts" seem to be fairly popular in all regions, but particularly in the south among school children and in the Midlands among employees.
The regional preference for offal tends to vary between the catering sectors but both industrially and commercially offal dishes are most popular in the North West of England.

12.3.2. Regional preferences - made-up meat dishes.

Indisputably the Scots have the greatest preference for made-up meat dishes. Meat and pastry products are equally popular in Scotland, but also in the North. Mince and minced-meat pies appear to be as much Scottish preferences in all catering sectors except the commercial, as are haggis, bridies, Scots pies and stovers. Beef-burgers are similarly a northern and Scottish preference, but sausages are more popular in Wales, despite the very great popularity of sausage rolls in Scotland.

East Anglian schoolchildren and hospital patients have a marked preference for cold meat served with hot vegetables, while chicken and ham pie appears to be a particular favourite of pupils in Yorkshire and Humberside. Shepherds pie is a West Midlands favourite in all substitute domestic catering sectors.

Meat puddings are traditionally a northern and Welsh preference but commercial caterers are discovering a recent and noticeable demand for them in the South East. Pork pie is the only other made-up meat dish which penetrates the commercial market significantly and it does so predominantly within the snack trade of 'pubs' and fast food outlets. It is, however, hardly surprising that pork pies are extremely unpopular among the Scots in view of their great aversion to pork.

Certain dishes are traditionally idiosyncratic of individual regions and today retain their greatest popularity in these regions. Examples include Cornish pasties in the South West, meat-and-potato pie in Yorkshire and Humberside and the North West, Lancashire Hot Pot with pickled beetroot in the North West, pease pudding with ham in the North and black pudding in the northern regions and the Midlands.

12.3.3. Regional preferences - fish dishes.

Yorkshire and Humberside is indisputably the stronghold of fish consumption in all sectors of the catering industry. Most ready-cooked (fried) fish is also bought in this region.

Cod is the preferred fish in the South East, even commercially, although it is extremely unpopular in Scotland and Yorkshire and Humberside. Another southern favourite is plaice, but this is also very popular in Wales. Hake is a favourite in South Wales and the
Liverpool conurbation of the North West, and there is a noticeable preference for rock salmon in the Greater London conurbation. Haddock is without doubt the fish which is preferred in Scotland and the north of England: and particularly in Yorkshire and Humberside where it is preferred skinned. Skate, sole, trout, whiting, any 'fish-in-sauce' and the more unusual fish only reach reasonable levels of popularity in London and the South East.

12.3.4. Regional preferences - made-up fish dishes.

Fish fingers and fish cakes are the only made-up fish products which reach relatively high levels of popularity. Both are particularly popular in the East Midlands, while fish cakes alone are preferred in Scotland and fish fingers in the North.

12.3.5. Regional preferences - cheese dishes and egg dishes.

Cheese dishes made with cheddar-type cheese are popular in the home and in schools in the North, North West and Yorkshire & Humberside, although they appear to be disliked by Northern hospital patients. Southern employees seem to enjoy cheese dishes, and in South Eastern homes soft cheese and the hard continental varieties are preferred.

Egg dishes are enjoyed in northern homes and schools, but are especially unpopular among hospital patients of the North West. However, employees of both the North West and South West appear to enjoy egg dishes which seem to be commercially popular in East Anglia alone.

12.3.6. Regional preferences - cold meals.

Salads are reportedly very unpopular in most regions, especially in the north, although employees (and particularly female office and retail staff) in the South East, London and East Anglia do seem to have a preference for them.

Sandwiches similarly are a preference of the South East, although filled rolls are very popular in commercial catering establishments of the North West where the fillings tend to be more 'adventurous' than in the south. Commercial caterers in Scotland report a high popularity of bread rolls: indeed all bakery products are extremely popular in Scotland and the North in both industrial and commercial catering sectors. This is probably allied to the high home consumption of flour, bread and other cereal products.

Cold meat with pickles is a preference in Yorkshire and
Humberside and the West Midlands. Indeed, in the West Midlands all pickles and sauces are popular especially in the substitute domestic catering sectors, whereas in Wales the traditional accompaniments such as mint sauce with lamb and tartar sauce with fish are very popular.

12.3.7. Regional preferences - 'foreign fare'.

Within all catering sectors the preference for 'foreign' fare is concentrated almost without exception in East Anglia, the South East and London. Indeed dishes with 'foreign sounding' names are positively avoided by employees in northern areas, particularly the North and Yorkshire & Humberside. Pasta dishes are reasonably popular, and curry is very popular, in the West Midlands. Acceptance of other 'foreign' dishes only occurs within the commercial catering sector of other regions.

12.3.8. Regional preferences - traditional regional British dishes.

Traditional regional fare seems to be enjoyed by hospital patients throughout the country, but there is a marked preference for it among both employees and commercial catering customers in the North, North West and Scotland. The region of Britain which features the most traditional local dishes, and in which most are consumed, is Scotland: this is true of all sectors of the catering industry. Local people in northern regions of England also enjoy their regional fare but in other parts of the country, and within commercial catering, it tends to be mostly visitors, both British and foreign, who select most of these dishes. Regional dishes appear to be commercially most successful in tourist areas of the country.

12.4. Regional preferences - vegetables. (fig.A.12.2.)

Similar to the household situation, within the catering industry fresh green vegetables are preferred in London and the South East but are very unpopular in Scotland: root vegetables are the northern preference. Most marked is the preference for peas in the West Midlands, for carrots in the North and North West and for 'mushy' peas in the North, North West and Yorkshire & Humberside. Broccoli, spinach, courgettes and more unusual vegetables only seem to find favour in London and the South East, but baked beans are enjoyed everywhere within the substitute domestic catering sectors.

Butter beans seem to be popular among northern industrial workers and cabbage and brussel sprouts in commercial catering
establishments in the North and among hospital patients in the South West. Cauliflower appears to be most popular in the substitute domestic situations in the East Midlands and beetroot in Scotland. Mushrooms, tomatoes and cucumbers are all preferred in southern regions, except canned tomatoes for which there is an idiosyncratic preference in the East Midlands. Pease pudding is popular in the North West among employees.

The most obvious preferences within the commercial catering sector alone include those for fresh green vegetables in London and the South East, for brussel sprouts, cabbage and carrots in the North, for peas in the South East, for 'mushy' peas in the North West and Yorkshire and Humberside and for the more unusual vegetables in the South East.

Again as in the household situation potato consumption within the catering industry is greatest in the North and Scotland. In the substitute domestic catering situation and in the fast food sector of the commercial catering industry chips are extremely popular in all regions. However, creamed and boiled potatoes are also popular, but primarily in the north and Midlands among hospital patients and employees. There is moreover a preference for roast and sauté potatoes in Wales, end for scallop, croquette, duchesse and more unusual forms of potato in London and the South East. Baked potatoes with cheese appear to be a popular meal on their own among employees in the West Midlands and "chip butties" are reported to be a specific favourite within the Birmingham conurbation.

12.5. Regional preferences - desserts. (fig.A.12.3.)

Fresh fruit, as a dessert, seems to be most popular in London, the South East and East Anglia and least popular in Scotland, the North and Yorkshire & Humberside in the substitute domestic situations as it is in the household situation. Soft fruit is a particular favourite in East Anglia, tinned fruit in the West Midlands and dried fruits in Yorkshire & Humberside and the South East/East Anglia. Fruit salad is seemingly a favourite of school children in Yorkshire & Humberside and stewed fruit a favourite of hospital patients in the East Midlands and East Anglia.

In all the substitute domestic catering sectors cakes appear to be by far most popular as a dessert in Wales, and milk puddings in the Midland regions although in employee catering alone they also seem to be enjoyed in the North and Scotland.
Ice-cream appears to be popular in southern regions but also in Wales and Scotland, and within school catering in the Midlands. Yoghurt however is strictly a southern preference as are the majority of "lighter" desserts. Industrial workers in the West Midlands, North West and Yorkshire & Humberside appear to have a definite aversion to the lighter desserts. Hospital patients appear to enjoy trifle and cream caramel in the West Midlands, trifle in Yorkshire and Humberside and fruit and jelly in the North. Some of the lighter desserts do find popularity within the commercial catering sector in northern regions: for example, pancakes and waffles are reportedly particular favourites in the North West.

None of the 'heavier' desserts seems to be popular in the south, nor in any region within the commercial catering sector. Among the heavier desserts the specific preference in the substitute domestic catering sectors in Wales is for tarts and flans, in Scotland and the North for "crumbles", in Scotland for pies and flans and throughout northern regions and Wales for sponges. Puddings seem to be particularly popular among northern school children and lemon meringue pie among those in Scotland. Steamed and baked puddings appear to be favourites among employees in the Midlands, North West and Scotland, in which regions in fact, any heavy pudding served with a generous portion of thick custard is popular.

It is of interest however, that suet puddings appear to be currently undergoing a revival: commercial caterers report an increasing demand for them in southern regions.

The popularity of cheese and biscuits as a final course to a meal appears to be vastly overestimated in all regions and in all sectors of catering. However, among school children and hospital patients it seems to be most popular in the South West and among (office) employees in the South East. When the cheese is selected it seems that north of an east-west line through Sheffield, red cheese is chosen but south of it white varieties are preferred.

12.6. Regional preferences - breakfasts.

Most data concerning food preferences at breakfast relate to hospital patients' dish choices, although a little is available as regards the employee and commercial catering sectors.

Among hospital patients fruit juice or stewed fruit at breakfast seems to be strictly a southern preference while porridge (or another breakfast cereal) is preferred further north.
Egg dishes appear to be most popular in the North West and fish in the East Midlands (particularly fish fingers) and Scotland (especially fish cakes). Offal dishes, such as black pudding, seem to be enjoyed in Scotland, ham in Yorkshire and Humberside and pork sausages in Wales. Some form of potato as an accompaniment is apparently a southern preference, but fried bread or toast is preferred in northern areas and Scotland.

The fact that a cooked breakfast appears to be favoured most by employees in the North West and South West (chapter 10, fig. A.10.24.) concurs with the opinions of many caterers that a lighter breakfast is generally the rule in London and the South East.

12.7 Regional preferences - food presentation.

It is apparent that minced meat is most popular in Scotland: even pies and other products appear to be preferred if based on minced meat. Made-up meat (and other) dishes are more popular in Scotland and northern regions of England than in Wales or southern regions. Meat pies seem to be popular in the North and meat puddings in the West Midlands, although all savoury pastry dishes are popular in the Midland regions. Filling foods are definitely a northern preference, being particularly popular in Yorkshire and Humberside. Sliced meats seem to be preferred in the south, and particularly the South East, compared to the much thicker slices or "chunks" of meat popular in the north. Northerners tend to select the larger 16oz. steaks in preference to the smaller 'medium' or 'standard' sizes which are preferred in the south. Sauces poured over sliced meats seem definitely to be a South Eastern preference and particularly in the commercial catering sector. In Scotland and the North West griddle products are reported to be commercially very popular indeed.

Many caterers, from all sectors of the industry, are of the opinion that quantity is considered to be extremely important in northern areas and some concessions are made to this in as much as larger portions are served than in the south, but for the same price.

The type of chips which are acceptable in the various regions also differs: in the North they seem to be preferred drier than the greasier ones of the South, while in the Midlands "soggy" chips appear to be preferred. Even the vinegar varies in colour from dark brown in the south to a paler shade in the Midlands to colourless in Scotland.

Another variation in presentation is that a liberal garnish of mustard and cress on a dish seems to be much more popular in the
north than south. However, in contrast to this, other additions to a dish such as a sauce, are usually preferred in the South East, where more elaborate or foreign-sounding names for dishes appear to be altogether more acceptable.

12.8. Regional preferences - influence of the time of day.

On the basis of the dish choices of hospital patients (chapter 9) and of the interviews with experienced caterers in both the employee (chapter 10) and commercial (chapter 11) catering sectors, it would seem that the majority of the Scottish, northern and Midland populations consider their midday meal to be the main meal of the day, while in London, the South East and East Anglia the evening meal tends to predominate. Resulting from this distinction is a greater consumption of soup and meat dishes and heavier desserts at midday within the catering industry in northern and Midland regions, while a 'starter' and a 'heavier' dessert appear to be more usual in the evening in the south. "Lunch" in southern regions' staff restaurants and in the commercial catering sector is very often little more than a snack. This means that in the south a larger meal is eaten in the evening, while in other regions this position is reversed. The exception to this is in northern and Midland regions when "eating out" for pleasure takes place in the evening in a more expensive commercial catering establishment, so that more courses are eaten in the evening than at midday.

Employees in the northern and Midland regions term their midday meal as "dinner" while southern employees, and especially office staff, call it "lunch". In the domestic situation the evening meal is termed "tea" in the north and Midlands as it is in hospitals and among shift workers, but when these same people eat out in an hotel or restaurant the meal is referred to as "dinner" as it is in the south.

12.9. Regional preferences - beverages. (fig.A.12.4.)

The regional preferences among beverages have not been examined in depth, but some distinctions have become apparent from published information and in association with dish and meal preferences, particularly within the employee and commercial catering sectors.

Household consumption of hot beverages is highest in the West Midlands but significantly below the national average in Scotland. Among employees tea consumption is highest in northern and Midland
regions but in a commercial catering situation tea is most popular in Wales. Coffee, however, is favoured in London and the South East by employees and commercial customers as well as in the household situation.

Cold beverages such as milk and soft drinks are more popular in Scotland than are hot beverages.

Alcoholic beverages, apart from whisky, are most popular in London and the South East in the household situation, but commercially their popularity extends to the West Midlands and Scotland particularly. Within commercial catering sherry appears to be most popular in the West Midlands and liqueur in Scotland while most wine is drunk in Scotland and the South East. Beer, however, is most popular in the West Midlands commercially and in the home, while sparkling wines find favour in Wales and the West Midlands.

12.10. Regional food preference profiles within the Catering Industry.

12.10.1. WALES.

Lamb and mutton, pork and poultry are all very popular in any "eating out" situation in Wales: more so than in the household situation. However, similar to household food consumption, beef and veal are unpopular. Lamb, mutton and pork are the favourites of school children and hospital patients; employees prefer pork, bacon, ham and poultry while commercially lamb, mutton and poultry are most popular.

Similar to the household situation, made-up meat dishes, including pastry products, are not at all popular in Wales, except beef sausages which are popular at school and steak and kidney pudding which hospital patients enjoy.

Roasted joints are particularly popular in Wales, which explains the popularity of roasted potatoes, and corresponds to the high household purchase level of joints of meat 'on the bone'.

Fish dishes are not particularly popular among the Welsh, but plaice and hake are the favourites (the latter especially in
South Wales), and fish cakes appear to be very popular among school children.

Neither cheese nor egg dishes are very popular and this, together with the low beef and fish consumption, causes low animal protein and calcium intakes.

Fat intake in Wales is high in view of the high consumption of fried bacon, sausage and fried bread at breakfast, roast potatoes and pork (tables S.9.1 - S.9.11 inclusive), and a traditional preference for the greasier poultry such as duck and goose.

Foreign fare is generally unacceptable in Wales except in the more expensive establishments of the commercial catering sector in which the local people tend to choose dishes that are "different" to their usual diet, while the traditional regional dishes are selected by visitors to the region (section 11.6).

Domestic milk consumption is low and this is extended to the 'eating out' situation in which milk puddings are not at all popular. Tinned fruit appears to be preferred to fresh fruit, but fruit tarts are favourites in the substitute domestic catering situations, perhaps reflecting the above average household purchase levels of cooking fat, flour and sugar. Flans also seem to be popular among schoolchildren and sponge puddings containing preserves are favourites among hospital patients. However, the dessert preference which is idiosyncratic of Wales, especially in all the substitute domestic catering sectors, is for cakes.

An above average consumption of tea, especially early in the morning in the commercial catering sector, is typical of the Welsh.

Traditionally in Wales, as in Scotland, afternoon tea used to be a substantial meal for which many of the traditional dishes were prepared. This regional idiosyncracy is now being increasingly and successfully exploited within the commercial catering industry by featuring the fruit tarts, which used to be consumed in the home in great quantity and which are now popular as a dessert in 'eating out' situations, along with various types of breads and preserves and bakery products containing dried fruits.

Of the people who eat out at work in Wales, the majority, and a greater percentage than in any other region, tend to use their canteen. Snack prices are lower than the national average but meal prices now differ little from those in other regions although they were higher than elsewhere 10 years ago.
Expressed as a percentage of total food expenditure, the expenditure on meals out in Wales has increased since 1969/70 as compared to that in other regions, although the average price per meal is reasonably low. Eating out in pubs occurs somewhat less often than in other regions perhaps because in some Welsh counties pubs do not open on a Sunday.

12.10.2. SCOTLAND.

The most outstanding characteristics of the food preferences within Scotland's catering industry are the striking aversion to pork in any form, the popularity of made-up minced-meat dishes, the fondness for thick soups and the great consumption of traditional regional dishes compared to that in other regions of Britain.

Both at home and at school meat consumption is low in Scotland, so causing a below national average intake of nicotinic acid. Beef is perhaps the most popular meat, but it is mince and made-up meat dishes which find most favour. The avoidance of pork causes a low thiamin intake but the popularity of made-up meat dishes and pastry products (except pork pies) which contain much cereal, contributes to the high regional carbohydrate intake.

Mince is very popular in all substitute domestic catering situations, beefburgers are popular in hospitals and sausage rolls find favour among schoolchildren and employees. Haggis, stovers, bridies and Scots pies appear very often on all types of menus, including those of commercial establishments. Traditional Scottish dishes are very popular indeed within all catering sectors, among local people and visitors, both foreign and British. Recently the commercial catering sector has found 'take-away' chicken to be very popular in Scotland.

Fish in general is not particularly popular in Scotland. Cod is extremely unpopular but haddock is chosen in preference to most other species, especially in canteens, while herring is popular among hospital patients. Fish products are popular in the home: hospital patients enjoy fish cakes particularly and schoolchildren, fried fish (preferably haddock).

As in Wales neither cheese nor egg dishes are particularly popular in Scotland; nor are salads or sandwiches.

'Foreign' fare is rarely featured on substitute domestic catering establishments' menus and caterers find there to be little or no demand for them. However, in the commercial sector Scotland's
historical connections with France and Scandinavia are reflected in her culinary practices and on some menus: for example, escargots are reported to be very popular in Edinburgh.

In Scotland, more than in any other region of Britain, soups are very popular and are preferred thick with a high carbohydrate content in all catering sectors. Similarly porridge, which also contributes carbohydrate to the diet, is a regional favourite but is served with salt, not sugar as elsewhere.

As in the household situation the very low consumption of fresh fruit and green vegetables accounts for the low intakes of vitamins C and A. It appears that schoolchildren prefer cauliflower and beetroot while hospital patients prefer most root vegetables: both however, are most fond of baked beans. Potato consumption is reasonably high in Scotland and in the schools 'chips' are preferred.

Heavier puddings, especially if served to employees with generous portions of thick custard, are preferred to lighter ones in all the substitute domestic catering sectors. The fondness for tarts, flans, crumbles, pies, puddings and sponges, preferably containing preserves, contributes still more to the region's high carbohydrate intake. Similar to the household situation milk puddings are popular among employees, but the only light desserts which appear to attain reasonable levels of popularity are ice-cream, jelly and Scots trifle (with whisky). Chocolate confectionery and chocolate biscuits are also very popular.

The tradition of eating afternoon tea or high tea is still continued in many Scottish homes and is available in employee and commercial catering sectors. Most caterers agree that the variety and probably the quality of bakery products are at their highest in Scotland and that consumption of cakes and shortbreads is very high, especially at the meal termed as "tea". This also contributes to the high carbohydrate intake. The consumption of all hot beverages is lower in Scotland than in any other region.

In Scotland about a third of employees eat in the canteen provided, another third eat in a restaurant, while the largest percentage in Britain (10%) eat in a hotel. Self-service is most popular among Scottish employees although composite meal prices are marginally higher than elsewhere.

The smallest percentage of meals eaten out per average week occur in Scotland where the average meal price in a commercial establishment is higher than in any other region, although expenditure
on meals out as a percentage of total food expenditure is near to the national average. Self service is also most popular among Scottish commercial catering customers, as it is among employees.

12.10.3. NORTH OF ENGLAND.

In the North, as in Scotland, within the catering industry meat consumption is not very great, but there are no outstanding preferences or aversions. Made-up meat dishes, especially pies, seem to be the most popular in the employee catering sector. In schools mince, beefburgers, black pudding and ham and pease pudding are popular. Within commercial catering the more filling dishes appear to be preferred.

In the household situation in the North fish is popular and this is reflected in the catering industry, especially the employee sector in which both cod and haddock reach relatively high consumption levels. It seems that fish fingers are most popular among hospital patients.

Egg and cheese dishes are both relatively popular among schoolchildren, although the latter seem to be particularly disliked by hospital patients. Salads and sandwiches find little favour in any catering sector.

Pasta, curry and other 'foreign' fare tends to be strictly avoided, especially by employees. The more traditional fare of the region, as in Scotland, seems to be popular both in canteens and within the commercial catering sector. Also as in Scotland the selection and consumption of bakery products is great: both pastry goods and bread are very popular which reflects the high home purchase and consumption of bread and flour.

Root vegetables are more popular in the North of England than in any other region and the great consumption of carrots, particularly in the school and commercial catering sectors, causes a high intake of vitamin A, which counteracts the loss due to the apparent aversion to fresh green vegetables. Cabbage and brussel sprouts, however, appear to be reasonably popular in the commercial catering sector although "mushy" peas retain a firm hold on the preferences of school-children. Broad beans seem to be popular in hospitals and butter beans among employees. Potatoes are popular: both chips and creamed potatoes being enjoyed by hospital patients. Dishes such as Cottage pie which contain a considerable proportion of potato seem to be very popular, especially among workers.
Although household milk consumption is low, again as in Scotland, employees enjoy milk puddings but heavier puddings, and especially crumbles, sponges and pastry products, appear to be most popular in all the substitute domestic catering sectors. Of the lighter desserts only fruit jelly appears to be enjoyed. Fruit in any form is unpopular and this contributes to the region's low vitamin C intake.

Tea is the preferred beverage of the North, although as in Scotland, employees also consume soft cold drinks.

Self service is not as popular among northern employees as among Scottish: counter service is very popular in the North where most main meals are eaten during night shifts. The expenditure on meals 'out' as a proportion of total food expenditure is similar to the national average although the average price of a meal in a commercial catering establishment is lower than elsewhere in Britain.

12.10.4. YORKSHIRE & HUMBERSIDE.

Beef appears to be the most popular meat in Yorkshire and Humberside, especially among schoolchildren, although bacon and ham seem to be popular in hospitals. Meat pastry products are enjoyed by school children and employees: especially steak and kidney pie, chicken and ham pie and the traditional "meat and potato" pie. As in the North filling foods are in demand in all catering sectors, even the commercial.

The very great popularity of fish within all sectors of catering is idiosyncratic of the region. "Fish and chips" are at their most popular in Yorkshire and Humberside, and fried fish sells well in every possible kind of establishment. It is haddock, however, which is most popular and it is preferred skinless: cod is strictly avoided.

Cheese and egg dishes appear to be popular among schoolchildren but it is the cheddar-type cheese which is preferred, as in all northern regions, not the soft or continental varieties which are popular in London and the South East.

As in the North employees in particular dislike 'foreign fare', and commercial 'take away' foreign food is not popular in Yorkshire and Humberside either: 'fish and chips' or the increasingly popular 'chicken and chips' is preferred. However, some of the region's more traditional dishes appear to be popular, especially among hospital patients.
Root vegetables are not as popular in Yorkshire and Humberside as in other northern areas: green vegetables seem to be more popular. "Mushy" peas are enjoyed however in schools, hospitals and even in some of the commercial catering sector, and chips are particularly popular.

Fresh fruit as a dessert is not popular and this contributes to the low vitamin C intake in the region. Lighter desserts are unpopular, especially among employees, but in all substitute domestic catering sectors consumption of heavier desserts, and especially sponges, cobblers, pies and tarts, is high.

The regional diet contains a high proportion of carbohydrate, but vegetable protein intake is above the national average due to the great consumption of flour and bread and the relative popularity of vegetables compared to other northern regions.

Tea is definitely preferred to coffee, especially by employees.

Canteen prices are lower in Yorkshire and Humberside than elsewhere, and partly in consequence of this and the great consumption of food in terms of volume, cooked meal take-up during shifts is greater among employees than elsewhere.

Apart from East Anglia, expenditure on meals out in Yorkshire and Humberside, as a proportion of total food expenditure is lower than in any other region, despite the fact that prices are relatively low. Commercial catering customers in Yorkshire and Humberside appear to be least concerned about the type of table service available: a larger percentage than elsewhere "do not mind".

12.10.5. NORTH WEST.

The most striking preferences in the North West are for lamb, mutton and offal. In all sectors of the catering industry, with perhaps the exception of hospital catering, lamb is extremely popular, and offal dishes are popular not only among employees but also within the commercial catering sector. The marked unpopularity of beef, which is also present in the domestic situation, perhaps accounts for the low iron intake. In contrast, however, to the domestic situation, school children seem to show a preference for pork and poultry as well as lamb. As in Yorkshire and Humberside, meat and potato pie is very popular but so are Lancashire Hot Pot (served in the traditional way with pickled beetroot), tripe and onions and black pudding, which even appear on the menus of more expensive commercial catering establishments.
Employees seem to have a preference for fried fish, and within the Liverpool conurbation there is a preference for hake which is most apparent in the commercial (fish-and-chip) sector.

Cheese dishes appear to be enjoyed by school children but egg dishes seem to be popular among workers.

There is a seeming indifference to 'foreign' dishes within the substitute domestic catering sectors although commercially a larger percentage visit foreign restaurants in Lancashire than elsewhere. The region's traditional dishes (containing lamb offal) are popular in all catering sectors: infact the more expensive commercial catering establishments find a substantial market for local dishes both among locals and visitors. Among snacks, filled rolls seem to be particular favourites as the fillings are usually more 'adventurous' than elsewhere.

Both fresh fruit and green vegetables have a low consumption, but carrots (which have a high vitamin A content) are very popular as are 'mushy' peas in all sectors of catering, and to a lesser extent pease pudding. Some commercial caterers even have requests to feature 'mushy' peas on banquet menus, along with such dishes as cowheel, tripe or Hot Pot.

Milk puddings are popular among schoolchildren and employees, but the latter seem to have a particular aversion to lighter desserts of all types. Heavier desserts are most popular: apparently any hot pudding served with custard is enjoyed, especially by industrial workers. In the commercial catering sector pancakes and waffles are especially popular and there is a preference for all griddle products in the North West. As in other northern areas tea is the favourite beverage.

A high proportion of the workforce in the North West use the canteens provided for them in which prices are generally lower than elsewhere in Britain.

Expenditure on meals out, as a proportion of total food expenditure is near the national average in the North West, although average commercial meal prices are lower than elsewhere. This contrasts with the domestic situation in which food prices are generally higher than in other English regions.

12.10.6. EAST MIDLANDS.

Within the catering industry in the East Midlands, as in the home situation, it is pork which seems to be the most popular meat,
especially among school children, and this accounts for a high thiamin intake. Sausages, meat puddings and pies, and roasts appear to be the favourite dishes within the substitute domestic catering sectors, while in the commercial sector meat pies, for which there are many traditional regional recipes, are particularly popular.

Fish does seem to be popular in the region, especially in the commercial catering sector, but fish fingers and fish cakes appear to be extremely popular in the substitute domestic sectors; in fact more popular than in any other region.

There appears to be no strong preferences or aversions to any other main dish items, apart from salad which seems to be particularly disliked by schoolchildren.

The consumption of fresh green vegetables is high, especially it seems in schools, and so vitamin A intake is relatively high. Brussel sprouts, cauliflower, carrots and canned tomatoes emerge as the most popular vegetables, but potato consumption is no higher than the national average.

Among schoolchildren and hospital patients milk puddings appear to be popular and the former also appear to enjoy yoghurt and ice-cream. Unlike more northerly regions stewed fruit, preferably with custard, is a favourite dessert. Heavier puddings, however, appear to be as popular as they are further north: schoolchildren enjoy sponges, jam roly-poly and fruit pies, hospital patients like apple tart, while employees prefer steamed and baked puddings. These preferences indicate a high consumption of flour, cooking fat and sugar; the purchase level of these is also high in the household situation.

A lower than average proportion of employees in the East Midlands eat in the canteens provided for them, perhaps because the average meal price in this region is higher than elsewhere. However, those who do eat in a canteen take longer over their meal than in other regions.

More snacks are eaten in 'Eastern England', both in the employee and commercial catering sectors, than elsewhere, and expenditure on meals out, as a proportion of total food expenditure is below the national average. Commercial meal prices are marginally above the national average.

12.10.7. WEST MIDLANDS.

Meat pies (including Shepherd's pie), meat puddings and offal dishes are popular in the substitute domestic catering sectors of the West Midlands. Employees apparently prefer meat dishes, and
particularly 'roasts', to any other.

Pickles and sauces (such as Worcester sauce) are served with a great variety of dishes: in fact the fondness for sour foods is apparent in the home as well as in the catering industry and is idio-syncretic of the region.

In the West Midlands fish seems to be most popular among hospital patients, although its consumption is generally fairly low. Cod, however, is the preferred fish, and it is particularly enjoyed as fried fish or fish fingers.

Cheese does not seem to be as popular in an 'eating out' situation as it is in the home, and egg dishes, salads and sandwiches also are generally fairly unpopular.

Pasta is popular among hospital patients, but it is curry which is particularly favoured in the West Midlands. Within both the employee and commercial catering sectors a high consumption of curry is apparent.

There appears to be an outstanding preference for peas in the West Midlands, not only in the home but also within the catering industry, and especially among employees. Baked beans are also very popular as are chips and boiled potatoes. Baked potatoes, especially served with cheese, and 'chip butties' both make a popular snack: the latter being requested in canteens from time to time in preference to other dishes. More potato and bread is consumed in the West Midlands than in the East Midlands. Bread and butter (and tea) is served with almost every meal in this region - the bread being preferred well-baked, almost burnt-looking compared to the lightly baked product preferred in the south.

As in the East Midlands, milk puddings are popular, but tinned as opposed to stewed fruit is preferred. Hospital patients appear to like trifle and cream caramel but all lighter desserts are strictly avoided by workers, who, along with schoolchildren, prefer heavier desserts such as tarts and pies containing preserves. The West Midlands fondness for preserves reflects the high sugar consumption in the domestic situation.

Hot sweet beverages are very popular in the West Midlands, especially tea and branded food drinks. In Birmingham in particular sterilized milk is preferred in tea, compared to the preference for pasteurized milk in Scotland and homogenized milk elsewhere. Employees in the West Midlands consume more tea than elsewhere and they are also very fond of cold milk. In addition the West Midlands' consumption of
sherry, cider and in particular beer, is very high.

It seems that the biggest eaters among workers are to be found in the West Midlands where canteen prices are very close to the national average and the employers' subsidy is probably the lowest in the country.

The proportion of food expenditure devoted to meals out is marginally greater than in the East Midlands, but still a little below the national average, although the commercial price of a meal out has fallen over the past ten years compared to other regions. Table service is greatly preferred to self service in the West Midlands, and a waiter is considered preferable to a waitress.

12.10.8. SOUTH WEST.

In the catering industry as in the household situation in the South West no one meat appears to be outstandingly popular. Hospital patients seem to prefer lamb and offal dishes and schoolchildren prefer meat pastry products. Cornish pasties are apparently more popular than many other dishes, although in the more expensive commercial catering establishments mixed grill seems most popular.

Fish consumption is not especially high but both cheese and egg dishes appear to be popular, especially amongst employees.

As in northern areas "foreign fare" is positively disliked but hospital patients in particular claim to enjoy 'local' dishes.

The consumption of all vegetables appears to be close to the national average with cabbage and brussel sprouts seemingly the favourites in substitute domestic catering situations, although baked beans (and chips) are popular among schoolchildren.

The popularity of egg dishes is reflected in the hospital patients' preference for egg custard as a dessert, and the liking for cheese is apparent as the South West is the only region in which schoolchildren appear to enjoy cheese and biscuits. Some heavier puddings are popular - such as shortcake (in school) and apple dumplings (in hospital) - but their consumption is definitely not as great as in the Midlands and North.

Pastries and cakes seem to be popular but bread consumption, and therefore vegetable protein intake, is relatively low. Animal protein intake is equally below average due to the relative unpopularity of meat and fish. Savoury products and cheese and egg dishes appear to be favoured more than in other regions.

Canteen prices are relatively high - in fact 10 years ago
they were higher than in any other region except Wales, and perhaps this is a contributory factor to the use of canteens in the South West being lower than elsewhere. A higher proportion of employees than in any other region choose to eat in cafes or restaurants.

In 1970 expenditure on meals out in the South West, as a proportion of total food expenditure, was less than in any other region but in 1974 it was well above the national average, second only to that in London and the South East. The average price of a meal in a commercial catering establishment has always been slightly above the national average and the proportion of self-service establishments has always been low.

12.10.9. EAST ANGLIA.

As in the household situation consumption of lamb and poultry is higher than that of other meats, although made-up meat dishes are also popular, especially in schools. As in Scotland mince and beef-burgers are enjoyed; similar to the South East "roasts" are popular in schools; but idiosyncratic of East Anglia alone is the popularity of cold meats served with hot vegetables, especially in the substitute domestic catering sectors.

Fish consumption is high, as especially in schools and in commercial catering establishments, a great variety of mostly local fish and seafood dishes sell well. Fish cakes appear to be popular among hospital patients.

Cheese dishes are not popular but egg dishes appear to find favour not only in schools but also within the commercial catering sector. Salads are reasonably popular among employees - mostly office staff - although in schools they seem to be disliked.

"Foreign fare" reaches fairly high consumption levels in East Anglia with pasta dishes seemingly being preferred by school-children.

Fresh green vegetables are markedly more popular than root vegetables, especially in schools and hospitals. Employees demonstrate a particular liking for cauliflower and it is interesting that when "mushy peas" (greatly favoured in the north) are offered to school-children they are strictly avoided. Potato consumption is not very high but potato "substitutes", such as rice, are reported to be acceptable in this region, especially in schools.

Heavier desserts do not seem to be as popular as in northern and Midland regions but some are enjoyed in the substitute domestic
catering sectors. Lighter desserts appear to be preferred in hospitals and particularly in commercial establishments. Fresh fruit is extremely popular as a dessert among schoolchildren and stewed fruit among hospital patients: the high consumption of soft fruit being the distinguishing feature of the region.

The pattern of food consumption in the catering industry of East Anglia demonstrates a greater intake of "bulk" than in the South East, but somewhat less carbohydrate than further north.

Expenditure on meals out as a proportion of total food expenditure is less in East Anglia than in any other region, although prices are similar to those of the South East.

12.10.10. SOUTH EAST.

The unpopularity of bread and other cereal products causes a low vegetable protein intake, but intake of animal protein is very high due to the marked preference for meat dishes: as in the home situation consumption of lamb and butter is very high in substitute domestic catering sectors. Bacon and ham also seem to be very popular but the most marked contrast to the household situation is the preference for beef within the commercial sector. "Roasts" are very popular, especially in schools, but made-up meat dishes tend to be avoided, particularly by employees. Vol-au-vents are enjoyed by hospital patients while commercial caterers have noticed a significant and recent increase in the demand for meat puddings, which some feel represents a trend back toward more traditional English fare. Pork pies are apparently very popular in the South East - especially in pubs and 'fast food' commercial catering outlets.

Fish consumption is greatest in the employee and commercial catering sectors, although throughout the catering industry of the South East cod is the preferred fish. Plaice also seems to be very popular as is a variety of more unusual types such as skate, sole, whiting, et cetera. "Fish-in-sauce" is enjoyed more than in any other region, especially by employees.

In contrast to the Scottish preference, soup is least popular in the South East, although the soups which are consumed have a higher vegetable protein content than in Scotland. Similarly there is no shared preference for stews with the north.

Employees in particular favour cheese dishes. Salads are more popular than elsewhere, especially among female office staff. Schoolchildren seem to readily accept sandwiches and other "snack"
items, but egg dishes are not at all popular in the South East.

Within all sectors of the catering industry 'foreign fare' is extremely popular: pasta seems to be preferred in schools and Quiche Lorraine in hospitals. Curry is very popular among employees and commercial customers. More Chinese 'take away' food is bought and more Indian restaurants are visited in the South East than in any other region.

Fresh green vegetable consumption is significantly higher in all catering sectors in the South East than elsewhere. All vegetables reach reasonable uptake levels and courgettes, broccoli, spinach, celery and more unusual varieties appear to be popular both in the employee and commercial catering sectors although these rarely sell at all "north of the Wash", except perhaps in some very expensive commercial catering establishments. Quick-frozen peas and beans are also much more popular than they are elsewhere. Potato consumption is below the national average, but the more unusual type of potato — scallop, duchesse, croquette — gain higher acceptance levels than in other regions. Savoury snacks such as puffed potato products are also popular in the South East.

Heavier desserts and milk puddings are generally disliked in the South East: only strudels (a 'foreign' dish) seem popular. Lighter desserts are apparently preferred in all catering sectors: jelly and cream caramel being particular favourites of hospital patients. Yoghurt and cheese and biscuits (especially crispbread) are particular favourites among employees — primarily retail and office staff. Ice-cream is also popular. As in East Anglia fresh fruit is enjoyed as a dessert, and particularly it seems in schools.

Coffee is significantly more popular in the South East than in any other region and instant coffee is used mostly, although more machine-vended tea is drunk than elsewhere. Wine consumption is also high, predominantly within the commercial catering sector, although it is also becoming increasingly available and appreciated in some staff restaurants.

In the South East the ratio of staff restaurants to works canteens is approximately 4:1, whereas in the north and Midlands it is approximately 1:1. A greater percentage of employees than elsewhere eat in a pub, although canteen prices are generally relatively low. In fact there are more pubs per head of the population in Kent, Surrey and Sussex than elsewhere in the country (Allen, 1958). Snacks are most popular in the south where the greatest number of between
meal 'nibblers' are to be found.

Expenditure on meals out is greater than in any other region although average commercial meal prices are generally above the national average.

Health food shops with restaurants attached to them predominate in the South East and South West, where about two-thirds of business takes place. Other 'speciality' foods such as vegetarian dishes and slimming foods are more easily available in London and the South East than elsewhere.

12.10.11. LONDON.

The pattern of food preferences in London is very similar to that of the South East apart from a few exceptions.

Only within London does veal consumption reach relatively high levels. A preference for rock salmon is also idiosyncratic of the conurbation.

As in the rest of the South East salad and snack items seem to be more popular than elsewhere and 'foreign fare' is also very popular and perhaps to an even greater degree. Unusual foods - meat products, vegetables and fruits - are all found to be acceptable to some extent.

Fresh green vegetables are also popular but root vegetables are preferred somewhat more than in the rest of the South East.

Again as in the rest of the South East it is the lighter desserts which appear to be preferred - particularly within the commercial catering sector. Fresh fruit seems to be favourite of school-children and ice-cream seems to be particularly enjoyed in commercial establishments.

Coffee consumption is also very high and more ground coffee is perhaps used than elsewhere in the South East. A preference for wine is most marked.

Twenty years ago canteen prices in London were higher than anywhere else but today, although snack prices are high, meal prices are generally lower than elsewhere. This is probably why employees in London spend most on main meals and cooked snacks and why the average time taken over a canteen meal is longer than elsewhere. The employers' catering subsidy on consumables is significantly greater in London than in any other area of Britain: nearly twice that in Wales and the Midlands in fact.

The greatest percentage of main meals eaten out in commercial
establishments also occurs in London; expenditure on meals out is significantly greater than anywhere else, but the average commercial price for a meal is now lower than elsewhere in Britain.


Empirically, it seems that certain distinct food preferences exist in each of the food preference regions of Britain, although probably fewest specifically identifiable preferences or aversions exist in the North, Midlands, South West and East Anglia.

A greater number of marked differences in taste are obvious between the north and south than between eastern and western areas. The high carbohydrate (e.g. cereal) and low protein (e.g. meat and vegetable) intakes of Scotland are reversed in the South East, and in London in particular. The high acceptance level of foreign fare in London and the South East is exactly opposite to the strict avoidance of such dishes in northern regions of England, in all but the commercial sector.

Geographical gradients of preference are identifiable in some food commodities. For example, lamb, fresh green vegetables and fruit become noticeably less popular when travelling north through Britain, while beef, root vegetables, potatoes and cereals become more popular. Marked exceptions include the significant preference for bulky and 'filling' foods in the West Midlands and Yorkshire and Humber, and the idiosyncratic high level of fat intake in Wales.

In the catering industry of Scotland, and perhaps the North West of England, the indigenous traditional regional dishes are much more popular than is traditional fare elsewhere, and especially in the south. Although traditional dishes are featured within the commercial catering sector of all regions, they are found to be selected most in this catering sector in Scotland, parts of the north of England and in certain tourist areas. The increased interest in regional dishes which has become apparent during the present research period is probably in part attributable to their promotion by the Scottish and English Tourist Boards. In contrast, traditional regional fare is less apparent within the catering industry of Wales, where the Welsh Tourist Board has not undertaken a comparable scheme, although one or two commercial caterers in Wales who do feature local dishes report a definite market for them. This further demonstrates the exploitation potential of regional fare.
13.1. The Acknowledgement of Regional Food Preferences.

That regional food preferences actually exist within the households of Britain has been demonstrated by previously published pieces of research (e.g. Matheson & Philpott, 1967: section 6.6.; and Thomas et al, 1972: section 6.7.), but the present study provides confirmation of this fact, and in addition establishes that regional food and dish preferences also exist to varying degrees within certain sectors of the catering industry - namely school catering, hospital catering, employee feeding and commercial catering.

Each annual report of the National Food Survey (section 6.5.) simply presents statistics which demonstrate geographical differences in food consumption for one particular year without explaining them. In any one year these regional variations may be due to strictly temporary conditions. For example, the pattern of potato supplies and yields varies quite widely from year to year; it was low in 1976 and this will be reflected in the consumption statistics. Therefore in chapter 7 the figures for the past 18 years (1955 - 1973) are considered in order to eliminate transient variations so that the persistent differences emerge to establish the true existence and nature of regional household food preferences, as indicated by food consumption levels.


The majority of industrial caterers interviewed in the present study feel that regional food preferences are apparent within the employee catering sector (section 10.7.3.) and the Bateman Contract Catering Organization (1966) was sufficiently convinced of the existence of regional food preferences among their workers to undertake a nationwide study of this.

Over half of the commercial caterers personally contacted during the present study were of the opinion that regional food
preferences do exist within their sector of the catering industry (section 11.4.3. and section 11.5.3.) and this was particularly true of the independent operators.

The commercial benefit to be derived from regional food preferences has been recognized by the Scottish and English Tourist Boards in particular, both of whom have recently launched campaigns to promote the featuring and awareness of their regional fare. The recognition and exploitation potential of regional food preferences has also been realized by a large nationwide food manufacturer and distributor serving the household, substitute domestic and commercial catering sectors, to such an extent that their advertising, marketing and even product production divisions are concentrating upon regional tastes (personal communication, 1976).

13.2. The Nature of Regional Food Preferences.

Chapter 6, part A, contains details of the principal sources of information on regional household food preferences to date, and chapter 7 describes in detail what these preferences actually are in terms of food groups, commodities and nutrients.

There has been some previous research into the food preferences of hospital patients, employees and customers of commercial catering establishments (outlined in chapter 6, part B), but the majority of the findings are somewhat superficial and suffer from a lack of regional homogeneity.

The results of the present study, relating to the food preferences within individual sectors of the catering industry, are presented in chapters 8 to 11 inclusive, and the conclusions regarding regional dish preferences within the industry as a whole appear in chapter 12.

13.3. The Existence of Regional Food Preferences.

Many researchers, from a variety of different academic disciplines, have theorized upon the variables which govern food preferences and a number of their deductions are discussed in chapter 3, section 3.2. An amalgam of these variables is presented in fig.3.1. but in this chapter the effect of these factors upon regional food preferences specifically within the catering industry is considered, and examples given in an attempt to elucidate 'why people eat what they eat, where they eat it' within the catering industry.

From the evidence presented hitherto it would seem that
Regional food preferences were originally established and perpetuated within the domestic situation by such forces as climate, soil type, historical events, culture, religion and economics. These preferences were disseminated into the substitute domestic catering situations when people began to eat outside the home as a matter of necessity in hospitals, places of work and schools (chapter 5). In general these institutions were within the same region of the country as were the home environments of the incumbents and so similar food habits pertained to them.

However, as travel increased both in frequency and distance by the agencies of the stage-coach, railway and motor vehicle (chapter 5), the need for accommodation and sustenance away from the home also increased. New foods, dishes and modes of presentation were encountered in the commercial situation and adjustments took place in terms of food acceptability. In fact the very existence of a catering industry outside the domestic situation initiated a process of continual modification to regional tastes and preferences in food. The modifications which took place were however, at least partly dependent upon the stability of the already prevailing pattern of preferences; and the enduring need for a retention of identity and affiliation reinforced and maintained certain of the original preferences.

Regional food preferences are modified by socio-economic and technological influences which are apparent in the domestic situation, but also by factors which exert their effect through facets of the catering industry and its constituent sectors.

13.4 The Production of Regional Food Preferences.

13.4.1 Geography.

The natural environment first dictated the foods which could be hunted, caught and latter produced. Within Britain the soil on the eastern side is very fertile (fig. A.4.1) for growing crops while the land in the west is more suitable for grazing cattle and sheep. Similarly the harsher climate of Scotland (fig. A.4.2) precludes the growing of wheat as in southern England, but it is possible to grow oats, and porridge is still today the preferred breakfast cereal of the Scots within the commercial catering sector. The rich light soil of East Anglia is particularly suitable for growing soft fruits and despite the recent innovations of transport and technology making their distribution possible nationwide, they are still more popular as a
dessert among schoolchildren of East Anglia than anywhere else.

The original primary fuel of the South West of England was peat or turf, but since it was not possible to roast meat with this, a tradition of baking and 'raising' clotted cream over the slow fires grew up: today Cornish pasties are more popular in a substitute domestic catering situation in the South West than elsewhere and cream tends to be most popular in all catering sectors in this region.

13.4.2. History.

Historical events such as wars, invasions and trading and diplomatic associations between countries provide opportunities for the establishment and transference of food preferences within specific areas. Figure 4.1., maps 1 to 4 inclusive, give some examples of the invasions of Britain and the regionalization which resulted therefrom.

Scotland provides some good examples of the absorption of food habits from other peoples. Indeed all the Celtic countries – Scotland, Wales, Ireland and Brittany have a similarity of language, cultural heritage and a number of foods in common, especially the original uses of oatmeal. All these countries were visited by the Vikings and Scotland in particular has adopted some Scandinavian methods of cooking, the salting and curing of fish and mutton and the prime Aberdeen Angus cattle (probably of Viking stock). Similar to Scandinavia, today in the Scottish catering industry there is a high consumption of herrings, a low consumption of green vegetables and a great deal of cold milk is drunk by adults (especially employees).

Scotland's ties with France began in the ninth century and a succession of French royalty has left its mark on both the content and terminology of Scottish cuisine. The Scots have the French fondness for sweet foods and in fact were serving a dessert long before the English. Buttery Rowies, the traditional Aberdeen butter yeast rolls, are practically the same, apart from the shape, as the ordinary French breakfast croissant: these and other bakery products are very popular in all sectors of the catering industry in Scotland.

Historically London has always had greatest access to imported foods and so consumption of citrus fruits for example has always been, and still is, highest in the South East.

Today many regional differences in food consumption patterns tend to be explained in socio-economic terms, but a study of the regional differences in 1949 (HMSO, 1956) attempted to eliminate most of the variation due to income and degree of urbanization by restricting
the selection to working-class urban households of prescribed composition. The result was that many of the more marked regional differences persisted and the conclusion was reached that one is compelled to explain them in terms of history and geography rather than by contemporary economic or demographic conditions.

Similarly, a study for the Milk Marketing Board (Baines, 1967) established that after adjusting for income and household size, North East England and South Wales have exceptionally low milk consumption, which seems to reflect habits formed before the war that "may yield only very slowly to time and education."

13.4.3. Culture.

'Cooking reveals the culture of a country, and a country's soul is reflected in its food' (Lowenberg et al., 1974).

The culture of a region with respect to food encompasses all aspects of food habits and food ways which are established by availability, religion or some other agency and are perpetuated within the traditions of that region; these are modified very slowly by the change of generation and by movements of population.

The law against pubs opening in some Welsh counties on a Sunday is a direct effect of the influences of the Nonconformist chapels. Similarly religion still influences the Friday menus of many establishments especially in the substitute domestic catering sectors, in which fish tends to be offered especially within the Liverpool conurbation which has a high proportion of Irish Roman Catholics (personal communication, industrial caterers, 1974-5).

Black pudding also has religious connections: it originated in Germany, it then became established in Yorkshire and Lancashire predominantly, where it is still most popular within all substitute domestic catering sectors. As black pudding contains blood it was originally a dish for Bloody Thursday (Maundy Thursday).

A firm tradition in Scotland is the celebration of Hogmanay (New Year's Eve) for which haggis is the most traditional of all foods: it is featured extensively at this time of year in commercial catering establishments, and throughout the year in all catering sectors.

In Wales the traditional Christmas dinner consists of goose, and it is within the catering industry of Wales that the greasier meats (such as pork, goose and duck) are most popular.

The tradition of Sunday lunch, which today is stronger in the north than the south, enhances family ties and feelings of security
and affiliation and reinforces regional food preferences as familiar foods are usually consumed. The proportion of Yorkshiremen eating Yorkshire pudding is nine times higher than the proportion of Lancashiremen who eat it (Bird & Mills, 1972).

13.4.4. Economics.

Spending power has always been a very real force in the moulding of food habits. Very often cheaper cuts of meat, and in fact every part of the animal, had to be eaten and such dishes as tripe-and-onions (today popular in all catering sectors of the North West - even the commercial) and Durham cutlets (a Northern dish, still popular among employees and made from scraps of meat formed to look like a chop) evolved.

Regional predilections which now vary can often be traced back to sound economic reasons which prevailed years ago, but which have by now disappeared. Response-reinforcement and the need for affiliation explain why such habits persist. Many of the made-up meat dishes are examples of these influences. Meat-and-potato pie, today a regional preference in Yorkshire and Lancashire, and particularly of employees, was first produced because insufficient meat could be afforded. More recently the inclusion of potato within the pie has not been necessary for economic reasons, but the preference persists, especially among the older generations.

In this way economic influences produce food ways which are idiosyncratic of a region and the food ways which persist for an appreciable length of time become part of the region's culture. Yorkshire pudding, which was at one time a carbohydrate 'filler' to be eaten before the meat dish, is still eaten as a separate first course in Yorkshire. Similarly bread and butter was eaten with a meal in the West Midlands in order to satisfy the hunger as not sufficient of the more expensive foods was available: today bread and butter is still regarded as a necessary accompaniment to all dishes in the substitute domestic catering sectors (and in some commercial establishments) of the region.

The very high consumption of soup by Scots which is evident throughout the catering industry, does not seem attributable to the colder winters and to a greater intake of hot nourishment, but to a tradition of economic necessity. Soup is very often a substitute for a hot main dish at midday. The Scots' higher soup consumption by comparison with the English, is balanced by the latter's greater
consumption of main dishes (Bird & Hills, 1972; and section 10.4.5.).

13.4.5. Status concepts.

In Yorkshire and Humberside root vegetables such as turnips used to be used for cattle fodder and so whenever possible they were avoided as human food as they were considered to be inferior. This belief is maintained today as schoolchildren in the region apparently dislike root crops despite their comparative popularity in other northern regions (personal communication, School Catering Adviser, Leeds, 1975).

13.4.6. Food preservation.

The habit of smoking fish to preserve it, as introduced into Scotland by the Scandinavians, has established a preference for Finnan Haddie, a well-known cured haddock. These 'smokies' are very popular in Scotland today, predominantly within the substitute domestic catering sectors.

In Wales, to preserve butter, layers of salt were put into earthenware pots with it. During use the salt was mixed in with the butter and it is probably from this that an acceptance of and preference for salted butter was generated. A number of caterers from all sectors of the industry report a marked preference for salty butter in Wales (personal communication, 1973-76).

13.5. The Modification and Reinforcement of Regional Food Preferences.

Food preferences which have been established within the domestic situation are modified by such factors as food technology, education, state ways, status concepts and other prevailing socio-economic factors (as described in chapter 5), and also by the diverse influences of the catering industry. The catering industry modifies regional food preferences because it adds new dimensions of choice in terms of availability and psycho-social contexts.

The influence of the catering industry upon regional food preferences is likely to increase if 'eating out' continues to become less of a luxury as it has over the last 30 years or so: in 1939 the income elasticity in relation to 'eating out' in Britain was 2.25 but by 1967 it was down to 1.39 (Bryn Jones, 1970).

In this section (13.5.) some of the forces, primarily from within the catering industry, which modify and reinforce prevailing
regional food preferences are examined.

13.5.1. Availability factors.

The very fact of food being available outside the home, and that very often a choice is offered, in itself modifies food preferences as it is the individual and not the household's caterer who determines dish selection.

13.5.1.1. Location.

Obviously the food preferences of a community will not be modified to include a preference for pasta dishes if an Italian restaurant is not located so as to be accessible. It has been the availability of Chinese, Indian and French restaurants, et cetera, which has caused people to consume 'foreign' foods and so develop a taste for them. For example most people who buy Indian and Chinese 'take away' meals are to be found in London and the South East where the greatest number of Indian and Chinese 'take away' outlets are located (fig.A.4.11.(d); fig.A.11.11.). Similarly most fish-&-chips are consumed where the greatest number of fish-&-chip shops are found: i.e. in Yorkshire (fig.A.4.11.(e); fig.A.11.11.).

It is interesting that new foods appear to be most acceptable in regions which already have an established preference for a similar product. For example, the patronage of 'Hamburger' establishments is greater in Scotland than elsewhere (HSG.EDC,1975), which is the region that traditionally has had the greatest preference for mince and minced meat products, not only in the home but also within the catering industry. In this case the fast food sector of the catering industry has modified a preference for mince into a preference for an American product - the hamburger.

13.5.1.2. Economics.

Economic influences, as well as establishing certain regional food preferences, also have the continuous effect of modifying the type of food chosen in light of currently prevailing conditions.

Economic influences are dominant determinants of eating out (Bryn Jones,1970), but once the decision has been taken to actually eat out, then within a predetermined price range, usually dependent upon the type of establishment chosen, the actual choice of dish is primarily dictated by non-economic factors.
An exception to this is the case of beef being preferred to lamb in the South East in a commercial 'eating out' situation. Caterers postulate that consumption of lamb is greater in the South East in the household situation partly because it is cheaper to buy at the retail level than beef. However, when out to eat, the price differential between lamb and beef is less marked and in order to eat something different to that which is available more cheaply in the home, beef is selected in preference to lamb.

The type and number of eating out establishments which are available and the amount an individual is prepared to spend on a meal out within a region is in part dependent upon regional prosperity. The acute cleavage between the relatively depressed and relatively prosperous regions of the British economy which had been so marked a feature of the inter-war years was softened in the years after 1945, but regional differences have still persisted in the fifties, sixties, and seventies and are proportionately still quite large (Williams, 1971). Indeed the regional differences were not noticeably any less in 1970 than they had been in the 1940s. Some of the major disparities lie in the unemployment rates (fig.A.4.4.(e)), levels of earning and household income (fig.A.4.4.(f)), the latter two of which can vary tremendously. Wales, for example, is rated quite high in terms of earnings, but quite low in terms of household income (fig.A.4.4.(f)), largely because the very poor employment opportunities for women (fig.A.4.4.(c)) means that the average number of earners per household is low. Generally, however, it can be said that Scotland, Wales and the north are most obviously relatively poor while the Midlands and the South East are relatively rich regions (fig.A.4.5; figs.A.4.6.(a) + (b); section 4.2.9.).

Within all sectors of the catering industry slightly more actual meal occasions take place in Scotland than elsewhere, but most is spent per capita in London where the average meal cost is highest (fig.13.1.).

Fig.13.1. Regional eating out habits within the catering industry as a whole. (derived from: HMC.EDC.1975)

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<td>average number of meals/wk. among those eating out</td>
<td>4.6</td>
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<td>4.3</td>
<td>3.7</td>
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<td>expenditure per capita of those eating out (p)</td>
<td>125</td>
<td>123</td>
<td>108</td>
<td>126</td>
<td>103</td>
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<tr>
<td>average meal cost (p)</td>
<td>26</td>
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More people in London, and to a lesser extent in the South East and the South West, than elsewhere are prepared to pay higher prices for a meal out: the smallest number who will pay over £1 per capita are in Scotland, although the greatest number who do not eat out at all are to be found in the 'West Pennines & Wales' region (H&C.EDC., 1975).

The recently depressed economic climate of Britain has had a differential regional effect as regards eating out habits. Between April 1974 and June 1975 the average amount spent per capita of those eating out and the number of meals per week eaten out rose in Scotland, London, the South East and South West but fell elsewhere. Average meal cost rose everywhere except the West Pennines and Wales (fig.A.4.10 (a)) where it fell marginally, representing a degree of trading down in this region (H&C.EDC., 1975).

In the West Pennines and Wales the total number of people eating out fell marginally between mid-1974 and mid-1975, and it is presumed that the reason for this is that even in depressed circumstances a certain amount of eating out has to be done for purely utilitarian reasons. Faced with this necessity, against a background of rising prices, there is only one thing which the consumer can do, and that is to 'trade down'. If this was taking place, then the natural effect would be to reduce the market value, while market volume remains relatively unchanged. Moreover in the purely commercial sector the expenditure in the West Pennines and Wales area increased slightly by 9%. This was somewhat higher than the national average, but this increase was small compared with the 74% increase which had occurred in meal occasions, a figure considerably above the national average. In short, volume had increased much more than value. Therefore if depressed conditions were operating in the West Pennines and Wales area - from where, and from whom, did these extra meal occasions come? It would seem that the partly commercial sector suffered much less in value than in volume, and so there appears to have been a distinct tendency for eaters out in the West Pennines and Wales to move their custom away from the works/office canteen into purely commercial outlets, where there was perhaps more opportunity to trade down. This has in fact had an effect on dish choice: between mid-1974 and mid-1975 in the West Pennines and Wales there was a reduction in the number of meat (excluding bacon) dishes selected and an increase in omelettes and other egg dishes, which was not apparent in the economically scudder area of London (derived from H&C.EDC., 1975).
13.5.1.3. Technology.

The availability of refrigerators and home freezers encouraged a preference for frozen produce in the homes of the South East where these appliances are most easily afforded (fig. A.4.8. (c)+(d)).

When frozen vegetables first became widely used in the catering industry they were most readily accepted by customers in London and the South East, where quick frozen peas and beans are still more popular than in any other region.

The recent innovation of 'cook-freeze' dishes has been found to have established a preference among schoolchildren (in Liverpool) for frozen food (Hollinghurst & Bolton, 1974; section 8.4.) rather than conventionally cooked food, but only when the recipes used conform to the pupils' already established dish preferences.

The application of technology to the production of new foods also modifies tastes and preferences. Spun and textured vegetable proteins (TVP) are expected to become a complete alternative to meat within 5 years, although they have been used in canteens and some schools and hospitals since 1970 and have become accepted particularly in areas which favour made-up meat dishes (personal communication: Craigmillar, 1976). Already "chicken joints" can be produced entirely from flavoured spun vegetable protein, and it is expected only to be a matter of time before steaks and other items are similarly available. As the price of meat rises, TVP products will gain an increasing economic advantage and will be readily used and accepted within the catering industry, especially in regions where economic conditions are most austere.

Substitute domestic catering establishments in the northern regions of England do indeed show a marked greater acceptance of TVP than in southern regions, where perhaps meat is still an economically viable proposition, but within the Scottish catering industry use of TVP is lowest. It is very interesting that the acceptability of TVP was established within the substitute domestic catering sectors and especially in the north of England: only later did it begin to be consumed at the household level, albeit still in comparatively small quantities. This is a very real example of a regional taste within the catering industry modifying regional food preferences.

13.5.1.4. Transport, distribution and marketing.

As in the domestic situation the availability of food commodities and dishes in all regions within the catering industry has
modified regional preferences. The fact that London is a main port of entry for imported foods and that it contains the central markets contributes to its comparatively more abundant and varied diet than the rest of Britain in the household situation. However, modern preservation, transport and distribution systems have enabled more exotic foods to become available in northern areas of the country, especially in the commercial catering sector. The more unusual items such as avocado pear, which at one time were available and enjoyed only in restaurants of the South East region have now become popular as a 'starter' in northern regions in the more expensive establishments of the commercial catering sector (personal communication, commercial caterers, 1975-6: section 11.4.).

Transport has yet another effect on food preferences, because without belabouring the obvious, by definition some distance must be travelled in order to be able to eat a meal away from home. The ability to be mobile, and through it the ability to eat out, is strongly related to age and position in the life cycle. The possession of a vehicle (fig. A.4.5. (c)) increases the likelihood of eating out, as do the need and desire to be mobile (Bryn Jones, 1970). The young, financially sound adults who possess a car and desire to travel to see friends and work colleagues have a high propensity to travel and eat out. This infers that residents of the South East region demand and use the most catering facilities.

The marketing of products can affect regional food consumption significantly. When the broiler industry expanded rapidly after 1957, the consumption in London soon became twice that in smaller urban areas. It would be naive to interpret this association as a difference in consumer preference as it reflects the industry's plans made in the late fifties for marketing broilers on a large scale (Baines, 1967).

Food company headquarters have traditionally tended to be located in London and the south, but food marketing experts are discovering a market for new and regionally orientated products elsewhere too, and are increasingly concentrating on regional, as opposed to national products and marketing programmes (Birds Eye, 1975 (c)). New potato products are found to be most successful in Scotland where household potato consumption is high; new egg dishes sell well in northern areas where egg consumption is traditionally higher than elsewhere; new offal products are found to be popular in the West Midlands and North West; and new examples of 'foreign' fare are preferred in the South East. These specifically regional marketing
techniques exploit traditional regional food preferences but also reinforce them, not only in the home but increasingly within sectors of the catering industry.

13.5.2. Psycho-social factors.

The existence of a catering industry establishes social and psychological influences upon food selection and consumption, different from those that pertain to the domestic situation. For example, the very circumstances under which a meal is eaten dictate to a certain extent the range of choice of dishes which is suitable or appropriate and this can vary between regions.

13.5.2.1. Circumstances of a meal.

The most usual circumstances under which a meal 'out' is eaten may vary regionally. More meal occasions during a shopping expedition take place in Scotland and the south than elsewhere but eating out while travelling is most usual in Scotland. Most business meals take place in London and the South East while a meal out for a special occasion is most usual in Eastern England. Eating out as an adjunct to some form of entertainment occurs most often in Scotland, the South East and South West, while "just a meal out" is more of a habit in Southern and Eastern England (HAC.EDC, 1975).

A "celebration" meal in northern England (the North West for example) generally consists of more filling foods and more courses than in London and the South East; the quantity consumed often being the criterion of a 'good meal' in the north (personal communication, commercial caterers, 1975-6).

In a tourist area of Britain the dish chosen by any particular customer can be predicted by his circumstances. A local resident will tend to choose a dish which is a "change" from his usual diet while a visitor to a region is more likely to choose a traditionally regional 'speciality'. For example, in North Wales more locals than visitors choose steak while the visitors select lamb which is an indigenous meat that the resident population can enjoy in their own homes (section 11.6.).

13.5.2.2. State ways.

Food habits and choice are usually established in childhood and attitudes determined at this stage may govern adult food
preferences. State control over school meals therefore has great influence over food selection and consumption and the recent report of the Department of Education and Science (1975) which allows local education authorities to determine their own limited choice menus within prescribed nutritional standards, should allow for the reinforcement of regional food preferences.

Britain's recent membership of the European Economic Community and the necessary changes to regulations governing imports, food hygiene, food additives and colours which are ensuing greatly modify the foods which are considered to be acceptable, both in the home and in the 'eating out' situation. Easier access of food produce and persons between Britain and other countries of the E.E.C. will inevitably lead to a growing acceptance of, and perhaps preference for, certain European dishes within Britain, particularly in the South East region. Multiple unit catering companies can now establish outlets in a number of different European countries and the probable interplay of menu contents will further modify tastes.

13.5.2.2. Status concepts.

About a decade ago scampi became a popular item of southern expense account meals and acquired the status of a desirable food from the social class aspect. However, once they became available throughout the commercial catering industry and were being eaten in northern fish-and-chip shops their status and therefore their desirability fell. A similar process took place about ten years ago in the case of prawn cocktail which is now rated as the most popular 'starter' in Britain along with tomato soup (section 11.3.4.2.), and avocado pear is currently undergoing a similar status experience (personal communication, commercial caterers, 1976; section 11.4.).

During the Middle Ages and seventeenth century oysters were the food of the common man in London, but their price and scarcity value has now elevated them to the position of being a sought-after food in the commercial catering industry. Nevertheless they are still predominantly associated with London.

Wine drinking has always been considered a symbol of superior status, but in recent years (perhaps in part due to the increasing continental influences in Britain) wine consumption has increased enormously, and is now highest in the South East and also in Scotland (perhaps as a result of Scotland's traditional associations with France) (fig.A.11.19).
13.5.2.4. Occupation.

The variations in industrial structure (fig. A.4.4.(a); section 4.2.4.) are still important but their significance has declined since the inter-war period due to a trend of decreasing regional specialization and concentration of industries.

However, the occupations which predominate within a region still affect the food consumption habits in the home, and particularly in the employee catering sector: chapter 10 provides evidence of this. Areas with much heavy industry continue to feature more filling carbohydrate dishes on their menus, while female office staff in the South East have developed a preference for salad and yoghurt.

Coal-miners in all parts of Britain have traditionally carried with them a mid-shift meal of bread and cheese. However, despite the fact that all coal-face workers need to expend the same amount of energy, the amount of cheese eaten, and therefore the calorific value of the meal, varies regionally from 1.9 ounces per day in Leicestershire and South Wales, to about 1 ounce per day in Fife and Yorkshire to 0.2 ounces per day in Lancashire and Durham. It is interesting that in heavy industry canteens in these areas, cheese consumption is similarly greater further south as compared to the north of England. This is a case of a food preference being maintained with respect to a region rather than a common occupation, and an example of industrial feeding habits reflecting and reinforcing an already established preference.

13.5.2.5. Household composition.

Household composition very much affects the amount spent, but not the propensity to eat out: children have a deterrent effect on expenditure (Bryn Jones, 1970). It is therefore in Scotland and the West Midlands (fig. A.4.3.(d)), where there is the greatest number of large families, that most 'trading down' occurs in the eating out situation due to larger households.

A high regional proportion of working wives, as there is in the West Midlands, South East and North West (fig. A.4.4.(c)), leads to a greater number of labour saving appliances and a higher consumption of convenience foods and ready-prepared complete meals. The working wife eats out more at pubs and cheaper restaurants, likes to try unusual and exotic foods (Birds Eye, 1975(d)) and encourages her family to do likewise. These trends are even more likely to be followed by the more highly educated wives (fig. A.4.3.(e)+(f); and Birds Eye, 1975(d)).
The members of a household in which there is a working wife tend to eat out at work and at school more than otherwise, and make their meal in the substitute domestic catering situation the main meal of the day. This means that school and canteen meals become a substitute for the domestic situation to an even greater extent, so reinforcing the need for familiar (and therefore perhaps regional) commodities and dishes.

13.5.2.6. Education.

A most striking effect of education upon the regional food consumption pattern in a non-domestic catering situation is the marked reduction in the intake of carbohydrates by office staff, especially in the South East. A decade ago the businessman's expense account lunch meant lavish expenditure and food consumption, but the prevalence of coronary heart disease and related conditions has led to a decrease in the consumption of potatoes and sugar in particular, and also a reduction in the number of courses consumed.

In northern regions, however, this trend is not apparent in the catering industry: a large meal is still generally regarded as a symbol of affluence and status and carbohydrate consumption continues to be relatively high, (personal communication, employee and commercial caterers, 1974-76).

13.5.2.7. Travel.

Travel abroad, which continues to predominate among people of the more affluent southern regions, introduces people to 'foreign fare' for which they create a demand when they eat out in their home region.

An increase in the number of British people taking their holidays within the regions of Britain, due to the prevailing adverse economic climate of 1974-76, provides an opportunity for commercial caterers to feature their region's fare on their menus as a "tourist attraction" and so reinforce the regional preferences of the resident population who are thereby exposed to the availability of these local dishes when they eat out (chapter 11, section 11.4., 11.5 & 11.6.).

It seems that the catering demand of overseas visitors represents about 5% of the total demand (Econ.Intell.Unit,Apr.1970). The forecasts of the demand for accommodation (Young,1969) would lead one to suspect that it is this sector of the commercial market which has the greatest potential for expansion in the next few years. This
therefore provides an increasing market in which to promote regional British dishes, and in so-doing continue to reinforce their popularity among the local population.

13.5.2.8. Immigration.

High concentrations of foreign immigrants introduce the indigenous population to "new" foods. The most striking example of this is the acceptance of, and preference for, curry in schools, hospitals, canteen and even commercial catering establishments of the West Midlands, due to the settlement of many people from India and Pakistan in that region.

13.5.2.9. Advertising.

The effect of advertising by the regional Independent Television Authorities (fig.4.1., map 7) is to introduce new commodities into a region or reinforce already established preferences.

Many school caterers feel that the effect of television advertising has increased the demand for fish fingers, hamburgers and other convenience products among pupils. This is felt to have been particularly 'successful' in the East Midlands where fish fingers are extremely popular in schools.

"Regional television and radio stations will benefit in the latter half of the seventies from the recognition by marketing specialists that food habits and life styles are vastly different in separate parts of the country" (Birds Eye,1975(c)).

13.5.2.10. Symbolism.

Various foods are thought of as having certain primary qualities and the desired quality is sought after as much when eating out as when eating in the home. For example, in Yorkshire and Lancashire 'filling' foods are chosen as they are regarded as representing "good value for money"; a higher than average number of sweet foods are requested by Scots; while southerners are mindful of the health-giving aspects of the foods they choose (personal communication, industrial and commercial caterers,1975-76). In fact health food restaurants are by far most prevalent in the South East of England and to a lesser extent in the South West (section 11.3.5.5.).

13.5.2.11. Time of day.

In the North of England midday generally dictates that the
main meal of the day is to be eaten, while in London and the South
East a snack is often considered to be sufficient. In the early
evening a meal termed as "tea" is eaten by northerners, while in
London and the South East the main meal of the day, "dinner", is not
eaten until 8 p.m. or after. This pattern is true of the home situation,
employee catering and parts of the commercial sector. In the more
expensive commercial catering establishments a later "dinner", which
constitutes a substantial evening meal, also occurs in northern regions
(personal communication, employee and commercial caterers, 1974-76).

Similar patterns of food consumption are reflected within
hospital catering: in the north a "roast" is mostly regarded only as
a midday meal dish but in the south it is equally suitable for the
evening meal. Other dishes are also regarded as suitable for either
the midday or evening meal by the residents of various regions (section
9.4.6.).

13.5.2.12. Specific satiety.

As has been mentioned elsewhere, in the north quantity is
often regarded as dictating customer satisfaction. In the employee
catering sector the biggest eaters are to be found in the Midlands,
while fewest actual meals are consumed in Scotland and snacks are
most popular in the south and Eastern England (NCI, 1973; HEC, EDC, 1974/5;
section 10.4.5.). Some nationwide multi-unit commercial catering
concerns even report that it is company policy to serve larger portions,
especially of carbohydrate foods such as "chips", in the north and
Midlands as compared to the south, as satiety or at least the amount
an individual is prepared to consume, does differ regionally (section
11.4.).

13.5.2.13. Sensory attributes of the catering environment.

The environment within the catering situation, the type of
service, style of menu, degree of comfort and so on can all have an
effect upon the consumer and his choice of food (chapter 3, section
3.10.).

There is evidence which indicates that the more a canteen
can adopt a commercial rather than an institutional nature, the more
effective will be its role as there is a need for a non-work atmosphere
to help release tensions. In addition to this, greater satisfaction
is derived from the service of an item such as individual steak and
kidney pie than from a similar sized portion cut from a large pie
(Coombs, 1967). This would be particularly true in a region where pies are a preferred dish, as in the Midlands or north.

In a commercial situation it can be hypothesized that a young adult in the South East, where foreign fare is most accepted, and who enjoyed school meals in his childhood and therefore became used to eating in public, would be more likely to eat out in a foreign restaurant which has a long, elaborate menu than an elderly person in the north who is unaccustomed to eating in public and unused to foreign dishes. This person from the North would be more inclined to eat in an establishment which displayed a simple menu of dishes familiar to him, and so his possible dish choice would be governed accordingly, (opinion derived during personal communication with commercial caterers, 1975/6). People who are least used to eating out tend to patronize the same restaurant, while those more accustomed to meals away from home are more 'adventurous' as they accept new situations without embarrassment (Coombs, 1967).

13.6. The Prevalence of Regional Food Preferences Within The Various Types of Catering.

The findings of the present study, based both on secondary sources of published information and upon original data, indicate that regional food preferences are more prevalent within the household situation than within the sectors of the catering industry. Fewest actual regional preferences are apparent within the commercial catering sector.

Regional differences are more evident within the home because a much wider range of food commodities are available from which the household caterer (usually the housewife) can make a selection. The choice available in an eating out situation is limited by the constraints of a menu which is largely determined by the caterer and his personal perception of consumer demand.

The fact that even in 1976 a mother's teaching remains by far the most important influence upon a housewife's cooking habits in all regions (Birds Eye, 1976) provides an ideal vehicle for the transference of traditional and regional culinary skills and dish preferences within the home environment.

The food preferences of a schoolchild are moulded in the home (Pilgrim, 1961) and in order for school meals to be consumed and the necessary nutritional benefit derived (D.E.S., 1975), the school
meal service has to provide familiar dishes which are acceptable.
The regional food preferences within schools are therefore reflections
of those in the home.

Hospital patients often regard their meals as 'high-spots'
of the day: boredom is endemic to the life of the patient, and if he
is physically well enough to eat, this is especially so. The psycho-
logical stimulus of food can provide a therapeutic benefit - a placebo
effect - quite divorced from the physiological effect (Hays,1971).
Nutritious, appetising and attractive food is of course an essential,
but familiar dishes are preferred to the unfamiliar (Dunne,1974).
As National Health Service hospitals generally draw their patients
from within a certain radius of the hospital, food which is familiar
to the majority is likely to include regional dishes. Ideally,
therefore, hospital meals should reflect to a significant extent the
regional food preferences which are evident within the household
situation.

Employee feeding is also a substitute domestic situation,
but meals offered need to relate not only to the local preferences but
also to the occupation of the employees. Nevertheless it has been
established that the more a canteen can adopt a commercial rather than
an institutional nature the more acceptable it will be (Coombes,1967).
Employee catering should therefore not only feature familiar dishes
but also be influenced by the prevailing trends within the commercial
sector.

The commercial catering sector is least like the domestic
situation. 'Foreign' fare exerts most influence within this sector
of the industry and the wide range of types of meals which are avail-
able introduce customers to unfamiliar commodities and dishes.
Commercial catering modifies regional food preferences more than any
other sector of the industry, but it is very interesting that it is
also within commercial catering that Regional Tourist Boards are now
promoting and extending the availability of traditional regional fare.

13.7. The psychodietetics of British gastrogeography.

'Gastrogeography' implies a geographical variation in food
habits, while psychodietetics is the relationship between behaviour
and nutrition and vice versa. The discovery and examination of regional
food preferences and the forces which produce, modify and reinforce
them, which is the subject of this study, encompasses the psychodietet-
etics of British gastrogeography.
Many factors influence regional food preferences both in the home and within the catering industry. Regional food preferences themselves deserve consideration by a housewife, school or hospital caterer, industrial or commercial caterer in the planning of menus, meals and dishes.
CHAPTER 14

FOOD PREFERENCES IN THE FUTURE.

14.1. Future Influences Which Could Further Modify Regional Food Preferences.

Many factors could modify the regional food preferences existing in Britain today. A significant and long-term change in the climate could bring about profound and fundamental adjustments to the present food consumption patterns, but these would probably take many years to become evident. More specific alterations to the supply and availability of foods are likely to have a more immediate effect.

14.1.1. Food technology.

The growing realization that more and cheaper vegetable protein than meat can be produced per acre of land by growing soya beans, for example, than by using the same acre for animal grazing land, could well lead to less meat being available. Were meat to be at a premium its scarcity value would limit its purchase to the more prosperous South East, and elsewhere alternatives such as texturized vegetable protein (TVP) would be increasingly used. Already TVP is being accepted within the substitute catering sectors of northern England and the expected advances of technology, which could make TVP products indistinguishable from meat, will further increase its acceptability.

The forms in which TVP will be most acceptable will probably conform closely to the existing pattern of regional preferences; for example, ersatz 'mince' would be most popular in Scotland; 'meat' pies in the north, 'joints' in Wales and sliced 'meat' in the south.

Convenience products are likely to be used increasingly, both in terms of frequency and quantity, particularly in regions with a high proportion of working wives or single person households. Quick frozen products are acquiring larger sections of the retail market yearly as the number of households with refrigerators and home freezers (especially in the South East) continues to increase (fig.A.4.8.). Within all sectors of the catering industry use of convenience products can be expected to rise - on the basis of forward planning within the industry (personal communication, 1973-1976) - perhaps even more dramatically than in the home. Some hospitals, schools and staff restaurants are already operating cook-freeze systems of meal production
and industrial caterers are increasingly using multi-proportioned frozen packs of commodities. Commercial caterers are exploiting all types of convenience foods, including pre-plated dishes and even meals, because of the strictures of shortage of skilled staff, rising labour costs and the high average standard of food expected by the customer (personal communication, Craigmillar, 1976).

14.1.2. The national economy.

Should the depressed economic climate of 1973 - 1976 continue beyond this date and more expensive food for consumption both in the home and in 'eating out' situations exceed the means of a large proportion of the population, then a return to the use of more economic cuts of meat and more carbohydrate foods could be experienced. An increased consumption of made-up meat products, stews and farinaceous dishes could herald a resurrection of regional fare, much of which was originally developed to combat economic restraints of previous periods of history (section 13.4.4.).

14.1.3. Foreign restaurants.

The current proliferation of foreign restaurants in London (for example, in 1968 the first Japanese restaurant was opened in London and in 1976 there are twenty-five) could extend into the provinces and a taste for foreign fare could pass northward through the country, and from urban to rural districts. The recent invasion of franchised American 'fast food' outlets has greatly increased the preference for hamburgers for example, particularly in London (where most new foods first become established in Britain) and also in Scotland (where the traditional preference for minced meat has raised the potential acceptance level for this product).

14.1.4. Membership of the E.E.C.

Britain's membership of the European Economic Community has provided an access route for continental fare into this country. To date this influence is little felt but first London and the South East and then other regions will come under the influence of commodities and dishes which conform to the European Communities' standards and regulations, and indeed the preferences of its member states.

14.1.5. Foreign Travel.

The radius of foreign travel by British holidaymakers is
constantly being extended and so people are coming into contact with
more exotic and previously unknown foodstuffs. Familiarization with
these dishes and the resultant creation of a demand for them at home,
which in time would be exploited by the food manufacturers and cater-
ers, leads to further extension of the range of available foods and
perhaps a modification of preferences.


High concentrations of immigrant populations have already
modified some regional preferences: for example, in the West Midlands
and especially within the conurbation of Birmingham. Should immigration
continue on the present scale, with its concomitant introduction of
new cultures, traditions, religions, genes, and of course food habits,
then the food preferences of other regions could be similarly affected.

14.2. Aspects of Regional Food Preferences which Deserve
Further Investigation.

14.2.1. The accomplishment of the aims of the research.

The intention of the present study is to establish the
nature of the regional food preferences within Britain, both in the
home and within certain sectors of the catering industry, and as far
as possible to examine the factors which produce, modify and reinforce
these preferences.

This intended research has been carried out. The regional
household food preferences are defined by studying the pattern over
the past two decades; the current regional food preferences within
school, hospital, employee and commercial catering are indicated; and the
origins of and influences upon regional food preferences are considered.

14.2.2. Limitations upon the extent of the research.

"Although the catering industry is the fourth largest in terms of
employees and is one of the largest winners of invisible exports,
it is one of the most disorganized industrial groupings in the
United Kingdom. Nowhere is this disorganization more clearly seen
than in the statistics which describe the industry's main charac-
teristics and measure its progress" (Econ.Intell.Unit, 1970).

The highly fragmented nature of the catering industry and
the striking lack of statistical records makes any research into the
ill-defined product with which it deals an extremely complicated task.
Accordingly, information relating to current consumer preferences was excessively difficult to gather and that relating to some years ago proved to be practically impossible to acquire. Some menus prior to 1970 were forthcoming from one or two Regional Catering Advisers for school meals and hospital catering, but these were too few for comparative purposes. Otherwise, sales records were reported to be non-existent.

The restraint of research time limited investigation of preferences to only some sectors of the catering industry, and so pursuit of extensive confirmatory data had to be sacrificed in order to investigate the food preferences within all regions of Britain in as many types of catering as possible.

An insufficiency of statistically reliable data led to the abandonment of any attempt at accepted statistical analyses, while concentration upon the establishment of regional food preferences within various sectors of the catering industry and their identification precluded in depth research into the factors which modify these preferences. Nevertheless, the governing factors and their probable influences which emerged during the course of the research are considered in chapter 13, sections 13.4 and 13.5.

14.2.3. Possible further research.

14.2.3.1. Routine surveys of food preferences.

The report of the Scottish Hospital Catering School (1973) concluded that since regional food preferences do exist they should be taken into consideration in planning hospital menus, and in view of the fact that they are modified over time by innumerable influences, "current trends in food preferences throughout Britain (should) be assessed by routine surveys".

This is an admirable suggestion as hospital patients ought to be assured of receiving satisfactory nutrition, but it is equally desirable in the cases of schoolchildren and perhaps employees too.

People eat foods not nutrients, and can only ingest an adequate supply of the latter if sufficient of these are contained in foods they prefer to eat.

An assessment of current food preferences in a particular locality is especially important if the introduction of a new system of catering - such as cook-freeze - is intended, so that an acceptable range of dishes is made available.
14.2.3.2. Effect of advertising.

A number of school caterers report that the effect of television advertising in particular is evident in the preferences of schoolchildren.

To date it has been widely accepted that the home environment has the most significant moulding effect upon the child's food habits, but in view of the extensive and increasing omnipresence of the mass media, an assessment of its ability to modify tastes, both adversely and beneficially, would be most enlightening for nutritionists, dieticians and food marketers.

14.2.3.3. Effect of occupation.

In this present study perhaps the least reliable findings lie within the field of employees' preferences, as modified by their occupation, since insufficient reliable and regionally representative data was obtainable.

Koudra (1974) demonstrated that the availability of present and future employee catering services depends on the average unit size of business operations, which is related to the structure and location of industry. If present trends, such as manufacturing employment alone falling from 39.3% to 38.3% between 1961 and 1971, continue until 1982, there could be a reduction in the proportion of employees with catering facilities.

However, changes in the location of industry could be more significant than changes in the structure. For example, between 1958 and 1968 growth in manufacturing employment in Britain averaged 4%, but it was significantly higher in East Anglia (39.1%), Wales (18.1%) the South West (15.3%) and the East Midlands (13.5%). In the North West, on the other hand, there was a marked decline of 8.8% in manufacturing employment.

Projections of the population growth between 1971 and 1981 were for a 3.7% increase in Great Britain as a whole with East Anglia achieving 13%, the East Midlands 9%, and the South West 7%. Scotland on the other hand was only expected to increase its population by 1.4%. Thus Koudra (1974) expects that an increasing share of the demand for catering services would come from the three 'growth regions' while within regions a greater requirement will tend to come from the new and expanding towns growing at the expense of the conurbations.

This type of shift in the concentration of employment would
of itself modify regional food preferences within the employee catering sectors and therefore warrant a review of the preferences of the employees themselves.

14.2.3.4. Effect of localized immigrant populations.

A preference for curry is already evident in the West Midlands but how exactly the dissemination of tastes for various foods newly introduced into a community actually takes place is not known.

Had time permitted, the arrival of the Ugandan Asians in Britain in 1973 would have provided an ideal opportunity to investigate any effects of the introduction of their culture, traditions and habits into the community. A similar concentration of immigrants into Britain in the future would repeat such an opportunity.

14.2.3.5. Effect of membership of the E.E.C.

The present study has been carried out at the very beginning of British membership of the European Economic Community and probably before any real and quantifiable modifications to British food preferences have taken place. A similar study undertaken in five or ten years time would doubtless reflect changes which increasing unity with other member states would produce.

14.2.3.6. Effect of the introduction of 'new' foods.

Technology is yearly introducing new foods into the spectrum of food choice. Frozen commodities, 'cook-freeze' prepared dishes and entire meals, and TVP products are already beginning to be accepted and placed within the hierarchy of regions' food preferences.

Fish farming and the domestication of reindeer (which graze more efficiently than cows) are already considered to be viable propositions to augment the food supply.

A study of the infiltration of such foods into British gastrogeography would demonstrate the degree of tenacity with which familiar foods are clung to, and at the same time measure the flexibility of food acceptability in the various regions.

14.3. The future of food preferences.

Regional food preferences were originally developed in Britain and elsewhere because of the prevailing conditions of geography and climate, and therefore food availability.

These preferences were modified by a variety of forces but
reinforced by the need for affiliation and security.

Increasing inter-regional and international communication does cause increasing similarity of life styles and habits. When a person leaves his native land he may learn a new language or change his style of dress, but his eating habits die hard (Fyke, 1968).

It is probable that regional and national differences in food preferences, which are deeply rooted in history, culture and tradition, will persist into the foreseeable future, and that any further investigation of regional food preferences will conclude, as has the present study, that, in the words of a Latin proverb,

"De gustibus non est disputandum"

(There is no disputing about taste).
APPENDICES.
APPENDIX TO CHAPTER 1.

Specific Acknowledgements.

(Appendix 1 consists of a list of individuals, in alphabetical order by organization, with whom communication took place in order to acquire statistical data, unpublished information or informed opinion. Channels of communication include correspondence, telephone discussion, postal questionnaire and personal interview.

*...Organizations marked with an asterisk (*) are those within which personal interviews took place.)

Abbot's Barton Hotel, Canterbury, Kent - the Manager.
Aberdeen County Education Department, 22 Union Terrace, Aberdeen AB9 1HJ - Mrs. J. Hogg, Assistant School Meals Organizer.
Ale Cellar Restaurant, Dodington, Avon - the Manager.
Alveston Kitchens Ltd., Timothy's Bridge Road, Stratford-upon-Avon - J.F. Docker, Managing Director.
*Anchor Hotels and Taverns Ltd., 17 Cumberland Ave., Park Royal, London NW 10 TRN - H.R. Cade, Catering Adviser.
Angel Inn, Corbridge, Northumberland - Mrs. A. Rogerson, Manageress.
Angus Hotel, 101 Marketgait, Dundee DD1 1QU - the Manager.
Australian Meat Board, Management House, Park St., London WC 2B 5DL - G.L. Lodge, Executive Officer.
Banff County Education Committee, Education Offices, Keith AB5 3EF - M. Greig, School Meals Organizer.
Barron Beef Restaurant, Gutter Lane, Gresham St., London EC2V 6ER - F.H. Russell, Manager.
Bateman Catering Ltd., Times House, Station Approach, Middlesex HA4 6LE - A. Robinson, Divisional Director.
Bateman Catering Ltd., I.C.L., Lovelace Rd., Bracknell, Berks - M. Hill.
Bayley Arms Hotel, Hurst Green, Nr. Whalley, Lancs. - A.M. Perry, Proprietor.
Bedfordshire County Council, County Hall, Bedford MK42 9AP. - M.D. Taylor, County School Meals Organizer.
*Berni Inns Ltd., The Pithay, Bristol BS99 7EW. - M.A. Bogod, Marketing Director; R.G.V. Bridge, Operations Executive.
Berwick County Council, Selkirkshire - C. Purases, School Meals Adviser.
Beverley Arms Hotel, Beverley, Humberside - the Manager.
*Birds Eye Foods Ltd., Station Avenue, Walton-on-Thames, Surrey - G. Kemp, P.R. Consultant; Miss J. Salmon, Nutrition Consultant;
Miss A.E. Dare, Head of Birds Eye Kitchen.
Blue Bell Hotel, Belford, Northumberland - the Manager.
Boots Pure Drug Co., Thorne Road West, Nottingham - D.E. Burton, Catering Administration Manager.
Bristol Royal Infirmary, Bristol BS2 8BW - I.E. Young (Miss), Acting Group Catering Manager, United Bristol Hospitals.
*British Broadcasting Corporation, Broadcasting House, London W1A 1AA.
- M. Weigall, Producer; J. Turtle, Producer, Current Affairs Magazine Programmes; L.O.S. Smith, Catering Planning Assistant.
British Hotel, Restaurants and Caterers Association, 20 Upper Brook St., London W1Y 2BE - G.C. Hedges, Assistant Secretary.
*British Home Stores Ltd., 129-137 Maryborne St., London NW1 5QD. - E.H.E. Bridges, Food Standards Manager.
British Leyland, Rover/Triumph, Rover Way, Pengam, Cardiff CF1 1UU.
- M.J. Lane, Financial Controller.
British Steel Corporation, 120 Bothwell St., Glasgow G2 7JG - J.B. Neish, Catering Manager.
B.T.P. Trioxide Ltd., Billingham, Cleveland TS23 1PS - H. Muchian(Miss).
Business Intelligence Service, Marketing Research Ltd., 79-80 Blackfriars Rd., London SE1 8HB - Simon Southern, Director.
Business Statistics Office Library, Newport, Gwent NFT 1XG - Juliet E. Male, Assistant Librarian.
Cadbury-Schweppes Foods Ltd., Catering Services Division, P.O. Box 171, Franklin House, Bournville, Birmingham B30 2NA - A.H. Hales, Market Manager.
Caenest Hotel, Llanbedr, Gwynedd - the Manager.
Calderstones Hospital, Whalley, Nr. Blackburn BB6 9PE – D.J. Scott, Group Catering Manager.
Caldicot Castle, Gwent – C. Morgan, Manager.
*Cambridgeshire Area Health Authority, Addenbrooke's Hospital, Hills Rd., Cambridge CB2 2QQ – M.H.Chivers (Miss), Group Catering Manager.
Cambridgeshire County Education Dept., Shire Hall, Castle Hill, Cambridge CB3 OAP – N.G. Cunningham, Chief Education Officer.
Castell Howell, Llandysul, Dyfed – the Manager.
Castle and Ball Hotel, Marlborough, Wiltshire – the Manager.
Castle, The, 21 Thames St., Sunbury-on-Thames, Middlesex – the Manager.
*Catering by County, 26 Parsons Mead, Croydon CRO 3SL – D.P.A. Gravells, Director.
*Catering Research Unit, Proctor Department of Food and Leather Science, University of Leeds, Leeds LS2 9JT – G. Glew, Director.
*Centre Hotels Ltd., 57 Russell Sq., London WC1B 3LH – C. Whitney, General Manager, Centre Restaurants.
Cherry Valley Farms Ltd., Rothwell, Lincoln LN7 6ER – P.R. Watson, Marketing Manager.
Cheshire Council Education Dept., County Hall, Chester CH1 1SQ – M. Thompson (Mrs.)
Chrysler U.K. Ltd., P.O. Box 122A, Administration Offices, Whitley, Coventry CV3 4GB – L.J. Smith, Manager, Food Services.
*Civil Service Catering Organization (CISCO), 140 Gower St., London WC1E 6JY – Miss A. Hodgson, Deputy Director of Sales and Marketing.
Clackmannan County Education Committee, 2 Glebe Terrace, Alloa – A.M.Duff (Miss), School Meals Organizer.
Clavehaven Hotel and Wessex Grill, Bognor Regis, Sussex – the Manager.
Collingwood Arms Hotel, Cornhill-on-Tweed, Northumberland – the Manager.
Commercial Catering (Scotland) Ltd., 9 Victoria Sq., Stirling – M.Porter, Catering Consultant.
*Commonwealth Secretariat, Commodities Division, 10 Carlton House Terrace, London SW1Y 5AH – W.Morgan; Mr. Rodgers; M. Arnold.
Compass Hotels Ltd., P.O. Box 27, Louchers Lane, Warrington WA4 6RQ, Lancs. – P.J. Hird, Area Manager.
Connaught Hotel, Carlos Place, London W1 – D. Withers, Manager.
Corn Dolly Restaurant, Great Bardfield, Essex – the Manager.
Cornwall & Isles of Scilly Area Health Authority, St. Clement Vean, Tregolls Rd., Truro TR1 1NR – H.J.Ricketts, Group Catering Manager.
*Craigmillar, a division of Van den Berghs and Jurgens, Sussex House, Burgess Hill, Sussex – I.Fox.
Crest Hotels Ltd., Bridge St., Banbury, Oxon OX16 8RQ - K.F. Butcher, Director.
Crown & Mitre Hotel, Carlisle, Cumbria - M.L. Perkin, General Manager.
Cumbria Council Education Committee, 5 Portland Sq., Carlisle CA1 1PU - B. Dawson (Ms.), Chief Catering Adviser.
Cumbria Tourist Board, Ellerthwaite, Windermere LA23 2AQ - Louise Haw, P.A. to the Director.
Dal-Ernight Hotel, Peterhead, Grampian - the Manager.
*Debenhams, Catering Division, 1 Welbeck St., London W.1 - Mr Thomas; Mr. Jones.
Department of Education and Science, Elizabeth House, York Rd., London SE1,7PH - F.M. Cowell (Ms), Senior Catering Adviser; M. Warrington (Ms), Senior Catering Adviser.
Derbyshire County Council, County Offices, Matlock DE4 3AG - C.W. Phillips, Director of Education.
Dinwoodie Lodge, Lockerbie, Dumfriesshire - the Manager.
Dirty Duck, Stratford-upon-Avon, Warwickshire - the Manager.
Dundee Corporation Education Office, 14 City Sq., Dundee DD1 3EP - H. Webster, Assistant School Meals Organizer.
East Anglia Tourist Board, 14 Museum St., Ipswich IP1 1HU - Helen Barber (Mrs.), Publicity/Publications.
East Midlands Tourist Board, Bailgate, Lincoln LN1 3AR - Sue Jones (Miss), Information and P.R. Officer.
*Economics Research Unit, University College of North Wales, Bangor LL57 2DG - Dr. B.H. Archer.
Edinburgh Corporation Education Dept., 40 Torphichen St., Edinburgh EH3 6JJ - Miss Hill, Educational Catering Organizer.
Edinburgh University, Pollock Halls of Residence, 18 Holyrood Park Road, Edinburgh EH16 5AY - R.F. Watson, Steward.
Elcot Park Hotel, Mr. Newbury, Berks. RG16 8NG - the Manager.
*English Tourist Board, 4 Grosvenor Gardens, London SW1W ODU - J. Gurney (Ms.), Special Promotions Officer.
Essex County Education Department, Threadneedle House, Market St., Chelmsford CM1 1LD - County Catering Adviser.
Fife County Council, County Buildings, Cupar, Fife KY15 4TA -
A.A.Kirk (Miss), Senior School Meals Assistant Organizer.

Food Manufacturers' Federation Inc., 1-2 Castle Lane, Buckingham Gate,
London SW1E 6DN - Miss D.S.Palmer, Librarian.

Galleon World Travel Association Ltd., Galleon House, King St., Maidstone,
Kent ME14 1EG - G.E.Eames, Controller, Holiday Properties Dept.

Galley Restaurant, Salcombe, Devon - the Manager.

*Gardner Merchant Food Services Ltd., Carolyn House, Dingwall Rd.,
Croydon, Surrey CR9 2TQ - I.H.Joseph, Director.

*Gardner Merchant Food Services Ltd., c/o Ford Motor Co. Ltd.,
Dagenham, Essex - J.Whybrew, Assistant to General Manager.

George Hotel, Chollerford, Northumberland - the Manager.

George Hotel, Stranraer, Dumfries and Galloway - N.K. Money, Manager.

George Hotel, Wallingford, Berkshire - R.S.Williams, General Manager.

Glan Ely High School, Michaelston Rd., Cardiff CF5 4SX - W.C.Wright,
Headmaster.

Glencoe Hotel, Frinton-on-Sea, Essex - the Manager.

Glenurquhart Lodge Hotel, Drumnadrochit, Invernesshire - the Manager.

Gloucestershire County Council, Shire Hall, Gloucester GL1 2TP -
V.G.Andrews (Miss), School Meals Organizer/Catering Adviser.

Golden Pheasant Restaurant, Shelton Lock, Derby - the Manager.

Good Housekeeping Institute, Chestergate House, Vauxhall Bridge Road,
London SW1V 1HF - Margaret Coombes, Assistant Director.

*Grand Metropolitan Hotels, 7/8 Stafford Place, London W1A 4YU -
P. Webber, Group Catering Executive.

Greyfriars Garden Restaurant, Greyfriars Ave., Hereford - the Manager.

Gwent Area Health Authority, Mamhilad, Pontypool, Gwent NP4 8TP -
S.Robert-Sargeant, Community Nutritional Adviser.

Gwynedd Education Office, Caernarfon LL55 1SD - M.Jones (Mrs.),
Senior School Meals Organizer.

Hampshire Education Dept., The Castle, Winchester - Miss Lannder.

Hark to Bounty Inn, Slaidburn, Lancashire - E.P.Hey, Proprietor.

Harrogate District Hospital, Lancaster Park Rd., Harrogate HG2 7SX -
K.A. Loveday, Group Catering Manager.


H.B.T. Trademarkets Ltd., P.O. Box 9, Stonefield Way, Ruislip,
Middlesex, HA4 OJR - J.W.Gibson, Marketing Director.

Heart of England Tourist Board, 65 High St., Worcester WR1 2EW -
A.Grieve, Research and Development Officer.
Hereford and Worcester Education Office, Castle St., Worcester, WR1 3AG
A.L. Chatfield, County Education Officer.

* Hertfordshire County Council, Town Hall, Hemel Hempstead HP1 1UG
Mrs. G.S. Moore, Divisional School Meals Organizer.

Highland Health Board, Reay House, 17 Old Edinburgh Rd., Inverness
IV2 3HG - I. Kindness, Interim Southern District Catering Manager.

H.M. Customs and Excise, Portcullis House, 27 Victoria Ave., Southend-on-Sea, Essex - The Controller.

* Holland & Barrett, 180/181 High St., Uxbridge, Middlesex UB8 1LA
R.A. Hill, Marketing Director.

Holt Comprehensive School, Five Ways, Childwall, Liverpool L15 6XZ
F. Brierley, Headmaster.

Hotel Catering and Institutional Management Association, 191 Trinity Rd., London SW17 7HN - Pamela Shillito, Publicity and Information Officer.

House of Anton, Hope, Derbyshire - the Manager.

Humber Royal Hotel, Grimsby, Humberside - the Manager.

Hunting Lodge, Cottingham, Leicestershire - the Manager.

* Imperial Chemical Industries Ltd., Central Catering Section, North Lodge, Fulshaw Hall, Wilmslow, Cheshire SK9 1QB - F.R. Noakes, Chief Catering Adviser.

Imported Meat Trade Assoc. Inc., 2 Charterhouse Sq., London EC1M 6EE
A.G. Gordon, Secretary.

Ind Coope Hotels, Burton-upon-Trent, Staffordshire DE14 1BZ - C.B. Bond, Managing Director.

Industrial Catering Association, 53/54 King William St., London EC4R 9AB
M.A. Headland, General Secretary.

Industrial Society, P.O. Box IBQ, 49 Bryanston Sq., London W1H 8BQ
M. McArdle (Mrs.), Head, Catering Advisory Services.

Inner London Education Authority, Education Catering Branch, Tredegar Rd., Bow, E3 - C.M. Roberts.

* Institute of Grocery Distribution, Grange Lane, Letchmore Heath, Watford WD2 8DQ - Dr. Beaumont, Senior Economics Officer; Mrs. A. Witcher, Librarian.

Isle of Wight County Council, County Hall, Newport, Isle of Wight PO30 1UD - B. Welch, School Meals Organizer.

Ivelchester Hotel, Ilchester, Somerset - W.J. Worsdale.

Jacklins Restaurant, Colchester, Essex - the Manager.

Kent Education Dept., Springfield, Maidstone ME14 2LJ - W.H.Petty, County Education Officer.
King's Fund Centre, King Edward's Hospital Fund for London, 24 Nutford Place, London W1H 6AN - Mrs.J.White, Librarian; B.R.Stanton, Miss.
Kings Head Hotel, Trout St., Orford, Suffolk - E.Shaw, Manager.
Kings Head Hotel, Wimborne Minster, Dorset - the Manager.
Knebworth House, Knebworth, Hertfordshire - R.H.Hindson, General Manager.
Lamb, The, Hindon, Wiltshire - the Manager.
Lanark County Education Department, County Buildings, Hamilton ML3 OAE - E.I.Martin, School Meals Organizer.
Lancashire Area Health Authority, Burnley General Hospital, Casterton Ave., Burnley BB10 2PQ - S.V.Bloor, Group Catering Manager.
Lancashire Catering Service (Southern) Ltd., 127 Sandgate Rd., Folkestone, Kent - D.J.Hammond, Southern Regional Manager.
Lancashire County Council, County Hall, Preston PR1 6RJ - B.S.Number, Chief Catering Adviser; C.Shufflebottom, Assistant Education Officer.
Last Drop Village, Bramley Cross, Lancs. - the Manager.
Leeds Area Health Authority, Eastern District, St. James's Hospital, Leeds LS9 7TF - T.D.Miller, Catering Manager.
Leeds Education Dept., Calverley St., Leeds LS1 3AE - J.M.Carter, Area Catering Office.
Leeming on Ullswater Country House Hotel, Watermillock, Cumbria - the Manager.
Leicester General Hospital, Gwendolen Rd., Leicester LE5 4PW - R.F.Ekins, Deputy Catering Officer.
Leo Burnett Ltd., (Advertising), 48 St. Martin's Lane, London WC2N 4RJ - John Fanning.
Lincolnshire County Council, County Offices, Lincoln LN1 1YQ - G.V. Cooke, County Education Officer.
Llanishen High School, Cardiff CF4 5YL - I.Hartog, School Secretary.
Lonsdale Cash and Carry, Bury Rd., Radcliffe, Manchester M26 9XB - K.Dean, Catering Buyer.
Lower Brock House, Blockley, Gloucestershire - the Manager.
Lucas Industries, Joseph Lucas Ltd., Great King St., Birmingham B19 2XF - D.G.Miller, Assistant Group Catering Controller.
Lygon Arms, Broadway, Worcestershire - K.Ritchie, Food & Beverage Manager.


Manchester City Education Dept., Crown Sq., Manchester M60 3BB - I.M.Mander, Assistant Education Officer (Catering).

Mappin (Caterers) Ltd., 79 Camden High St., London NW1 7JL - N. Abrahams, Director.

*Marks & Spencer Ltd., High St., Guildford, Surrey - Miss Cryumble, Catering Manageress.

Marks & Spencer Ltd., Michael House, Baker St., London W1A 1DN - Sybil L. Barnes, Staff Catering Services.

McTavish's Kitchens(Oban)Ltd., High St., Fortwilliam, Invernesshire - A.H.Kirk, Manager.


Mercury Motor Inns, 4/12 Marybone, Liverpool L3 2BY - N.T.McIndoe, General Manager.

Metal Box Ltd., Weasenham Lane, Wisbech, Cambridgeshire PE13 2RP - B.H.Barton, Catering Manager.


Metropole Hotel, Leeds - the Manager.

Middlesborough Crest Motel, Marton Way, Middlesborough, Cleveland - the Manager.

Midland Catering Ltd., (Northern), Greytown House, 42 Cross St., Sale, Cheshire M33 1AF - C.Standring (Mrs.), Personnel & Training Executive.

Midlothian County Council, 40 Torphichen St., Edinburgh EH3 8JJ - T.Henderson, Director of Education.

Mid-Surrey District Health Authority, Epsom District Hospital, Dorking Rd., Epsom, Surrey - M.Veits(Miss), Catering Officer.


Mirabelle, West Runton, Norfolk - the Manager.

Moorhead County High School, Accrington, Lancs. - Mrs.N.Dearden, Catering Supervisor.

Mount Charlotte Investments Ltd., 16 City Road, London EC1Y 2AL - C.T.Morgan, Director.


National Federation of Meat Traders' Associations, 29 Linkfield Lane, Redhill, Surrey RH1 1JQ - A.A.Nelson, Deputy General Secretary.

* National Federation of Wholesale Grocers and Provision Merchants, 18 Fleet St., London EC4Y 1AS - Dennis Ellam, Secretary.

National Grocers' Federation, 24A High St., Camberley, Surrey GU15 3RZ - L.E.Reeves-Smith, Chief Executive.

Nelson Hotel, Prince of Wales Rd., Norwich NR1 1DX - M.J.M.Walker.

New Inn, Tresco, Isles of Scilly - the Manager.


Nielsen, A.C. Co.Ltd., Nielsen House, Headington, Oxford OX3 9RX - C.J.Wallis, Director of Public Relations.

Ninewells Hospital, Dundee DD2 1VE - B.Q.Deans, Catering Officer.

Norfolk County Council, County Hall, Martineau Lane, Norwich NR1 2DL - E.A.Ritson, Senior School Meals Organizer.

Northern Regional Health Authority, Rose Cottage, St.Nicholas Hospital, Jubilee Rd., Newcastle-upon-Tyne NE3 3XT - D.Bramley, Catering Liaison Officer.

Northumberland Education Committee, Eldon House, Regent Centre, Newcastle-upon-Tyne NE3 3EZ - M.H.Trollope, Director of Education.

Northumbria Tourist Board, 140-150 Pilgrim St., Newcastle-upon-Tyne NE1 6TQ - J.White(Mrs.), Tourist Menu Scheme Regional Organizer.

* North Wales Tourism Council, Civic Centre, Colwyn Bay, Gwynedd - Mr.D.M.Thomas, North Wales Tourism Manager.

North West Regional Health Authority, Gateway House, Piccadilly South, Manchester M6O 7LP - R.Daniel, Regional Catering Adviser.

North West Tourist Board, 119 The Piazza, Piccadilly Plaza, Manchester M1 4AN - J.Wardle, Director.


Old Farmhouse Restaurant, Armitage, Staffordshire - the Manager.

Old Oscott Caterers, 91 Hawthorn Rd., Kingstanding, Birmingham B44 8QT - G.T.Barley.

Owen Owen Ltd., P.O. Box 145, 105 London Rd., Liverpool L69 1ED. - R.Tubb, Area Catering Manager, North.

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Pinewood Restaurant, Aviemore Centre, Inverness - the Catering Manager.

* Plas Maenan Hotel, Maenan, Llanrwst, Gwynedd - A.W.Jones, Director.
Porthole, The, Eastbourne, Sussex - the Manager.


Proctor & Gamble Ltd., P.O. Box 1EE, Gosforth, Newcastle-upon-Tyne NE39 1EE - L.J.Williams.

Raven Hotel, Droitwich, Worcs. - Manager.

RHM Foods Ltd., 10 Victoria Rd., London NW10 6NU - B.Murphy, Statistics Manager.

Robinson & Sons, Ltd., Bradbury Hall, Chatsworth Rd., Chesterfield - B.J.Morton (Mrs.), Catering Manager.

Rosie's Place, 200 St. Helen's St., Ipswich, Suffolk - the Manageress.

Rothes Glen Hotel, Rothes, Morayshire - D.C.Carmichael, Proprietors.

Rowntree Mackintosh Ltd., Chapel Field, Norwich NOR 43A - B.J.Plant, Catering Manager.

Royal Chase Hotel, Shaftesbury, Dorset - the Manager.

* Royal County of Berkshire, Department of Education, 80-82 King's Rd., Reading RG1 3EL - M.Wilson Powell (Miss), Senior School Meals Organizer.

Royal Edinburgh and Association Hospitals, 40 Colinton Rd., Edinburgh EH10 - C.A.Boothman, Group Catering Manager.

Royal George Hotel, Perth, Tayside - the Manager.

Royal Hotel, Ventnor, Isle of Wight - the Manager.

Royal Oak Hotel, Keswick-on-Derwentwater, Cumbria - the Manager.

Royal Scot Hotel, 111 Glasgow Rd., Edinburgh - the Manager.

Rum Puncheon, Berwick-upon-Tweed, Northumberland - the Manager.

Rutland Arms Hotel, Newmarket, Suffolk - the Manager.


Saward Baker Advertising Ltd., 79 New Cavendish St., London W1M 8AJ - Carol Walzer.

Scottish Health Service, Catering Advisory Dept., 141 Hill St., Glasgow G3 6UD - A.Addison, Catering Adviser.
*Scottish Hotel School, University of Strathclyde, Ross Hall, Crookston Rd., Glasgow G52 3NQ - Prof.J.Beavis; D.W.Kennedy; J.McKee; Dr.C.Jenkins; P.Shill.
Scottish Tourist Board, 23 Ravelston Terrace, Edinburgh EH4 3EU - L.S.Dickie, P.R.Division.
Sculpture Gallery Restaurant, Woburn Abbey, Beds. - D.J.Coyle, Director of Catering.
Seafield Arms Hotel, Cullen, Banffshire - the Manager.
Sheaf Inn Restaurant, West Haddon, Warwicks - the Manager.
Shell Centre, London SE1 7NA - N.G.Whitewick, Kitchen Controller.
Ship Inn, Itchenor, Chichester, Essex - D.Woods.
Shoulder of Mutton Inn, Nr. Aylesbury, Bucks. - the Manager.
Sign of the Angel, Lacock, Wilts. - the Manager.
Smith, J.J. & Nephew Ltd., Catering Dept., Hessle Rd., Hull - M.S.Ladd, Catering Manager.

Somerset County Council, Education Dept., County Hall, Taunton TA1 4DY - H.Barton, County Catering Adviser.
South East England Tourist Board, 4-6 Monson Rd., Tunbridge Wells, Kent TN1 1NH - W.Burnett, Director of Tourism.
South Glamorgan Area Health Authority, Temple of Peace and Health, Cathays Park, Cardiff CF1 3NW - Terri Davey (Miss), Deputy P.R. Officer.
South Glamorgan County Education Offices, Kingsway, Cardiff CF1 4JG - F.J.Adams, Director of Education.

*South West Thames Regional Health Authority, 282-292 Farnborough Rd., Farnborough, Hants. - C.C.H.Clark, Regional Catering Adviser.
Staffordshire Education Offices, Earl St., Stafford ST16 2DH - M.M.Robin, County School Meals Organizer.
Stanwell Hall Hotel, Stanwell, Middlesex - the Manager.
Stirling County Education Department, County Offices, Viewforth, Stirling FK8 2ET - J.G.Cowan, School Meals Organizer.
St. James' Hospital, Sarsfeld Rd., London SW12 8EW - D.Thomson, Catering Manager.
St. Merryn Hotel, St.Ives, Cornwall - the Manager.
Stockport Area Health Authority, Stepping Hill Hospital, Hazel Grove, Stockport - C. Butterworth, Group Catering Manager; P.A. Roberts, Catering Officer, St. Thomas' Hospital.

St. Peter's Cottage Restaurant, Cowfold, Sussex RH13 8EW - P. Graham, Proprietor.

St. Richard's Hospital, Spitalfields Lane, Chichester, Sussex - Mr. P. Booth, Group Catering Manager.


Suffolk County Council, Tower St., Ipswich IP1 3EH - J. Malley, Area Catering Adviser.

Surrey Education Dept., County Hall, Kingston-upon-Thames KT1 2DJ - O.H. Gocher, School Meals Officer.


Sutherland Education Committee, Education Offices, Brora, Sutherland KW9 6PG - S. Simms, School Meals Organizer.

Swallow Hotel, 10 John Walker Sq., Stockton-on-Tees, Cleveland - K. Taylor, Catering Manager.

Swallow Hotel, 2 Newgate Arcade, Newcastle-upon-Tyne - the Manager

Swallow Hotels Ltd., The Brewery, Sunderland SR1 3AN - K.N. Spencer, Personnel Manager.

Talbot Hotel, Stow-in-the-Wold, Glos. - the Manager.

Taste Bud, The, 44 Harbour St., Nairn, Highlands - the Manager.


* Television Consumer Audit, 52/66 Mortimer St., London W1N 7DG - Mr. R.B. Goodwin.


Tetthers, 1 Egliston Rd., Putney, London SW15 1AL - the Manager

Thames & Chilterns Tourist Board, 8 The Market Place, Abingdon, Oxon. OX14 3EG - S. Harrison, Deputy Director.


Three Counties Catering Co. Ltd., 19 Colehill St., Sutton Coldfield, Warwickshire B72 1SD - R.D. Creek, Director.
Three Shires Inn, Little Langdale, Cumbria - the Manager.
Thrum's Hotel, Kirriemuir, Angus - E.L.M.Simpson, Proprietor.
* Top Rank Motorports, Odeon Theatre, Dickson Rd., Blackpool FY1 2AX
  - G.Hildrew, Operations Controller.
* Town & County Catering Co. Ltd., 44 Brook Green, London W6 7BT -
  L.G.Crowhurst, General Manager.
* Trust Houses Forte Ltd., 86 Park Lane, London W1A 3AA - G.B.Chiandetti,
  Managing Director.
Tullich Lodge Hotel, By Ballater, Aberdeenshire - H.MacDonald, Manager.
Turnpike Restaurant, Crick, Northants. - the Manager.
Unilever Ltd., P.O. Box 68, Unilever House, London EC4P 4BQ -
  T.Ormiston, Head of Catering.
* University Catering Officers' Association, Royal Holloway College
  (University of London), Egham Hill, Egham, Surrey TW20 OEX -
  A.J.Boog, Catering Officer.
Vegetarian Society of the U.K. Ltd., Parkdale, Durham Rd., Altrincham,
  Cheshire - D.Knowles, Assistant Secretary; Mrs.M.Cluer, Food and
  Cookery Section.
Victoria Infirmary, Glasgow G42 9TY - N.R.Ford, Catering Officer.
Viking Hotel, North St., York Y01 1JF - B.W.Arnott, General Manager.
* Vogue Magazine, Hanover Sq., London W1R OAD - Q.Crewe, Contributing
  Editor.
Wales Tourist Board, Welcome House, High St., Llandaff, Cardiff CF5 2YZ
  - G.H. Naylor, Chief Executive.
Wall's Meat Co. Ltd., Wall's House, Old Oak Lame, London NW10 6DJ -
  W.G.Hugill, Market Research Manager.
Warwickshire County Council, 22 Northgate St., Warwick CV34 4SR -
  E.P.Jones, Home Economics Adviser; Judith Evans, Senior School
  Meals Organizer.
Waterside Restaurant, Romiley, Cheshire - M.Small.
W.D. & H.O. Wills, P.O. Box 244, Hartcliffe, Bristol BS99 7UJ -
  S.C.H.Platel, Catering Manager.
Welsh Education Office, 31 Cathedral Rd., Cardiff CF1 9UJ - Mrs.J.Brown.
Welsh Folk Museum, St.Fagans, Cardiff CF5 6XB - S.Minwell Tibbott(Mrs.),
  Research Assistant.
Welsh Office, Pearl Assurance House, Greyfriars Rd., Cardiff CF1 3RT
  - C.H.Bearpark, Hospital Catering Adviser.
West Country Tourist Board, Trinity Court, Southernhay East, Exeter
  EX1 1QS - J.Slater, Development Officer for Director.
Western General Hospital, Crewe Rd., Edinburgh EH4 2XU - J.E.D.Johnston,
  Deputy Catering Officer.
West Glamorgan Education Dept., Princess Way, Swansea SAV 4PD — J. Beale, Director of Education.

West Midlands Regional Health Authority, 139 Hagley Rd., Birmingham B16 8UA — R. A. Anderson, Regional Catering Adviser.

West Sussex County Education Dept., County Hall, Chichester, Sussex PO19 1RF — S. M. Chapman, Deputy County School Meals Organizer.

Wheatsheaf, The, Woolston, Newcastle-upon-Tyne NE13 8DF — the Manager.

* Whitbread and Co. Ltd., Brewery, Chiswell St., London EC1Y 4SD — D. S. Quarty, Catering Adviser.

Whitechurch Hospital, Whitechurch, Cardiff CF4 7XB — E. Dickman, Divisional Catering Manager.

White Hart Hotel, Buckingham, Bucks. — the Manager.

Windsor Restaurant, Lancaster Gate, London W. 2. — the Manager.

Withins, Bolton, Lancashire — the Manager.

Woodpeckers Country Hotel, Womanswold, Kent — the Manager.

Wookey Hole, Wells, Somerset BA5 1BB — Mr. Jackson.


* Wye College, (Marketing Department), University of London, Nr. Ashford, Kent — Rosemarie Headey, M.Sc. research student.

Wynnstay Hotel, Oswestry, Salop — the Manager.

Yorkshire Tourist Board, 312 Tadcaster Rd., York Y02 2HF — C. Rodgers (Miss) Information Research Assistant.

*Young's Seafoods Ltd., Mountbarrow House, Elizabeth St., London SW1W 9RE — K. D. Williamson, Marketing Administration Manager.
A.2.1.
Constituents of Food: chemical constitution, physiological role and dietary source.

Carbohydrates

Of all food components, carbohydrates are present in large quantities and generally provide most of the energy in all human diets.

Narrowly defined, carbohydrates are chemicals of the composition \((\text{CH}_2\text{O})_n\), where "n" is usually greater than 3, \(\text{C} = \text{carbon}, \text{H} = \text{hydrogen}\) and \(\text{O} = \text{oxygen}\). Also included are carbohydrate derivatives and di- and poly-saccharides, whose empirical formulae depart somewhat from the basic pattern.

Sugars and starch are carbohydrates, as also is cellulose which provides much of the indigestible roughage in human foods.

Some examples of carbohydrates can be classified as follows:

Monosaccharides are the simplest sugars and are called trioses, tetroses, pentoses or hexoses according to whether they contain 3, 4, 5 or 6 carbon atoms. Only hexoses occur in appreciable amounts in human foods: two examples being glucose and fructose. Glucose is the only hexose sugar known to exist in the free state in the fasting human, at a concentration of about 90mg. per 100ml. blood, but few natural foods, except some fruits such as grapes, contain more than traces of glucose.

Fructose, slightly sweeter than glucose, is found in free form in some fruits (e.g. figs) and in honey.

Disaccharides. Sucrose (cane or beet sugar) is the familiar, domestic sugar, and is derived from one molecule of glucose combined with one molecule of fructose.

Lactose, derived from two linked monosaccharides, glucose and galactose, is the principal sugar present in milk and is unique to mammals.

Maltose, derived from two linked glucose molecules, is formed from the breakdown of starch in the malting of barley.

Trisaccharides. Raffinose is a trisaccharide of glucose, fructose and galactose, found in molasses, while trehalose is present in many moulds, fungi and bacteria, but its dietary ingestion is negligible.

Tetrasaccharides. Stachyose is present in beans.
**Polysaccharides.** Starch grains, usually containing two polysaccharides, are the form in which utilizable carbohydrate is stored within the seeds and roots of many varieties of plants.

Dextrins are degradation products of starch with varying numbers of glucose units per molecule.

Glycogen is the animal equivalent of starch and is found in fish livers and shellfish, each molecule consisting of many thousand glucose units built up in branching chains.

**Dietary fibre** (or roughage) is indigestible material of plant origin, mostly polysaccharides. Examples are cellulose, the fibre on which green plants depend mainly for support, and pectic substances which are amorphous but not fibrous, and are found in the soft tissues of fruits. (Alcohol, although composed of C,H & O, is not strictly within the carbohydrate category, but is absorbed through all parts of the digestive system and can be used for energy production or can be converted into fat).

**Fats.**

A palatable diet needs about 20% of its energy value in fat. "Visible" fats consist of butter, margarine, lard, cooking fats and oils, while "invisible" fats are contributed in meat, bacon, nuts, fish, eggs, milk, etcetera. There are many diverse groups and the word "lipid" covers them all.

Triglyceride is the form in which fats chiefly occur in foodstuffs: they are esters of glycerol and fatty acids and have the general composition: $\text{CH}_2\text{.O.COR}^1$

$\text{CH.O.COR}^2$

$\text{CH}_2\text{.O.COR}^3$

where $\text{R}^1\text{COOH, R}^2\text{COOH and R}^3\text{COOH}$ are long-chain fatty acids with even numbers of carbon atoms.

Characteristically fats are mixtures of triglycerides: no fat found in nature consists of a single triglyceride.

**Fatty acids,** of which there are over 40 in nature, have the basic formula, $\text{CH}_3(\text{CH}_2)_n\text{COOH}$, where 'n' can be any number from 2 to 24, usually an even number.

There are three types, and the degree of unsaturation in any fat plays an important part in determining its physical nature.

(a) saturated fatty acids

Fats consisting predominantly of these are solid at room temperature.
(b) unsaturated fatty acids.
Fats with a high proportion of unsaturated acids are usually liquid (e.g. whale oil, cod-liver oil, olive oil).

(c) poly-unsaturated fatty acids.
These have two or more double bonds. Linoleic and linolenic acid cannot be synthesized in the body and are known as "essential fatty acids" (EFA). EFA's are present in large amounts in many vegetable oils.

The chemical composition of natural fats is related to the biological species from which they are derived. In fat from all freshwater life, whether plant or animal, the unsaturated C₁₆, C₁₈, C₂₀ and C₂₂ fatty acids predominate. In the marine world polyunsaturated C₂₀ and C₂₂ fatty acids, containing up to 6 double bonds are most numerous. In land animals, and particularly in mammals, the unsaturated oleic acid and saturated palmitic acid predominate. Milk fats, such as butter, differ from other animal fats in containing small amounts of short chain C₄ to C₁₂ fatty acids. In plant seeds, in addition to oleic and palmitic acid, linoleic acid (EFA) provides a large component.

Waxes. Defined chemically, waxes are fatty acid esters of higher alcohols. Although they occur widely in the cuticle of leaves and fruit, and replace triglyceride to some extent in the tissues of aquatic animals, waxes do not contribute importantly to normal human diets.

Phospholipids are present in vegetable oils and in the fat of animal tissues, in blood and in egg yolk. They consist of a glycerol stem to which 2 fatty acid units and a phosphate radical are linked, and infact can be manufactured within the body.

Sterols have a complicated structure of a four-ring framework of carbon atoms and are found in a concentration of 1% or less in animal and vegetable fats.

Cholesterol is found in all animal tissues so that some is present in all foods of animal origin, but eggs are the only common food rich in cholesterol. It is virtually absent from foods of plant origin. Plants contain phytosterols which are poorly absorbed into the human body.
fig. A.2.1.1. The proportion of the dietary fat contributed by different categories of food:

- butter, margarine, cooking fats and oils: 40%
- meat, bacon, poultry, fish: 32%
- milk, cheese, eggs: 16%
- bread, flour and cereals: 6%
- miscellaneous: 4%

Fat is the most concentrated source of energy of all nutrients, and is the second largest source of energy in most diets.

The "essential" fatty acids seem to play a part in maintaining health. Fat also serves as a vehicle for the entry of fat soluble vitamins (A, D, E, & K) into the body. In addition stored fat protects organs such as the kidneys from damage and prevents excessive heat loss through the skin by acting as an insulator.

**Proteins.**

Protein in the diet is essential to replace the continuous breakdown of the body proteins. The protein needs of children are relatively far greater than those of adults as growth is taking place as well as repair. Their energy contribution is usually 10 - 15% of the total.

Although much of a protein molecule consists of a carbon atom framework, each sub-unit contains one or more of nitrogen. Protein is a polymer: each molecule consists of a three-dimensional network of several thousand sub-units linked together in a pattern which is characteristic not only of the animal or plant of which the protein is a part, but characteristic also of each particular tissue within the living creature. The sub-units are arranged like links in the chains which make up the molecule and furthermore the chains themselves may be twisted and convoluted up, down and across as well as along. The sub-units or links, the monomers, from which the protein polymer is built up, are molecules of compounds called amino acids.

Proteins are made up of about twenty different amino acids, which are joined together by peptide bonds. The varying arrangements of the sequence of amino acids in protein molecules give them different chemical properties and also their individuality. The various combinations in which they can be arranged allows infinite variety of proteins to be synthesized.
An amino acid is an organic compound which contains in its molecular structure both the amino group, $-\text{NH}_2$, and the acidic carboxyl group, $-\text{CO}_2\text{H}$.

They all contain the grouping:

```
    | H |
  R--C--CO_2H |
    | NH_2 |
```

The amino acids, the end products of protein digestion, may constitute a "pool", from which various proteins are built up. Some amino acids cannot be synthesized in the body and so an adequate dietary supply is needed: these are essential amino acids. Alternatively, some amino acids may be broken up, the carbon framework used as a source of energy, and the nitrogen combined with carbon to form the soluble compound urea which is excreted in the urine.

Almost all foods contribute some protein to the diet, except refined foods like cooking oils or sugar (in western diets) and sago and tapioca (important in the east). Animal proteins are generally of greater nutritional value than vegetable proteins, as the former have a much greater content of essential amino acids and their proportions of various amino acids are closer to those needed to build up human protein.

Animal proteins can be divided into two kinds: fibrous and globular. Fibrous proteins, long, coiled or folded chains of amino acids bound together by peptide linkages, are found in the protective and supportive tissue of animals and are for the most part indigestible. The exact configuration of the rounded molecules of globular proteins, which are found in tissue fluids, is a challenge to molecular biologists, but they are easily digestible and contain a good proportion of essential amino acids: examples are caseinogen in milk, albumin in egg white and albumins and globulins of blood.

The chief plant proteins are glutenins and prolamines. The former are present in cereals and include glutenin from wheat, hordenin from barley and oryzenin from rice. Typical prolamines are gliadin from wheat and zein from maize. Wheat infect contains gluten, which is a mixture of two proteins: gliadin and glutenin.
fig.A2.1.2. The proportions of total dietary protein derived from different categories of food.

- Bread, flour and other cereal products: 40%
- Dairy produce: 20%
- Meat: 17%
- Fish and poultry: 6%
- Potatoes: 6%
- Eggs: 4%
- Miscellaneous: 7%

Water and electrolytes.

Of all items in the diet, intake of water (H₂O) is the most important. Without it, it is impossible to maintain the water balance of the body and dehydration follows. Although a starving man can survive for a month without food, he can only live for a few days without water. Since water makes up 70% of the body weight and the weight remains constant from day to day, water balance must be maintained.

![Diagram of water balance]

1. Fluids
2. Food (water content)
3. Oxidation of hydrogen in food

Water balance of the human body.

The 45 litres of water in the body are shared between the cells (intracellular fluid = 30 l.), the interstitial spaces (12 l.), and the plasma (3 l.). The soluble minerals are concerned with the maintenance of homeostasis: the constant environment of the living cells. Slight alteration of the normal concentration of the principal cation in the cell water, potassium (K), and in the extracellular fluids sodium (Na), as well as other electrolytes which exist in solution, can impair body functioning immediately and unpleasant symptoms occur.
Today it is recognized that the body requires quite a large number of accessory food factors, even if sometimes in minute quantities only. These are vitamins: all are organic compounds which have very different molecular structures, and differ in their physiological actions. There is a broad division between fat-soluble and water-soluble vitamins, while only the latter act in association with trace elements.

The fat soluble vitamins.

**Vitamin A**, a highly unsaturated hydrocarbon present in dairy produce, liver, fish oils, some fruits and vegetables. A deficiency leads to epithelial changes: secreting glands degenerate and the conjunctiva of the eyes become cornified (xerophthalmia), and 'night blindness' develops. Vitamin A is also necessary for growth and normal bone formation.

**Vitamin D**, a sterol, is found in the fat of milk, egg-yolk, fish liver oils. A deficiency leads to rickets, a childhood disorder of bone ossification or osteomalacia (a similar disorder) in adults.

**Vitamin E**, a mixture of tocopherols (oily liquids), is found in vegetable oils. Its necessity in human tissue metabolism is circumstantially evident, despite no unequivocal evidence of a deficiency. **Vitamin K** is essential for the formation of prothrombin in the liver, and is a necessary component in the complex mechanism of blood clotting. Fish meal, beef liver and fresh green leafy vegetables are good sources of this substituted naphthoquinone.

The water-soluble vitamins.

Most of these vitamins are precursors for substances involved in the mobilization of energy and are therefore very important.

**Vitamin B<sub>1</sub>** (thiamine) is a complex substituted thiazole, present in all animal and plant tissues, but rich sources are the germs of cereals, nuts, peas, beans, other pulses and yeast. The deficiency symptoms are known as beri-beri, and include loss of appetite and nausea, development of neuritis due to degeneration of the nerve sheath, muscular convulsions, cardiac disturbance and ultimately death.

**Vitamin B<sub>2</sub>** (riboflavin), composed of an alloxazine ring structure linked to an alcohol, is found especially in liver, milk, eggs and green vegetables. Although a deficiency causes nasolabial inflammation and seborrhoeic dermatitis of the skin, why these conditions do not progress to serious illness is unknown.
Vitamin B₆ (pyridoxine), a substituted pyridine, is found especially in meat, liver, vegetables and the bran of cereal grains. There is no distinctive deficiency syndrome for man, but in a number of conditions where a deficiency does develop, the presenting clinical symptoms can be anaemia, failure to thrive, peripheral neuropathy and depression. Pantothenic acid, found universally, but primarily in liver, kidney, yeast, egg yolk and fresh vegetables, is a derivative of the amino acid, beta alanine and is an integral part of co-enzyme A. Deficiency in man is unlikely, but symptoms would be loss of appetite, restricted growth and inflammatory lesions of the intestines.

Biotin, a derivative of imidazole, is readily produced by intestinal bacteria but liver, kidney and yeast extract are good sources. Only under extraordinary circumstances does a deficiency occur, leading to dermatitis, then nervous disorders and finally death.

Nicotinic acid (niacin) is a simple derivative of pyridine, which can be synthesized from tryptophan, but is found especially in meat, fish, wholemeal cereals and pulses. The symptoms of the deficiency disease, pellagra, are inflammatory reddening of the tongue, dermatitis, loss of appetite, diarrhoea, and in extreme cases, dementia.

Vitamin B₁₂ (cyanocobalamin), a highly complex substance, is only found in foods of animal origin. The associated disease is pernicious anaemia that can be complicated by spinal cord degeneration.

Folic acid, formed from glutamic acid, p-amino benzoic acid and a pterin, is present in foods in several different forms: the richest source being liver. In man the deficiency disease is megaloblastic anaemia.

Vitamin C (ascorbic acid) is found only in fresh fruit (especially citrus), and fresh vegetables. A deficiency leads to scurvy: slow healing due to weakening of the intracellular cement substance and capillary haemorrhages due to fragility. It is a simple, unsaturated sugar lactone.

Minerals.

Man's food is derived from soil or sea, the chemical composition of which depends on the underlying rocks. These are composed of complex mineral salts which contain many elements. The classification of these from a nutritional point of view presents difficulties and no classification is altogether satisfactory.
However, a number of organic mineral substances are important either in the structure or in the functioning of the body. Apart from the soluble body fluid minerals, there are:

(a) calcium, magnesium, phosphorus and sulphur: important components of bone and other supporting tissues.

(b) iron, iodine and fluorine: respectively of major importance for the formation of haemaglobin, of the secretions of the thyroid gland and of teeth resistance to caries.

(c) other trace elements: present in very small amounts in foods and in tissues of the body. Some of them are known to be components of enzyme systems and are therefore essential nutrients. They include zinc, copper, cobalt, manganese, selenium, chromium, molybdenum, cadmium, lead, mercury, arsenic, lithium, boron, tin, vanadium, nickel, silicon and aluminium.

A sufficiency of the majority of these minerals, needed only in small amounts, will be provided by most normal diets.

Deficiency of an element in the tissues is less likely to arise from deficiency in dietary intake than from factors in the diet reducing absorption or from a disorder of the absorbing epithelium.

An excessive concentration of any of these elements in the tissues has an adverse effect.
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APPENDICES TO CHAPTER 4.

Regional Environmental, Social, Economic & Availability Factors
Which Influence Food Consumption Patterns.

The inter-related effects of various factors on food preferences are considered in chapter 3.
The following inter- and intra-regional profiles are intended to be of a purely descriptive nature, which can be selectively drawn upon to aid elucidation of regional food preferences within the various spheres of research.

A.4.1. The Environment.
A.4.1.1. Geology.

Britain can roughly be divided into two: the lowland areas of the newer, softer rocks of midland, southern and eastern England, and the highland areas of Scotland, most of Wales, the Pennines and Lake District, consisting mainly of very old rock outcrops. The wide variety of scenery, flora and fauna is due to Britain's complex geology (Stamp + Beaver, 1963).

fig. A.4.1. SOIL TYPES IN BRITAIN (Stamp & Beaver, 1963)

(1) Mineral Soils derived from drift deposits left behind after the retreat of the ice sheets of the Great Ice Age.

- stiff boulder
- little cultivated
- wetter parts

clay
- grassland: often waterlogged
- of Scotland

chalky boulder
- often very fertile
- eastern

clay

- loamy glacial: very fertile: cultivated
- mid Scotland

- drifts
- parts of England

- glacial sands
- Ireland

- fine loam
- very fertile
- S. England

- gravelly soils
- Thames terraces

clay with flints
- grassland/oak woodland
- Kent, N. Downs

cultivated

- alluvium
- wide distribution

- marine silts
- around the Wash
(2) Mineral Soils derived from underlying solid rocks.
- siliceous soils from older rocks classify into sand, loam and clay
  e.g. Palaeozoic (not as fertile as soils from later rocks as too shallow)
  if drainage bad-peat and moorland predominate
  "Lowland Zone" of Scotland
  N. & W. England
  Wales
  e.g. Palaeozoic (not as fertile as soils from later rocks as too shallow)
  if drainage bad-peat and moorland predominate
  "Lowland Zone" of Scotland
  N. & W. England
  Wales

(3) Organic Soils
- classification
  mild humic soil/mull
  fen or mild peat
  raw or acid humus
  acid peat
  elsewhere

A.4.1.2. Climate. (fig. A.4.2.(a), (b) & (c).)
Britain has a temperate and equable climate with prevailing south-westerly winds. The average range of temperature between winter and summer is greatest in inland eastern areas. Southern summer temperatures occasionally rise above 27°C (81°F); winter temperatures below -7°C (20°F) are rare. The mountainous areas of the west and north have far more rain than the plains of the east and south; while southern regions have most sunshine and Scotland the least.

A.4.1.3. Agriculture and Vegetation. (fig. A.4.2.(d) & (e).)
With its mild climate and varied soils, Britain has a diverse pattern of natural vegetation: woodlands occupy about 8% of the surface. Most of Britain is agricultural land which over a third is arable and the rest pasture and semi-natural meadow (C.0.I., 1972). Wheat and barley lands are mostly in East Anglia and eastern England; oats are cultivated more generally over England and in parts of Scotland (Stamp & Beaver, 1963). Sugar beet is grown in East Anglia, Lincoln and a little in the West Midlands, the South West, the South East, Midlands and central lowlands of Scotland.
Very broadly, the main arable lands of Britain are to be found in the eastern half of England and Scotland, mixed arable and grassland centrally, and livestock in the west and highland areas.
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In 1972 British agriculture produced just over half the domestic food requirements, compared with a third before the second World War. Over three-fifths of Britain's cereal requirements, nearly four-fifths of its meat, all its fresh milk, over two-fifths of its bacon and ham, almost all of its potatoes and eggs, only one sixth of its butter but over half of its cheese and nearly two-fifths of its sugar are home-produced.

A.4.2. SOCIAL AND ECONOMIC INDICATORS.

A.4.2.1. Population. (fig.A.4.3. (a) + (b)).

Britain has one of the highest population densities in the world, and women form over half of the population, (106 females to each 100 males), predominating in the older age groups. The population is primarily urban and suburban and the seven great conurbations (illustrated in fig.A.4.11.) contain almost a third of it. Between 1951 and 1971, the British population increased by about 10%, or some 4.9 million. Of this increase, 3.9 million were to be found in the southern and midland regions (Hanners, et al, '72). The South East represents 11% of Britain's land area but contains 31% of the population, compared to 3% of the population living in 5% of land area which makes up East Anglia. The population of the West Midlands has risen steadily since 1801 and has even steepened, compared to the national average, since the 1920s: in fact the Birmingham conurbation, more than any other industrial area, has continued to grow in terms of population and employment. Shropshire and Herefordshire, however, suffer from classic rural depopulation as does mid-Wales. The West Midland population increase of 15.3% between 1951 and 1971, mostly due to natural increase, was among the highest regional rates and was even higher than that of the South East. The East Midlands is an area of net inward migration with a fast regional growth rate, although the north-eastern part of the region is lowlying, rural and sparsely populated. Yorkshire and Humberside's share of the population is declining. Although the population of the North West did increase more in the 1960s than in the 1950s, there has been an increasing migration away from the textile areas, the spinning towns of south-east Lancashire, and Manchester. The North East region is under-populated in relation it its size and net outward migration is continuous. Scotland has of late experienced an increase in industry
but continues to suffer a great out-migration of its population. In fact 75% of Scotland's population is concentrated in the central industrial belt: elsewhere population density is extremely low.

A.4.2.2. Household composition. (fig.A.4.3. (c) + (d)).
Scotland has continuously been the region with the greatest average number of persons per household: while the North has been the least. The West Midlands has the greatest percentage of households consisting of eight or more persons: two or three is most common in all regions.

A.4.2.3. Education. (fig.A.4.3. (e) + (f)).
It is clear that the greatest percentage of individuals remaining in education after eighteen years of age are found in Wales, and by far the least in Scotland. The English regions are relatively similar to each other in educational attainment.

A.4.2.4. Industry. (fig.A.4.4. (a)).
In 1960 most industrial building took place in the South East, but by 1970 this was primarily concentrated in the North West. Only in Scotland has industrial building continued to increase steadily since 1955 (Abst.Reg.stats.). Britain is highly industrialized: for every person employed in agriculture, twenty-eight are employed in manufacturing, mining and building. Although industry is widely dispersed it is still possible to distinguish the following as main geographical concentrations:

- Midlands ............... engineering & metal-using industries, vehicles, coal, pottery, textiles, footware, chemicals.
- W.Riding,Yorks ........ wool textiles, coal, steel, engineering, metal manufacture, clothing.
- Lancashire .......... engineering, cotton textiles, man-made fibres, coal, ship-building, chemicals, glass, clothing.
- South Wales ........... coal, steel, tinplate, non-ferrous metals, chemicals.
- N.E. coast England .... coal, steel, engineering, ship-building, chemicals.
- Clydeside and ......... engineering, ship-building, coal, steel, textiles, central Lowlands vehicles, electronics.
- of Scotland.

The traditional industries of these areas, for example, cotton, textiles, ship-building and locomotives have in some cases undergone
a considerable decline and a wide range of other industries—electronics, instruments, petro-chemicals, new types of engineering and man-made fibres—have taken their place (C.O.I., 1972).

Greater London is the most important manufacturing region of the country, and yet the South East's dominance in this sphere is surpassed by that of its service trades. Wholesaling is concentrated in this region, but retailing is more evenly spread throughout Britain. In the industrial heart of the West Midlands region is found 68% of the nation's population, 75% of its manufacturing employment and an even bigger share of its purchasing power. Despite these factors there are a few pockets of industrial difficulty such as the north Staffordshire Potteries, where the population and the industry are in decline; and in Kidderminster, which relies on the carpet industry, now weak in respect of labour demand. Employment in the West Midlands has relied too heavily on specialized manufacturing in view of the national increase in service trades, although now shop and restaurant floorspace is growing six times as quickly, and there are high rates of increase in financial, professional and distributive employment. In the East Midlands mining is widespread, while in the southern upland agricultural area of the region boot, shoe and hosiery industries are located in some big towns.

The traditional Humber-West Riding links are being matched by newer ones such as those between the new Yorkshire coalfields and the Humber ports.

The cotton industry of the North West has suffered a rapid contraction and the textile industry a 1.5% reduction in employment. In the South West service industries are of particular importance: especially the tourist industry. Since 1945 the development of chemical and engineering industries have been particularly rapid in the area bordering the Severn estuary, joining the significant aircraft and component industries of the inter-war years. Scotland, more than elsewhere in Britain, has attracted foreign industrial firms and has gained a large share of the rapidly growing electronic trades, now employing more than the coal industry. 80% of Scotland's industry is concentrated in the central, populated belt.

A.4.2.5. Employment. (fig.A.4.4. (b), (c), (d) & (e)).

Of the total British working population of 25.5 million in 1972, 16.3 million were men and 9.2 million women. Over 1.8 million were
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in business for themselves: the rest employees. Most economic activity and the greatest number of jobs in Britain are concentrated in the South East. Similarly the West Midlands have a very high activity rate, among both men and women. In the North East and Scotland average regional unemployment rates have been consistently twice the national average, and activity rates well below national standards. The South West and Wales have the highest unemployment rates among both males and females. The greatest proportion of retired individuals are found in the South West, East Anglia and Wales, and by far the least in the West Midlands. Female regional activity rates differ considerably, due mainly to varying employment opportunities: demand is affected by employers' attitude but supply by family attitude.

A.4.2.6. Income. (fig.A.4.4.(f)).

Income level is particularly high in the West Midlands, a region almost free of personal poverty, although its personal prosperity does not match the high standards of the South East. Average household weekly income has been lowest in the North since 1961.

A.4.2.7. Housing. (fig.A.4.5.(a) & (b)).

In Britain today half of the dwellings (19.4 million in 1972) are owned by their occupiers, about a third by public authorities and most of the remainder by private landlords. Although the numbers of dwellings and households are roughly in balance, their uneven distribution creates housing shortages in the more heavily populated areas. Home ownership has doubled in the last twenty years, but is highest in the South East and South West. The Scots live in the highest percentage of flats and rented homes, and Londoners in the highest percentage of privately rented homes. Terraced homes predominate in the North East and North West, semi-detached in the Midlands, and detached in the South East, South West and Wales.

A.4.2.8. Durable goods (fig.A.4.5.(c), (d), (e) & (f)).

The greatest percentage of households possessing a motor car are found in southern regions, and the greatest proportion with a telephone and central heating are found in the South East. The low percentage of television ownership in the South East may indicate a greater propensity for other leisure activities. However, over 90% of British
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households have a television set, showing that advertising via this medium has significant potential.

A.4.2.9. Regional Economic Potential. (fig. A.4.6.(a) & (b).) The South East is the single most populated, economically important and prosperous region of Britain (Manners et al., 1972), and it has unrivalled nodality in terms of communications both nationally and internationally. The gap between the prosperity of the South East and East Anglia, as measured by retain sales, has gradually widened since 1961.

The West Midlands also have always had good communications: navigable rivers and canals, excellent railway services and now major motor-ways; and it has been an industrial region of sustained economic progress.

The East Midlands at present have an economic potential undeniably greater than any past achievement, as during the 1950s and 1960s there was a significant overspill of manufacturing industry into the region and much office building.

Yorkshire and Humberside, only recently recognised as a regional entity, has a great urban-rural spectrum from the urban Leeds/Bradford conurbation to the antiquated villages in the northern wolds of Lindsey. The existing population concentrations and the new motorways are found in the west of the region but the industrial and urban potential lies in the estuarine east.

The North West is one of the less prosperous regions of Britain, having failed to gain a fair share of the national growth in terms of population, employment and personal prosperity, and it consists both of areas of recent rapid industrial and population growth, and others of dramatic decline. The textile region of east Lancastria in particular is in a state of extraordinary economic weakness as regards every indicator except unemployment.

In the North East in the nineteenth century economic growth spread throughout the coalfields but the staple trades of past economic expansion have now declined and new growth industries have not arrived quickly enough to offset the effects.

In the South West, the opening of the Severn road-bridge in 1966, the roles of the M4 and M5 motorways, and improved intercity railway service substantially increased the economic role and regional functions of the Bristol area. The economic dependence of South Wales
upon Bristol cannot but increase, while the creation of the 'Welsh Office' has given a louder political voice to Wales to add to the future growth of Severnside.

South-east and north-east Wales also possess good prospects of continuing economic development (Sec. of State of Wales; 1967). Scottish problems and prospects both vary considerably in such a large area. In the past there was dependence on a few basic trades that have shrunk or been rationalized and therefore shed labour (Manners et al, 1972).

Clark's index of "economic potential" (fig. A.4.6. (a)) measures the relative proximity of a place to total purchasing power as it is distributed geographically throughout the country. ("Purchasing potential" is net earned income of a resident population. "Proximity" is measured in terms of tapered freight transport costs, Clark, 1966). The growth of London and the West Midlands in the present century can be largely explained by high population concentrations, diversity of engineering, manufacturing and service trades, and increased sales due to low transport costs and customer accessibility. Prospectively this suggests the relative advantage of South East England within the European Economic Community (E.E.C.), (Clark, Wilson & Bradley, 1969).

A.4.2.10. Retailing.

(i) National Trends. (fig. A.4.6. (c) & (d.).) Since 1961 retail turnover has steadily fallen behind the level of disposable income. Since 1966 the level of food sales has steadily fallen behind that of all retail sales, both at current and constant prices.

(ii) Regional Retailing Pattern. (G.E.P., '73)

South East. Greater London is dominant. Areas of the north are characterised by an abundance of national chain stores but a general shortage of departmental facilities, while in the western area towns have extensive departmental and multiple shopping facilities. Facilities are relatively underdeveloped in Kent, but increase in intensity in the summer along the whole of the south coast.

East Anglia. Being sparsely populated, retailing centres are mostly located at considerable distances apart. Norwich has an extensive catchment area in the north; Cambridge and Ipswich in the south, although their facilities are not so extensively developed.

South West. The regional centres of Bristol and Plymouth provide both major national traders' facilities and substantial department store
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representation. Retail facilities in Cornwall are poor, although the recent growth of Poole has attracted several major stores.

**West Midlands.** Retail activity is concentrated in the central areas where Birmingham dominates, although several satellite towns also have good facilities. The rural west is sparcely populated and has few large retailing centres, apart from Shrewsbury which has an extensive catchment area including eastern mid-Wales.

**East Midlands.** The major retailing centres are located to the midwest: Nottingham and Leicester being the principal towns. Northampton dominates the south; while Lincoln serves the north and parts of Y.& H. Yorkshire and Humberside. Leeds and Sheffield dominate as the population is concentrated in the central and south-western areas. Close to Leeds are other towns with extensive facilities. Hull in particular, as well as Scunthorpe and Grimsby, are principal centres in the east.

**North West.** This region is the second largest for retailing in the U.K. and the Manchester and Liverpool conurbations are dominant. Towns such as Bolton to the north and Stockport to the south provide a good representation of key national multiple groups, but do not possess a range of comparison goods comparable to the conurbations. In the south Chester dominates trade and also attracts shoppers from North Wales.

**Wales.** The three prime retailing centres of Cardiff, Swansea and Newport are all in the south. There are no large towns in mid-Wales and facilities are strictly limited to local market centres. North Wales has a greater number of small towns and retail activity greatly increases during the summer tourist season.

**North.** 75% of the population, and therefore retail activity, concentrates between the Tyne and Tees. Newcastle predominates but is surrounded by some smaller centres. In the south most facilities are found in Teeside and in Carlisle in the west.

**Scotland.** The population determines the retailing pattern. Dominant Glasgow has a number of smaller surrounding centres. The facilities of Edinburgh, although overshadowed by those of Glasgow, are nevertheless extensive. Dundee, Aberdeen and Inverness are the only other principal retailing centres with a degree of independence from Glasgow.

A.4.3. **Influences upon regional household food consumption patterns.**

A.4.3.1. **Food Shopping, Storage & Cooking.** (figsA.4.6.(e)&(f), A.4.7.,A.4.8.,A.4.9.)

Food cannot be separated from other aspects of life.
Regional variations in shopping, storage, cooking, the design of kitchens, suitability of utensils and appliances, social changes and family attitudes all affect what is eaten, where it is eaten, and how (Birds Eye, 1967).

A.4.3.2. Grocery Turnover. (fig.A.4.6. (e) & (f), A.4.7. (a) & (b).)
In Britain between 1961 and 1971 turnover increased by 70%, although population increase was only 5% (fig.A.4.6. (e)) and the number of shops declined by 30%. Grocery turnover increased most in the South East and population in the South West. 1971 grocery sales per caput were highest in Scotland and least in the West Midlands (Census Distribution, 1971).

The co-operative share of the grocery trade has stabilised following a drop during the 1960's. Multiples doubled their share in 15 years, mainly since 1966, at the expense of independent grocers (fig.A.4.6. (f), Nielsen, '74). Probably by 1980 the multiples' share of grocery turnover will reach 53% but that of all independents drop to under 33%, while, by 1978 some 7-8,000 supermarkets are likely to account for 55% of total grocery turnover (Harrison, 1974). Grocery superstores have not changed the pattern of competition between other grocery outlets since 1967. The independents' share of turnover has declined fastest in southern regions, where traditional supermarkets have made rapid progress but superstores are few and far between.

A.4.3.3. Shopping places. (fig.A.4.7. (c), (d), (e) & (f).)
The greatest percentage of grocery superstores is found in the North West: the least in the South West. Nearly three-quarters of these superstores are concentrated in Wales, the Midlands and the North, an area with under a half of the population of Britain (fig.A.4.7. (f), Nielsen, '74).

Supermarkets are most popular for food shopping in London, the South East, North and North East; and bazaar-type stores in the South West and Wales. Scots frequent both types of shops least often (IPC, '72). Most independent grocery shops and co-operatives are found in Lancashire and most multiples in London (IGD, 1973).

Regional population per grocery shop has been highest in the South East since 1951. During this period population per shop fell in all regions in 1961 compared to 1951, except in East Anglia (Census of Distribution, '51, '61 & '71.).
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A.4.3.4. Food shopping and storage. (fig.A.4.8.(a),(b),(c) & (a).)

Food shopping takes place often in Scotland, where fewest homes have refrigerators or freezers. Friday is the most popular shopping day in all regions, especially in the North West, while Scots shop more than anyone else on Sunday and Monday (fig.A.4.8.(a),IPC '72).

A housewife in the South East or West Midlands is most likely to have a car (fig.A.4.5.(c).), or a job (fig.A.4.4. (c)), or both, and therefore has an incentive to shop less often and buy in bulk. Indeed the lowest percentage of households who shop daily are found in the south and West Midlands (fig.A.4.8.(b)); this, and the high popularity of bulk buying in Wales and the South West is probably related to the relatively high levels of home freezer ownership in these regions (fig.4.10.(d)). The report "What's in Store?" (Birds Eye,1966) shows a clear trend towards less frequent shopping by housewives who have a refrigerator (fig.A.4.8.(c)), but also that the smallness of many kitchens prevents a sizable proportion of the population (20%) from owning one.

Cooking. (fig.A.4.8.(e) & (f),A.4.9.).

There is a significant opportunity in all regions, but especially the North and Scotland, for traditional regional cooking methods and recipes to survive as the greatest influence on housewives' cooking seems to be that of their mothers' teaching (fig.A.4.8.(e)). This situation hardly changed between 1967 and 1976 (Birds Eye,1976).

In the North and Scotland, 85% of housewives are 'loyal' to one particular cookery book, compared to 60% elsewhere, (Birds Eye, 1967), so that in southern areas more variety is possible. 35% of housewives in the North and Scotland use their cookery book at least once a week; in other regions they are used less frequently (fig.4.10. (f)). The more adventurous cooks, who are most likely to go out and buy ingredients for a novel, published recipe, tend to live in London and the South, and have a job (Birds Eye, 1967).

The majority of housewives cook by gas, but especially in London and the South, while electricity users include a high proportion of those living in the North and Scotland.

In 1967 regional frequencies of use of both frying pan and grill were similar (fig.A.4.9.(b) & (c)), but by 1976 grill use has doubled in all regions, and is above average in Wales and the South West (Birds Eye,1976). Indeed, in 1976 95% of cookers have a grill
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compared to only 76\% in 1967 (Birds Eye, 1976).

In 1967 the North of England and Scotland were the strongholds of home baking, as indicated by frequency of oven use (fig. A.4.9.(d)), but in 1976 it is in the kitchens of the South East that ovens are used most (Birds Eye, 1976). The Birds Eye Review (1976) hypothesises that this might be related to the recently increased availability of frozen prepared meals which are quickly re-heated in the oven: certainly in homes with a freezer regular oven use is slightly above average.

The prevalence of small cooking appliances such as portable grills, spits and toasters can effect the nature of the plated food served in the home. Southern adoption of convenience foods is evidenced by use of the tin opener, but in contrast to this a coffee-grinder is seldom used outside the southern region (fig.A.4.9. (e) & (f)). Whereas in 1967 home-freezers were considered as "useful appliances" by only 1 housewife in a 100, in 1976 the proportion had risen to 20 per 100 (Birds Eye, 1976).

Most housewives cook a complete meal, with vegetables, once a day, although there is a slightly more marked tendency for two cooked meals a day in the South of England (fig.A.4.9.(h)), where in-fact there are most home freezers: this applies in 1976 as in 1967 (Birds Eys,1976).

In 1976 only half as many housewives as in 1967 spend six hours or more per day in the kitchen, and only in Scotland do as many as 22\% (twice the national average) spend more than 6 hours (Birds Eye,1967;Birds Eye 1976; fig.A.4.9.(g)). However, the fact that as many cooked meals are prepared in the home in 1976 as in 1967, despite the housewife spending less hours in the kitchen, suggests an increasing reliance on convenience, and especially frozen, products (Birds Eye, 1976).

A.4.4. Influences upon regional "eating out" patterns. (fig.A.4.10 & A.4.11.)

A.4.4.1. Regional "eating out" frequency & expenditure. (fig.A.4.10.(a) + (b)).

It seems that the greatest percentage of people who "eat out" is found in Eastern England, and the smallest in Scotland (fig. A.4.10.(a), EDC.EDC,'75).

The average cost of a meal at a place of work is marginally
more within London than elsewhere in Britain, but the average cost of a meal in a commercial catering establishment is highest in Scotland and southern regions. School and hospital meals tend to be most expensive in Eastern England, but least in the southern region, excluding London (fig. A.4.10.(a)).

However, overall expenditure on meals eaten away from home (including tips and school meals) is greatest in London and the South East (£2.03 and £1.85 per household per average week, respectively), but least in East Anglia (£1.18), (fig. A.4.10.(b)). Similarly, meals "out" represent the greatest percentage of total food expenditure in Greater London (18.8%) and the South East (17.1%), and the least in East Anglia and Wales (both 12.6%). In the North and Scotland the proportion is 14-14.5% and elsewhere 13-14%, (derived from FES, '74, data).

A.4.4.2. Location patterns of the Catering Industry.

Catering services are consumed at (or very near to) the point of sale and so need to be produced, or provided, there. Therefore the market is the dominant, and often the only influence on location, (Medlik, '72). The industry is widely dispersed over the whole country, with certain areas of concentration determined by specific characteristics of the market.

A.4.4.3. Regional distribution of substitute domestic catering sectors. (fig. A.4.10.(c), (d) & (e)).

Obviously catering activities which are provided as a service to some other main function of organizations, such as manufacturing, education or medical treatment, are distributed in direct proportion not only to population density but also in relation to regional concentration of the organizational main function. Thus fig. A.4.10.(c) illustrates the close link between regional concentration of employee catering units and the population and the even closer relationship between the former and employment in manufacturing: indeed the North West and Midland regions, with above average concentration of manufacturing industry, demonstrate a higher proportion of catering units than is warranted by share of population (Koudra, '74).

The regional demand for school meals depends on the number of potential customers and the meal acceptance rate: the latter being 60.3% on average in England, 52.2% in Wales and 41.3% in Scotland. The potential customers are school-children and staff, the number of
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whom is determined by population density and household composition. Fig.A.4.10.(d) indicates that regional school meal production is closely related to pupil populations, except in Scotland where the low regional meal acceptance rate accounts for the notably low share of meals produced.

The production of N.H.S. hospital meals is governed solely by regional bed availability and occupancy, as no alternative catering facilities are available to patients. Figure A.4.10.(e) illustrates the high bed occupancy in Scotland (nearly 10 occupied beds per 1,000 population), compared, for example, to the Oxford hospital area, (5.7/1,000 population).

A.4.4.4. Regional Distribution of Commercial Catering Establishments.

A number of surveys of the "Catering Industry" defines it according to the Standard Industrial Classification, that is in terms of its commercial (profit-making) element and exclude from it what are largely welfare forms of catering (unless operated by catering contractors). In this way the 'Catering Industry' is seen as consisting of hotels and other residential establishments which provide food service: restaurants, cafes, snack bars, pubs, clubs providing food to members and their guests, and establishments run by catering contractors. Catering contractors contribute only about 1% of the Industry's turnover, (DTI, 1972), and so the proportion of them which serve schools, hospitals, canteens and other substitute domestic catering situations (herein considered separately) can be ignored for present purposes, so that 'Commercial Catering Industry' can be substituted for 'Catering Industry,' for clarity of discussion.

The regions with an above national average concentration of commercial catering establishments are southern England and Wales, and especially Greater London (fig.A.4.10.(f)). Regional commercial catering activity, as reflected by an analysis of the industry's food purchases (fig.A.4.10.(g)), indicates the extent to which geographical distribution is governed by high population density (fig.A.4.3.(a)), relatively high disposable income (as reflected by possession of durable goods: fig.A.4.5.), and above average tourist activity, (i.e. in London and the South East, South West, North West and Scotland). Similarly, an indication of the distribution of the hotel and catering industry throughout Britain can be gained by comparing the proportion
of those engaged in the industry in a specific area (x) with those so engaged in the country as a whole (y): these location factors (x/y) provide a measure of comparison between different areas (fig. A.4.11 (a)). Location factor values are particularly high in the main holiday areas such as the South West, and the sub-region of North Wales and the Fylde (NW), while low values are found mainly in industrial and agricultural areas (Medlik, '72).

The greatest number of public houses, hotels, restaurants and cafes are found in the South East region (fig. A.4.11 (b), (c) & (f)). Accommodation services predominate in areas with high levels of travel and transport facilities and in holiday resorts, while location of catering services is determined primarily by market density, i.e. availability of spending power per given area, generated by both the resident population and visitors. In addition to these considerations, the distribution of licensed premises is also influenced by the discretionary granting of licences. The predominance of the South East in terms of numbers of commercial catering outlets is in part at least accounted for by the fact that within Central London alone, 19% of the catering turnover in Britain is carried out in 8% of outlets, and that between 1964 and 1970 there was a greater rise in the absolute turnover of outlets in London than in the rest of the country (System Three, '71).

In London 23% of restaurants have a foreign cuisine, compared with 16% in the rest of Britain (System Three, 1971). Similarly, the majority (over 50%) of Indian and Chinese "take-away" outlets are located in London and the South East (Mintel, '72), while most fish-&-chip or chicken- &-chip take-away outlets are in northern England and Scotland (fig. A.4.11 (d)). The North West and Yorkshire & Humberside have the greatest number of the traditional British fish-&-chip shops (fig. A.4.11 (e)).

The regions in which the concentration of catering establishments offering traditional regional dishes on their menus are greatest include the South East, North West and South West, and to a lesser extent the North and Scotland (fig. A.4.11 (g)), all these being regions of high tourist activity.

It seems that 'Food Guides' tend to recommend eating establishments in southern England most highly, while favourable comments are made about the North, Scotland and Wales. The Midlands, Yorkshire & Humberside and the North West rank lowest. A lack of attractive pubs seems to be the main reason for unfavourable comments, particularly in Scotland (Hammond, 1968).
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
### REGIONAL FOOD PREFERENCES IN SCHOOL MEALS.

**FIG.A.8.1.**

**ITEM: MAIN DISH.**

<table>
<thead>
<tr>
<th>Dish group</th>
<th>Dish</th>
<th>REGIONS. (p.f./m.a.) = (production factor / menu appearances.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Wa</td>
</tr>
<tr>
<td>Heat</td>
<td>bacon + ham</td>
<td>1.60/1</td>
</tr>
<tr>
<td></td>
<td>beef + veal</td>
<td>0.83/7</td>
</tr>
<tr>
<td></td>
<td>lamb + mutton</td>
<td>1.70/1</td>
</tr>
<tr>
<td></td>
<td>offal</td>
<td>1.60/1</td>
</tr>
<tr>
<td></td>
<td>pcuk</td>
<td>1.70/2</td>
</tr>
<tr>
<td></td>
<td>poultry</td>
<td>1.07/3</td>
</tr>
<tr>
<td></td>
<td>MEAT TOTAL</td>
<td>1.17/15</td>
</tr>
<tr>
<td>Fish</td>
<td>fish</td>
<td>1.70/1</td>
</tr>
<tr>
<td></td>
<td>fish products</td>
<td>1.30/2</td>
</tr>
<tr>
<td></td>
<td>FISH TOTAL</td>
<td>1.43/3</td>
</tr>
<tr>
<td>Made-up</td>
<td>TOTAL</td>
<td>1.12/9</td>
</tr>
<tr>
<td>pasta</td>
<td>TOTAL</td>
<td>0.30/2</td>
</tr>
<tr>
<td>Pastries</td>
<td>flan</td>
<td>1.00/1</td>
</tr>
<tr>
<td></td>
<td>pasty</td>
<td>1.60/1</td>
</tr>
<tr>
<td></td>
<td>pie</td>
<td>0.98/4</td>
</tr>
<tr>
<td></td>
<td>pudding</td>
<td>0.90/1</td>
</tr>
<tr>
<td></td>
<td>vol-au-vent</td>
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<td>PASTRY TOTAL</td>
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<td>Salad</td>
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<td>0.20/5</td>
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<tr>
<td>Sandwich</td>
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<tr>
<td>Miscellaneous</td>
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<td>0.63/14</td>
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<tr>
<td>Dish:</td>
<td>REGIONS. (p.f./m.a.) = (production factor / menu appearances.)</td>
<td>Wa</td>
</tr>
<tr>
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<td>---------------------------------------------------------------</td>
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<td><strong>FIG.A.8.2.</strong></td>
<td></td>
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</tr>
<tr>
<td>green</td>
<td></td>
<td>no</td>
</tr>
<tr>
<td>root</td>
<td></td>
<td>0.88/12</td>
</tr>
<tr>
<td>other</td>
<td></td>
<td>1.02/12</td>
</tr>
<tr>
<td>substitute veg.</td>
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<td>1.20/3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td>0.95/40</td>
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<td><strong>FIG.A.8.3.</strong></td>
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<td>DESSERTS</td>
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<tr>
<td>biscuit</td>
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<tr>
<td>crunch</td>
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<td>0.60/2</td>
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<td>flan</td>
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<td>1.80/1</td>
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<td>pie</td>
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<td>1.80/1</td>
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<td>1.79/3</td>
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<td>roll</td>
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<td>1.65/1</td>
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<tr>
<td>slice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sponge</td>
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<td>1.70/1</td>
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<tr>
<td>strudel</td>
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<td></td>
</tr>
<tr>
<td>tart</td>
<td></td>
<td>1.77/3</td>
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<tr>
<td><strong>HEAVIER DESSERTS TOTAL</strong></td>
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<td>1.75/8</td>
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<tr>
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<td>0.88/2</td>
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<td>MISCELLANEOUS</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td>0.36/22</td>
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FIG. A.8.4.
Regional School Meals - Average number of midday meals per week per child, 5-14 years.

<table>
<thead>
<tr>
<th></th>
<th>meals not from the household supply</th>
<th>meals from the household supply</th>
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<tr>
<td></td>
<td>school meals</td>
<td>other meals out</td>
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<tr>
<td>all households</td>
<td>2.52</td>
<td>0.11</td>
</tr>
<tr>
<td>Wales</td>
<td>2.20</td>
<td>0.17</td>
</tr>
<tr>
<td>Scotland</td>
<td>1.92</td>
<td>0.11</td>
</tr>
<tr>
<td>North</td>
<td>2.66</td>
<td>0.11</td>
</tr>
<tr>
<td>Yorkshire + Humberside</td>
<td>2.52</td>
<td>0.10</td>
</tr>
<tr>
<td>North West</td>
<td>2.61</td>
<td>0.11</td>
</tr>
<tr>
<td>East Midlands</td>
<td>2.54</td>
<td>0.08</td>
</tr>
<tr>
<td>West Midlands</td>
<td>2.57</td>
<td>0.11</td>
</tr>
<tr>
<td>South West</td>
<td>2.90</td>
<td>0.16</td>
</tr>
<tr>
<td>S.E., E.A. + London</td>
<td>2.72</td>
<td>0.11</td>
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FIG. A.8.5. ESSEX SCHOOL MEALS
PUPILS' DISH PREFERENCE SURVEY (age group 7-11 years)
(supplied by County Catering Adviser, Essex County Council 27/2/75)

<table>
<thead>
<tr>
<th>Like Main Dishes</th>
<th>Times Mentioned</th>
<th>Dislike Main dish</th>
<th>Times Mentioned</th>
<th>Suggestions Main Dish</th>
<th>Times Mentioned</th>
</tr>
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<tr>
<td>Fish fingers</td>
<td>26</td>
<td>Liver</td>
<td>8</td>
<td>Hot Dogs</td>
<td>4</td>
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<tr>
<td>Sausages</td>
<td>23</td>
<td>Salad</td>
<td>8</td>
<td>Fried Egg</td>
<td>3</td>
</tr>
<tr>
<td>Yorkshire</td>
<td>8</td>
<td>Sausage</td>
<td>7</td>
<td>Pancakes</td>
<td>2</td>
</tr>
<tr>
<td>Pudding</td>
<td>8</td>
<td>Curry</td>
<td>7</td>
<td>Roast chicken</td>
<td>2</td>
</tr>
<tr>
<td>Luncheonmeat</td>
<td>8</td>
<td>Scrambled egg</td>
<td>4</td>
<td>Soup</td>
<td>2</td>
</tr>
<tr>
<td>Shepherds Pie</td>
<td>8</td>
<td>Stew</td>
<td>4</td>
<td>Macaroni cheese</td>
<td>2</td>
</tr>
<tr>
<td>Meat Pie</td>
<td>8</td>
<td>Fish</td>
<td>4</td>
<td>Wimpy</td>
<td>2</td>
</tr>
<tr>
<td>Chicken Pie</td>
<td>7</td>
<td>Shepherds Pie</td>
<td>3</td>
<td>Egg &amp; Bacon Flan</td>
<td>2</td>
</tr>
<tr>
<td>Roast Pork</td>
<td>7</td>
<td>Egg</td>
<td>2</td>
<td>Toast</td>
<td>1</td>
</tr>
<tr>
<td>Sausage Roll</td>
<td>6</td>
<td>Cheese</td>
<td>2</td>
<td>Rolls</td>
<td>1</td>
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<tr>
<td>Fishcakes</td>
<td>6</td>
<td>Luncheonmeat</td>
<td>2</td>
<td>Bread</td>
<td>1</td>
</tr>
<tr>
<td>Dumpling</td>
<td>6</td>
<td>Fritters</td>
<td>2</td>
<td>Cheese &amp; Bacon Flan</td>
<td></td>
</tr>
<tr>
<td>Salad</td>
<td>6</td>
<td>Luncheonmeat</td>
<td>2</td>
<td>Flan</td>
<td></td>
</tr>
<tr>
<td>Liver &amp; Bacon</td>
<td>5</td>
<td>Bacon</td>
<td>2</td>
<td>Kippers</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>4</td>
<td>Fishcake</td>
<td>1</td>
<td>Cressettes</td>
<td></td>
</tr>
<tr>
<td>Curry &amp; Rice</td>
<td>4</td>
<td>Cheeseburger</td>
<td>1</td>
<td>Pork Pie</td>
<td></td>
</tr>
<tr>
<td>Mince</td>
<td>4</td>
<td>Ham</td>
<td>1</td>
<td>Filchards</td>
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</tr>
<tr>
<td>Scotch Egg</td>
<td>4</td>
<td>Sausage rolls</td>
<td>1</td>
<td>Parsley Sauce</td>
<td></td>
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<tr>
<td>Beefburgers</td>
<td>4</td>
<td>Scotch eggs</td>
<td>1</td>
<td></td>
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continued.....
### FIG. A.8.5. (cont.) ESSEX SCHOOL MEAL PREFERENCES.

<table>
<thead>
<tr>
<th>Like Main Dishes</th>
<th>Times Mentioned</th>
<th>Dislike Main Dish</th>
<th>Times Mentioned</th>
<th>Suggestions: Main Dish</th>
<th>Times Mentioned</th>
</tr>
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<tbody>
<tr>
<td>Eggs</td>
<td>3</td>
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<tr>
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</tr>
<tr>
<td>Ham</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheese Flan</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Cheese</td>
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<td></td>
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</tr>
<tr>
<td>Corned Beef</td>
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<td>Ravioli</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Toad-in-the-hole</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<td>Luncheonmeat</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Stew</td>
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<td></td>
<td></td>
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<td>Butter beans</td>
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<th>Times Mentioned</th>
<th>Suggested Sweet Course</th>
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<td>Strawberries</td>
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<td>Custard</td>
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<td>Milk shake</td>
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<tr>
<td>Biscuits</td>
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<td>5</td>
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<td>1</td>
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continued....
FIG. A.8.5. (CONT.) ESSEX SCHOOL MEAL PREFERENCES.

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<th>Suggestions</th>
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<tbody>
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<td></td>
<td>Prunes</td>
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<td>Gateau</td>
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<td></td>
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<td>Apple pie</td>
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FIG. A.8.6. FIFE SCHOOL MEALS: (JUNIOR HIGH SCHOOL) PUPILS' DISH PREFERENCE SURVEY. (Ranking in order of Preference.)

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<td>5. Carrots</td>
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<tr>
<td>8. Beef &amp; Liver Stew</td>
<td></td>
<td></td>
<td>5. Semolina &amp; fruit</td>
</tr>
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</table>

(supplied by Miss A. Kirk, Senior School Meals Assistant Organizer, Fife County Council.)
### Norfolk School Meals: (Secondary School)

#### Pupils' Dish Preference Survey (30-1-75)

(supplied by Miss Ritson, Senior School Meals Organizer, Norfolk County Council)

<table>
<thead>
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<th>Dislike</th>
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</tr>
<tr>
<td>Pork</td>
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</tr>
<tr>
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<tr>
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<tr>
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<td>56</td>
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<td>40</td>
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<tr>
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<td>48</td>
</tr>
<tr>
<td>Braised Steak</td>
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<td>60</td>
</tr>
<tr>
<td>Hot Pot</td>
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</tr>
<tr>
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<tr>
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<td>48</td>
</tr>
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<td>Curried Mince</td>
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<td>76</td>
</tr>
<tr>
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#### Like Dislike

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<tr>
<td>Pork</td>
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<tr>
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<tr>
<td>Chicken Pie</td>
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<tr>
<td>Chicken Curry</td>
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<td>56</td>
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<tr>
<td>Chicken Casserole</td>
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<td>Hot Pot</td>
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<tr>
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#### EGGs

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#### FISH

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#### VEGETABLES

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<tr>
<td>Stewed Rhubarb</td>
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<td>28</td>
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<tr>
<td>Stewed Apple</td>
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<td>36</td>
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<td>Stewed Prunes</td>
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<tr>
<td>Mincemeat Tart</td>
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<td>Jam Roly Poly</td>
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</tr>
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continued.....
FIG. A.8.7 (CONT.) NORFOLK SCHOOL MEAL PREFERENCES.

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<td>Lettuce</td>
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<td>28</td>
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<td>Carrot</td>
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<td>40</td>
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<td>Cheese</td>
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<td>20</td>
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FIG. A.8.8. LEEDS SCHOOL MEALS:

Pupils' Dish Preference Survey. (age group 12-16 years).
(supplied by G. Glev, Catering Research Unit, Leeds University. April, 1974).

Main course (dishes ranked in declining order of preference.)

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</tr>
<tr>
<td>steak + kidney pie</td>
</tr>
<tr>
<td>salad</td>
</tr>
<tr>
<td>bacon</td>
</tr>
<tr>
<td>curry</td>
</tr>
<tr>
<td>steak pie</td>
</tr>
<tr>
<td>fish + chips</td>
</tr>
<tr>
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</tr>
<tr>
<td>steak</td>
</tr>
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<td>lamb chop</td>
</tr>
<tr>
<td>shepherds pie</td>
</tr>
<tr>
<td>stew</td>
</tr>
<tr>
<td>&quot;joint&quot;</td>
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<tr>
<td>spaghetti</td>
</tr>
<tr>
<td>soup</td>
</tr>
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<td>meat + potato pie</td>
</tr>
<tr>
<td>turkey</td>
</tr>
<tr>
<td>chop</td>
</tr>
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<td>roast beef</td>
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<td>spare ribs</td>
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<table>
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<td>sprouts</td>
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<td>beans</td>
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<td>onions</td>
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<tr>
<td>rice</td>
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<td>swede</td>
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<td>fruit</td>
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<td>cream</td>
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<td>flan</td>
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<td>rhubarb pie</td>
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<td>crumble</td>
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<td>ice-cream</td>
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<td>rhubarb crumble</td>
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<td>trifle</td>
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</tbody>
</table>
In England and Wales education establishments include universities, polytechnics, colleges of education, colleges of further and higher education, maintained schools (maintained by the local education authority), direct grant schools (receiving grants direct from the Department of Education and Science) and independent schools (not maintained by the local authority nor grants aided by the Secretary of State). Of all these establishments only the maintained state schools are likely to draw pupils from the immediate vicinity, and so these are the most likely to reflect regional food preferences. The county schools ('state' or local authority maintained), which have to operate within a framework laid by the Department of Education and Science, are also likely to have similar standards nationwide in all aspects of their operation, including catering (SI 1969 & SI 1971).

Among local authority maintained schools, the following categories exist:

- nursery schools - for children below the compulsory school age of 5 yrs.
- primary schools - for children aged 5-11 years
- secondary schools - for children aged 11 yrs. to school-leaving age of 16 or 18 years.

Among the secondary schools there are:

- Secondary modern schools - catering for the less academic pupil
- grammar schools - catering for the more academic pupil
- Comprehensive schools - catering for the non-selected pupil

(The public system of education in Scotland is similar but maintained schools are referred to as public schools.)

Within the local authority maintained school system at present it is usually only the secondary schools which operate a limited choice menu.

Even before 1971 when the price of school meals increased by 2p. to 12p., some pupils in senior schools had been showing their dissatisfaction with the single set meal by leaving the school at lunch time for the local snack bars and fish & chip shops.

A determined effort to win back senior pupils to the school meal was therefore begun by replacing the set meal with a multi-choice cafeteria service. Today infants are generally given a single menu so that they can be gradually introduced to new dishes. When they enter the junior school they make a choice which prepares them for the senior school where they choose from a variety of dishes in a cafeteria system (Hollinghurst & Bolton, 1974). The Department of Education and Science (1975) recommends that this system be adopted as widely as possible.
### APPENDICES TO CHAPTER 9.

**Fig. A.9.1. REGIONAL PREFERENCES OF BREAKFAST DISH ITEMS AMONG HOSPITAL PATIENTS.**

<table>
<thead>
<tr>
<th>DISH</th>
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<th>Va</th>
<th>Sc</th>
<th>N</th>
<th>Y-H</th>
<th>NW</th>
<th>EM</th>
<th>VN</th>
<th>EA</th>
<th>SE</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>5.03</td>
<td>7.23</td>
<td>4.95</td>
<td>5.03</td>
<td>3.87</td>
<td>18.58</td>
<td>10.62</td>
<td>27.43</td>
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<td></td>
</tr>
<tr>
<td>Porridge</td>
<td>7.54</td>
<td>9.31</td>
<td>7.02</td>
<td>10.07</td>
<td>4.19</td>
<td>10.40</td>
<td>5.56</td>
<td>5.99</td>
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<tr>
<td>Fruit juice</td>
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<td>2.59</td>
<td>2.30</td>
<td>2.00</td>
<td>4.95</td>
<td>20.00</td>
<td>17.59</td>
<td>17.41</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Grapefruit segments</td>
<td>0.62</td>
<td>3.44</td>
<td>4.82</td>
<td>20.00</td>
<td>8.82</td>
<td>5.54</td>
<td>4.72</td>
<td>11.77</td>
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<td></td>
<td></td>
</tr>
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<td>Stewed fruit</td>
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<td>1.40</td>
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<td>2.57</td>
<td>3.87</td>
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<td>4.48</td>
<td>1.54</td>
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<td>7.47</td>
<td>15.74</td>
<td>23.96</td>
<td>27.75</td>
<td>18.23</td>
<td>17.28</td>
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<td>17.54</td>
<td>37.08</td>
<td>20.00</td>
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<td>19.40</td>
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<tr>
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<td>4.69</td>
<td>9.10</td>
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<td>14.90</td>
<td>11.90</td>
<td>4.53</td>
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<td>0.95</td>
<td>2.32</td>
<td>1.90</td>
<td>4.00</td>
<td>1.89</td>
<td>1.99</td>
<td>1.77</td>
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<td>2.23</td>
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<td>2.23</td>
<td>1.89</td>
<td>1.99</td>
<td>1.77</td>
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<td>6.66</td>
<td>3.58</td>
<td>4.76</td>
<td>8.93</td>
<td>4.72</td>
<td>11.15</td>
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<td>2.85</td>
<td>11.38</td>
<td>22.49</td>
<td>12.13</td>
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<td></td>
</tr>
<tr>
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<td>3.74</td>
<td>3.87</td>
<td>3.78</td>
<td>7.76</td>
<td>8.26</td>
<td>5.48</td>
<td>0.88</td>
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</tr>
<tr>
<td>Tomatoes</td>
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<td>6.04</td>
<td>5.20</td>
<td>15.92</td>
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<td>11.96</td>
<td>13.48</td>
<td>3.48</td>
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<td></td>
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<td>15.59</td>
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<tr>
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<td>0.66</td>
<td>0.83</td>
<td>7.14</td>
<td>3.68</td>
<td>7.62</td>
<td>5.48</td>
<td>1.77</td>
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</tbody>
</table>

**KEY: (applies to figures A.9.4., A.9.5., A.9.10. & A.9.11.)**

<table>
<thead>
<tr>
<th>DISH</th>
<th>Region A</th>
<th>Region B</th>
</tr>
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<tr>
<td>Cereals</td>
<td>x.A.</td>
<td>x.B.</td>
</tr>
<tr>
<td>Porridge</td>
<td>y.A.</td>
<td>y.B.</td>
</tr>
</tbody>
</table>

where:

- \( x \) = total average percentage consumption of fish dishes.
- \( y \) = total average percentage frequency of appearance of fish dishes on menu cycle.
**FIG. A.9.2. REGIONAL PREFERENCES OF MIDDAY MEAL "STARTERS" AMONG HOSPITAL PATIENTS.**

<table>
<thead>
<tr>
<th>Ranking of Uptake</th>
<th>Wn</th>
<th>So</th>
<th>N</th>
<th>Y+H</th>
<th>NW</th>
<th>SN</th>
<th>WM</th>
<th>EA</th>
<th>SE</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scotch Broth(3)</td>
<td>Mutton broth(4)</td>
<td>Minestrone(4)</td>
<td>&quot;Soup&quot;</td>
<td>Spring veg(2)</td>
<td>Mushroom(7)</td>
<td>Tomato(3)</td>
<td>NONE</td>
<td>NONE</td>
<td>Tomato(3)</td>
</tr>
<tr>
<td>2</td>
<td>Minestrone(3)</td>
<td>Veg.(3)</td>
<td>Split pea(3)</td>
<td>Onion(4)</td>
<td>Oxtail(4)</td>
<td>Veg.(6)</td>
<td>Chicken(4)</td>
<td>Oxtail(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Tomato(2)</td>
<td>Tomato(2)</td>
<td>Tomato(3)</td>
<td></td>
<td>Chicken(4)</td>
<td>Minestrone(6)</td>
<td>Lentil(5)</td>
<td>Pea+Psn(4)</td>
<td>Spring veg(2)</td>
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</tr>
<tr>
<td>4</td>
<td>Oxtail(3)</td>
<td>Green Pea(3)</td>
<td>Scotch broth(1)</td>
<td></td>
<td>Scotch broth(3)</td>
<td>Celery(4)</td>
<td>Minestrone(3)</td>
<td>Scotch broth(3)</td>
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</tr>
<tr>
<td>5</td>
<td>Spring veg(2)</td>
<td>Green pea (2)</td>
<td>Lentil(2)</td>
<td></td>
<td>Chicken noodle(2)</td>
<td>Green pea(6)</td>
<td>Oxtail(4)</td>
<td>Mushroom(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Beef+veg(3)</td>
<td>Mushroom(2)</td>
<td>Mushroom(4)</td>
<td></td>
<td>Kidney(9)</td>
<td>Asparagus(9)</td>
<td>Spring veg(2)</td>
<td>Lentil(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Mushroom(3)</td>
<td>Lentil(1)</td>
<td>Green pea(4)</td>
<td></td>
<td>Tomato(2)</td>
<td>Tomato(5)</td>
<td>Green pea(1)</td>
<td>Chicken noodle(3)</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>chicken(1)</td>
<td>Leek+potato(2)</td>
<td>Celery(4)</td>
<td>Yeg(4)</td>
<td>Thick onion(1)</td>
<td>Oxtail(6)</td>
<td>French onion(1)</td>
<td>Clear soup(1)</td>
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<tr>
<td>9</td>
<td>Kidney(3)</td>
<td>Potato(4)</td>
<td>Oxtail(2)</td>
<td></td>
<td>Asparagus(2)</td>
<td>Veg.(2)</td>
<td>French onion(9)</td>
<td>White onion(1)</td>
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</tr>
<tr>
<td>10</td>
<td>Asparagus(2)</td>
<td>Scotch broth(4)</td>
<td>Asparagus(4)</td>
<td></td>
<td>Leek(3)</td>
<td>Beef+veg(8)</td>
<td>Asparagus(2)</td>
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<td>Split pea(4)</td>
<td></td>
<td></td>
<td>Celery(3)</td>
<td>Brown Windsor(9)</td>
<td>Leek(3)</td>
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</tr>
<tr>
<td>12</td>
<td>Minestrone(4)</td>
<td>Chicken noodle(3)</td>
<td></td>
<td></td>
<td>Kidney(4)</td>
<td>Spring veg(3)</td>
<td>Rock Turtle(4)</td>
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</tr>
<tr>
<td>13</td>
<td>Spring veg(4)</td>
<td>Lentil(4)</td>
<td></td>
<td></td>
<td>Orange Juice(4)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Chicken broth(4)</td>
<td></td>
<td></td>
<td></td>
<td>Pineapple Juice(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15</td>
<td></td>
<td>Grapefruit Juice(5)</td>
<td></td>
<td></td>
<td>Tomato Juice(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
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</tbody>
</table>

((x) = ranked position with respect to frequency of appearance on menu cycle.)
FIG. A.2.3. REGIONAL PREFERENCES OF EVENING MEAL "STARTERS" AMONG HOSPITAL
PATIENTS. (Soup, unless otherwise stated)

<table>
<thead>
<tr>
<th>Ranking of</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
<th>10.</th>
<th>11.</th>
<th>12.</th>
<th>13.</th>
<th>14.</th>
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<tbody>
<tr>
<td>Weight</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Mushroom</td>
<td>No.</td>
<td>No.</td>
<td></td>
<td>Chicken(5)</td>
<td>Chicken noodle(6)</td>
<td>Oxtail(2)</td>
<td>Veg.(5)</td>
<td>Scotch broth(4)</td>
<td>Oxtail(3)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Mincestrone</td>
<td>No.</td>
<td>No.</td>
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<td>Green pea(6)</td>
<td>Spring veg(1)</td>
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<td>Mushroom(4)</td>
<td>Veg.(2)</td>
<td>Asparagus(2)</td>
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<tr>
<td>6. Leek(2)</td>
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<td>No.</td>
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<td>Tomato(2)</td>
<td>Mushroom(2)</td>
<td>Asparagus(3)</td>
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<td>Celery(3)</td>
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<td>10. Tomato(2)</td>
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<td>No.</td>
<td></td>
<td>Leek(3)</td>
<td>Chicken(1)</td>
<td>Green pea(5)</td>
<td>Lentil(4)</td>
<td>Green pea(4)</td>
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<tr>
<td>11. Beef + veg(2)</td>
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<td>Leek(4)</td>
<td>Leek(4)</td>
<td>Chicken noodle(4)</td>
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<td>12. Scotch broth(2)</td>
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<td>French Onion(6)</td>
<td>&quot;Pottage&quot;(2)</td>
<td>Leek(4)</td>
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</table>

((x) = ranked position with respect to frequency of appearance on menu cycle.)
### Fig. A.9.4. REGIONAL PREFERENCES OF MIDDAY MEAL MAIN DISH ITEMS AMONG HOSPITAL PATIENTS. (Key: see Fig. A.9.1.)

<table>
<thead>
<tr>
<th>DISH</th>
<th>Nat. X</th>
<th>Wa</th>
<th>Se</th>
<th>N</th>
<th>YCH</th>
<th>NW</th>
<th>EM</th>
<th>WM</th>
<th>EA</th>
<th>SE</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>bacon + ham</td>
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<td>7.67</td>
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<td>4.32</td>
<td>9.35</td>
<td>5.22</td>
<td>6.64</td>
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<tr>
<td>lamb + mutton</td>
<td>13.79</td>
<td>15.05</td>
<td>12.95</td>
<td>20.10</td>
<td>12.62</td>
<td>7.95</td>
<td>11.94</td>
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<td>5.41</td>
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<td>6.59</td>
<td>9.57</td>
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<td>6.41</td>
<td>5.71</td>
<td>2.89</td>
<td>8.15</td>
<td>5.87</td>
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<td>15.11</td>
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<td>6.31</td>
<td>6.32</td>
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<td>2.97</td>
<td>8.56</td>
<td>10.74</td>
<td>4.28</td>
<td>10.35</td>
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<td>0.09</td>
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<td>9.31</td>
<td>0.58</td>
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<td>4.70</td>
<td>3.83</td>
<td>0.65</td>
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<td>3.90</td>
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### Fig. A.9.5. Regional Preferences of Evening Meal Main Dish Items Among Hospital Patients. (Key: see Fig. A.9.1.)

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-361-
TABLE A.9.6. REGIONAL PREFERENCES OF MIDDAY MEAL VEGETABLES AMONG HOSPITAL PATIENTS.

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<th>WN</th>
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<td>Carrot + turnip(7)</td>
<td>French beans(3)</td>
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<td>Spring greens(9)</td>
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<td>Turnip(2)</td>
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(Ratio green: root veg) 2.65:1  1.76:1  1:1  2.3:1  3.5:1  1.9:1  7.8:1  2.4:1

(x) = ranked position with respect to frequency of appearance on menu cycle.)
### Fig. A.9.7. Regional Preferences of Evening Meal Vegetables Among Hospital Patients

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\[(x) = \text{ranked position with respect to frequency of appearance on menu cycle.}\]
**FIG. A.9.8. REGIONAL PREFERENCES OF MIDDAY MEAL POTATOES AMONG HOSPITAL PATIENTS.**

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((x) = ranked position with respect to frequency of appearance on menu cycle)
### FIG. A.9.9. REGIONAL PREFERENCES OF EVENING MEAL POTATOES AMONG HOSPITAL PATIENTS.

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((x) = ranked position with respect to frequency of appearance on menu cycle.)
**FIG.A.9.10. REGIONAL PREFERENCES OF MIDDAY MEAL DESSERTS AMONG HOSPITAL PATIENTS.** (Key: see Fig.A.9.1.)

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**FIG.A.9.11. REGIONAL PREFERENCES OF EVENING MEAL DESSERTS AMONG HOSPITAL PATIENTS.** (Key: see FIG.A.9.1.)

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APPENDICES TO CHAPTER 10.

Fig. A.10.1. Where do working people eat? (NCI, 1966)

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<th>S.</th>
<th>Mids</th>
<th>N.</th>
</tr>
</thead>
<tbody>
<tr>
<td>working population by region (%)</td>
<td>43</td>
<td>20</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>working population with canteens (%)</td>
<td>65</td>
<td>70</td>
<td>63</td>
<td>59</td>
</tr>
<tr>
<td>use of canteen facilities (%)</td>
<td>69</td>
<td>73</td>
<td>62</td>
<td>70</td>
</tr>
</tbody>
</table>

Fig. A.10.3. Price per average canteen meal, 1965. (NCI, 1966)

<table>
<thead>
<tr>
<th></th>
<th>GB</th>
<th>SE</th>
<th>NW</th>
<th>WM</th>
<th>TyH</th>
<th>Sc</th>
<th>Wa</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>pence</td>
<td>25</td>
<td>23</td>
<td>22½</td>
<td>25</td>
<td>22½</td>
<td>24</td>
<td>26½</td>
<td>26½</td>
</tr>
</tbody>
</table>

Fig. A.10.4. Meals and snacks at PLACE OF WORK

- regional cost & number.

- 1974-5.

- total number of main meals/snacks out.


Fig. A.10.5. The Five INDUSTRIAL SOCIETY REGIONS of Britain.

(source: Ind. Soc., 20th survey, no.192, 1974-5)

- Lancaster
- York
- Sheffield
- Chester
- Ipswich
- London
- Postal District
Fig. A.10.6. Regional canteen dish prices. (Ind. Soc. 1975).

<table>
<thead>
<tr>
<th>Industrial Society regions:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soup (p) 1967</td>
<td>2_1</td>
<td>2_1</td>
<td>2_1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1974/5</td>
<td>2_2</td>
<td>2_2</td>
<td>2_2</td>
<td>2_2</td>
<td>2</td>
</tr>
<tr>
<td>roast joint &amp; 2 vegetables (p) 1967</td>
<td>12_1</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>11_1</td>
</tr>
<tr>
<td>1974/5</td>
<td>20</td>
<td>22</td>
<td>18_1</td>
<td>18_1</td>
<td>18_1</td>
</tr>
<tr>
<td>composite meal: roast, (p) 1967</td>
<td>17</td>
<td>15</td>
<td>15</td>
<td>14</td>
<td>13_1</td>
</tr>
<tr>
<td>2 veg., sweet &amp; custard, tea 1974/5</td>
<td>28</td>
<td>27_1</td>
<td>27_1</td>
<td>25_1</td>
<td>29</td>
</tr>
<tr>
<td>tea (p) 1967</td>
<td>1_1</td>
<td>1_1</td>
<td>1</td>
<td>1</td>
<td>1_1</td>
</tr>
<tr>
<td>1974/5</td>
<td>2_1</td>
<td>2_1</td>
<td>2_1</td>
<td>2_1</td>
<td>2_1</td>
</tr>
</tbody>
</table>

Fig. A.10.7. Percentage expenditure by each employee on various items (1974/5). (Ind. Soc. 1974/5)

<table>
<thead>
<tr>
<th>Ind. Soc. regions (fig. A.10.5.)</th>
<th>beverages %</th>
<th>main meals%</th>
<th>cooked snacks %</th>
<th>rolls, cakes %</th>
<th>crisps, biscuits %</th>
<th>confect- ionery %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>56</td>
<td>9</td>
<td>9</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>37</td>
<td>9</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>40</td>
<td>3</td>
<td>12</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>45</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>44</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

Fig. A.10.8. "Loss" (subsidy) per employee on consumables and labour alone. (Ind. Soc. 1974/5)

<table>
<thead>
<tr>
<th>Industrial Society regions (fig. A.10.5.):</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>£</td>
<td>8.47</td>
<td>4.70</td>
<td>4.32</td>
<td>4.75</td>
<td>6.65</td>
</tr>
</tbody>
</table>

Fig. A.10.9. Type of main meal service at place of work. (H&C, EDC, 1974/5)

<table>
<thead>
<tr>
<th>(%)</th>
<th>Sc.</th>
<th>E.Eng</th>
<th>W.P.&amp;Wa.</th>
<th>L.</th>
<th>SE/SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>self service</td>
<td>62</td>
<td>47</td>
<td>48</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td>waiter/waitress</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>counter service</td>
<td>29</td>
<td>38</td>
<td>42</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>trolley in factory/office</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>vending machine</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>other</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Fig. A.10.10. Time taken to eat a main meal in a place of work. (H&C, EDC, 1974/5)

<table>
<thead>
<tr>
<th>(%)</th>
<th>Sc.</th>
<th>E.Eng.</th>
<th>W. Penn &amp; Wa.</th>
<th>London</th>
<th>SE &amp; SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 19 mins.</td>
<td>18</td>
<td>13</td>
<td>16</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>20-39 mins.</td>
<td>64</td>
<td>64</td>
<td>62</td>
<td>61</td>
<td>49</td>
</tr>
<tr>
<td>40+ mins.</td>
<td>16</td>
<td>18</td>
<td>21</td>
<td>25</td>
<td>22</td>
</tr>
</tbody>
</table>
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
Fig. A.10.11. Types of food eaten during 24 hours. (Ind. Soc. 1974/5)

<table>
<thead>
<tr>
<th>Ind. Soc. regions (fig. A.10.5):</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of cooked snacks and light meals as a % of main meal uptake</td>
<td>25</td>
<td>23</td>
<td>22</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>% cooked meal take-up during the day</td>
<td>43</td>
<td>35</td>
<td>24</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>% cooked meal take-up on shifts</td>
<td>49</td>
<td>36</td>
<td>31</td>
<td>50</td>
<td>27</td>
</tr>
<tr>
<td>% main meal take-up at night</td>
<td>37</td>
<td>46</td>
<td>27</td>
<td>54</td>
<td>38</td>
</tr>
<tr>
<td>% of employees making daily purchase of break snacks</td>
<td>82</td>
<td>86</td>
<td>57</td>
<td>62</td>
<td>48</td>
</tr>
</tbody>
</table>

Fig. A.10.14 Regional salad preferences. (NCI, 1973)

<table>
<thead>
<tr>
<th>% preferring salad:</th>
<th>Total</th>
<th>South</th>
<th>North</th>
<th>Mids</th>
<th>female</th>
<th>male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>23</td>
<td>7</td>
<td>14</td>
<td>27</td>
<td>11</td>
</tr>
</tbody>
</table>

Fig. A.10.15 Regional vegetable preferences. (NCI, 1973)

<table>
<thead>
<tr>
<th>(%)</th>
<th>G.B.</th>
<th>South</th>
<th>Mids.</th>
<th>North.</th>
</tr>
</thead>
<tbody>
<tr>
<td>peas</td>
<td>25</td>
<td>24</td>
<td>44</td>
<td>13</td>
</tr>
<tr>
<td>sprouts</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>carrots</td>
<td>9</td>
<td>14</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>cabbage</td>
<td>11</td>
<td>14</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>beans</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Fig. A.10.18. Heavy industry food group choice (% uptake) (ORIGINAL DATA)

<table>
<thead>
<tr>
<th>no. of days in sample:</th>
<th>Wa</th>
<th>WM</th>
<th>Y &amp; H</th>
<th>NW</th>
<th>EA</th>
<th>SE</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>average no. of days</td>
<td>5</td>
<td>15</td>
<td>20</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>percentage of meat</td>
<td>25.5</td>
<td>28.7</td>
<td>20.0</td>
<td>25.8</td>
<td>28.0</td>
<td>18.4</td>
<td>23.4</td>
</tr>
<tr>
<td>made-up meat</td>
<td>16.7</td>
<td>13.3</td>
<td>31.5</td>
<td>23.8</td>
<td>25.0</td>
<td>28.1</td>
<td>18.0</td>
</tr>
<tr>
<td>fish</td>
<td>19.0</td>
<td>17.4</td>
<td>23.7</td>
<td>27.7</td>
<td>22.3</td>
<td>22.2</td>
<td>19.0</td>
</tr>
<tr>
<td>pasta</td>
<td>6.0</td>
<td>7.0</td>
<td>16.0</td>
<td>14.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;foreign&quot;</td>
<td>10.0</td>
<td>6.0</td>
<td>10.0</td>
<td>15.5</td>
<td>16.0</td>
<td>18.1</td>
<td>24.0</td>
</tr>
<tr>
<td>salad</td>
<td>9.0</td>
<td>19.0</td>
<td>21.0</td>
<td>12.0</td>
<td>14.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>egg</td>
<td>8.0</td>
<td>7.5</td>
<td>47.5</td>
<td>12.5</td>
<td>8.0</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>cheese</td>
<td>3.0</td>
<td>9.0</td>
<td>9.0</td>
<td>16.0</td>
<td>30.0</td>
<td>15.0</td>
<td></td>
</tr>
</tbody>
</table>

(DETAILED STATISTICS OF INDIVIDUAL DISH ITEMS: TABLE S.10.1)
### Fig.A.10.19. Light industry food group choice. (% uptake) (ORIGINAL DATA)

<table>
<thead>
<tr>
<th>regions:</th>
<th>Wa</th>
<th>Sc</th>
<th>N</th>
<th>NW</th>
<th>Y-H</th>
<th>WM</th>
<th>EM</th>
<th>EA</th>
<th>SE</th>
<th>L</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>no. of days in sample:</td>
<td>20</td>
<td>5</td>
<td>20</td>
<td>10</td>
<td>25</td>
<td>15</td>
<td>5</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>25</td>
</tr>
</tbody>
</table>

**starters**

- fruit juice
  - (corrected for a choice of 2 dishes) total % uptake of starters

|     | 60 | 35 | 40 | 37 | 38 | 37 | 20 | 39 | 26 | 29 | 28 |

|     | 54 | 36 | 49 | 25 | 24 | 40 | 37 | 45 | 57 | 40 | 34 |

|     | 60 | 47 | 48 | 50 | 43 | 58 | 59 | 49 | 46 | 41 | 42 |

### main dishes

- (corrected for a choice out of 3 dishes)

|     | 10 | 23 | 13 | - | 12 | - | 11 | 12 | - | - | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | - | - | - |

|     | 40 | 37 | 38 | 37 | 20 | 39 | 26 | 29 | 28 | 28 | 28 |

|     | 45 | 36 | 49 | 25 | 24 | 40 | 37 | 45 | 57 | 40 | 34 |

|     | 60 | 47 | 48 | 50 | 43 | 58 | 59 | 49 | 46 | 41 | 42 |

|     | 20 | 8 | - | 50 | - | 62 | 17 | 20 | 42 | - | - |

|     | 23 | 21 | 44 | 16 | 30 | 15 | 17 | 44 | 20 | 31 | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

### vegetables

- (corrected for a choice out of 2 dish items)

|     | 10 | 23 | 13 | - | 12 | - | 11 | 12 | - | - | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | - | - | - |

|     | 40 | 37 | 38 | 37 | 20 | 39 | 26 | 29 | 28 | 28 | 28 |

|     | 45 | 36 | 49 | 25 | 24 | 40 | 37 | 45 | 57 | 40 | 34 |

|     | 60 | 47 | 48 | 50 | 43 | 58 | 59 | 49 | 46 | 41 | 42 |

|     | 20 | 8 | - | 50 | - | 62 | 17 | 20 | 42 | - | - |

|     | 23 | 21 | 44 | 16 | 30 | 15 | 17 | 44 | 20 | 31 | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

### desserts

- (corrected for a choice out of 3 dishes)

|     | 10 | 23 | 13 | - | 12 | - | 11 | 12 | - | - | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | - | - | - |

|     | 40 | 37 | 38 | 37 | 20 | 39 | 26 | 29 | 28 | 28 | 28 |

|     | 45 | 36 | 49 | 25 | 24 | 40 | 37 | 45 | 57 | 40 | 34 |

|     | 60 | 47 | 48 | 50 | 43 | 58 | 59 | 49 | 46 | 41 | 42 |

|     | 20 | 8 | - | 50 | - | 62 | 17 | 20 | 42 | - | - |

|     | 23 | 21 | 44 | 16 | 30 | 15 | 17 | 44 | 20 | 31 | - |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

### (DETAILED STATISTICS OF INDIVIDUAL DISH ITEMS TABLES S.10.2 - S.10.5. inc.)

### Fig.A.10.20. Menu appearances of dish groups in retail store assistants' staff restaurants. (ORIGINAL DATA).

<table>
<thead>
<tr>
<th>regions:</th>
<th>SE</th>
<th>SW</th>
<th>NW</th>
<th>Y-H</th>
<th>Va</th>
<th>Sc</th>
</tr>
</thead>
</table>

**"starter"**

- fruit juice
- soup

|     | 24 | 24 | 24 | 24 | 24 | 24 |

|     | 24 | 24 | 24 | 24 | 24 | 24 |

**main course**

- meat
- made-up meat
- fish
- made-up fish
- miscellaneous
- 'yoghurt lunch'
- salad

|     | 10 | 10 | 8 | 7 | 6 | 6 |

|     | 3 | 10 | 7 | 9 | 6 | 9 |

|     | 2 | 3 | 5 | 2 | 3 | 3 |

|     | 2 | 1 | 2 | 1 | - | - |

|     | 3 | 3 | 5 | 2 | 3 | 4 |

|     | 2 | 1 | 2 | 1 | - | - |

|     | 23 | 24 | 16 | 22 | 11 | 23 |

**dessert**

- 'lighter'
- milk puddings
- 'heavier'
- cheese + biscuits
- fresh fruit
- yoghurt

|     | 13 | 10 | 12 | 7 | 16 | 13 |

|     | 3 | 4 | 2 | 1 | 1 | 1 |

|     | 15 | 11 | 8 | 13 | 7 | 10 |

|     | 24 | 24 | 24 | 24 | 24 | 24 |

|     | 24 | 24 | 24 | 24 | 24 | 24 |

|     | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

### (DETAILED STATISTICS OF INDIVIDUAL DISH ITEMS : TABLE S.10.6. )
Fig. A.10.21. Percentage uptakes of main dish groups by office staff.

(ORIGINAL DATA)

<table>
<thead>
<tr>
<th>regions:</th>
<th>N</th>
<th>WM</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>no. of days in sample</td>
<td>15</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>main dish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>meat</td>
<td>21</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>(corrected for made-up meat)</td>
<td>16</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>a choice out of fish</td>
<td>17</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>5 dishes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>made-up fish</td>
<td>16</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>'foreign' fare</td>
<td>5</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>miscellaneous</td>
<td>11</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>salad/cold buffet</td>
<td>27</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>&quot;Chef's special&quot;</td>
<td></td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

(DETAILED STATISTICS OF INDIVIDUAL DISH ITEMS : TABLE S.10.7.)
EMPLOYEE CATERERS' QUESTIONNAIRE -

KEY POINTS FOR STRUCTURED INTERVIEW.

1. **TYPE OF MARKET.** What type of workers are being catered for?
   - heavy industry / light industry / office / shop
   - workers / workers / staff / assistants

2. **GEOGRAPHICAL LOCATION** of CANTEEN/STAFF RESTAURANT UNITS?

3. **MEAL PRICE.** What is the average spend per meal?

4. **MEALS.** What type of meals are available?
   - At what times of the day &/or night is food service available?

5. **FOOD SUPPLIES.** Are national, nominated, local, or .......... suppliers used?

6. **MANAGERS.** How much freedom do individual unit managers have in menu planning?
   - (within cost guidelines)

7. **REGIONAL PREFERENCES.**
   - (a) Do you think there are regional food preferences in Britain?
   - (b) If so, are these reflected in industrial feeding?
   - (c) Are regional food preferences apparent among the customers as regards
     - (i) individual food commodities
       - (e.g. lamb/beef : root/green veg: ..............)
     - (ii) traditional regional dishes
       - (e.g. haggis v. tripe and onions v. ......)
**Fig. A.10.23. RESULTS OF EMPLOYEE CATERERS' STRUCTURED INTERVIEWS.**

(Catering Contractors & Companies which organize their own catering)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>C</td>
<td>GB SE EA SW EM WM Y+H</td>
<td>26 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>B</td>
<td>C</td>
<td></td>
<td>28 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td></td>
<td>40 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
<td></td>
<td>30 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>E</td>
<td>C</td>
<td></td>
<td>30 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>F</td>
<td>S</td>
<td>GB SE EA SW EM WM Y+H</td>
<td>28 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>G</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>I</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>J</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>K</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<td></td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>M</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>O</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>P</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Q</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>R</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>S</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>T</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>U</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>V</td>
<td>S</td>
<td></td>
<td>25 Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Fig. A.10.23.** The table above illustrates the results of employee caterers' structured interviews. The data includes information on the type of catering, type of worker, geographical location of units, average meal price, hours when meals are available, suppliers, managers' freedom to menu content, and whether there are regulatory preferences reflected in individual catering. The table also notes whether there are regulatory preferences in Great Britain and whether there are regulatory preferences in food communication trade cities and regional dishes. The data is presented in a tabular format, with entries for each category indicating the number of respondents who fall into each category.
Approximate Regional Configurations
Within Catering Operation of Company I, of fig.A.10.23.,
and referring to statistics in fig.A.10.24.(b).

Approximate Percentages of Regional Totals of the
Number of Portions of Various Food Items Served
during one week, by Company I (of fig.A.10.23.)

<table>
<thead>
<tr>
<th>Item</th>
<th>percentage of portions</th>
<th>regions in map, fig.A.10.24.(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>GB</td>
</tr>
<tr>
<td>fruit juice/cold starter</td>
<td></td>
<td>0.6</td>
</tr>
<tr>
<td>soup</td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>fish (hot or with salad)</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>meat (hot or with salad)</td>
<td></td>
<td>5.8</td>
</tr>
<tr>
<td>any other main dish (eggs, cheese, pasta, etc.)</td>
<td></td>
<td>1.8</td>
</tr>
<tr>
<td>potatoes</td>
<td></td>
<td>8.1</td>
</tr>
<tr>
<td>vegetables (hot or cold)</td>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td>sweet dishes (hot/cold)</td>
<td></td>
<td>5.1</td>
</tr>
<tr>
<td>breakfast item (eggs, bacon)</td>
<td></td>
<td>3.8</td>
</tr>
<tr>
<td>sandwiches/filled rolls</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>beverages (hot or cold)</td>
<td></td>
<td>39.9</td>
</tr>
<tr>
<td>cakes/scones/pastries</td>
<td></td>
<td>8.7</td>
</tr>
<tr>
<td>buns/biscuits</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>bread/rolls/toast</td>
<td></td>
<td>4.6</td>
</tr>
<tr>
<td>TOTAL %</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>
Fig.A.11.1. Minimum List Heading Classification 884 to 887 (inclusive) of the Standard Industrial Classification (1968 edition) include commercial catering businesses.

Minimum List Headings of the Standard Industrial Classification (1968)

884. Hotels and other residential establishments: hotels, motels, holiday camps, guest houses, boarding houses, hostels, etc.
885. Restaurants, cafe's and snack bars; and milk bars, coffee bars, tea rooms, tea shops, fish and chip shops, ice-cream parlours.
886. Public houses: selling food as ancillary to alcoholic liquor.
887. Clubs, serving food + drink, other than sports and gaming clubs.

The "Catering in the U.K." GIRA report (1971) extends this classification (in fig.11.1) to include department stores' catering and "take-away" facilities. Similarly, the first annual report of the "Trends in Catering" study of eating out by the Hotel and Catering E.D.C. (1974/75) enumerates the following "outlet types" as constituting the "purely commercial sector" of catering: "take away"; pub and pub restaurant; store restaurants; cafes and snack bars; and hotels and restaurants. To this list can be added the eating arrangements attached to places of entertainment or recreation.

Fig.A.11.2. Sales of meals & refreshments in all commercial catering businesses in G.B. (annual estimates derived from the Board of Trade, 1961 & 1966; D.T.I., 1972; IPC Marketing Manual, 1973; E+O.EDC, 1975.)

<table>
<thead>
<tr>
<th>(£ million)</th>
<th>hotel and holiday camps</th>
<th>public houses</th>
<th>restaurants cafe's</th>
<th>fish-and-chip shops</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>46.2</td>
<td>33.2</td>
<td>176.2</td>
<td>48.5</td>
<td>304.1</td>
</tr>
<tr>
<td>1964</td>
<td>65.9</td>
<td>57.2</td>
<td>311.6</td>
<td>94.8</td>
<td>529.5</td>
</tr>
<tr>
<td>1969</td>
<td>101.2</td>
<td>82.9</td>
<td>375.8</td>
<td>114.9</td>
<td>674.8</td>
</tr>
<tr>
<td>1971</td>
<td>140.0</td>
<td>100.0</td>
<td>550.0</td>
<td></td>
<td>790.0</td>
</tr>
<tr>
<td>1974/5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1223.0</td>
</tr>
</tbody>
</table>

Fig.A.11.3. Regional percentages of the total number of meals eaten out per average week in Britain (E+C.EDC, 1975).

<table>
<thead>
<tr>
<th>(%)</th>
<th>Sc.</th>
<th>E.England</th>
<th>W.Penn.+ Wa</th>
<th>London</th>
<th>SE + SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal occasions</td>
<td>10</td>
<td>28</td>
<td>21</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>Main meals only</td>
<td>10</td>
<td>27</td>
<td>21</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>Snacks only</td>
<td>9</td>
<td>29</td>
<td>22</td>
<td>27</td>
<td>13</td>
</tr>
</tbody>
</table>
### Fig.A.11.4. Expenditure on meals out (£), expressed as a percentage (%) of total food expenditure. (Family Expenditure Survey, 1970 & 1974)

<table>
<thead>
<tr>
<th></th>
<th>GtnL</th>
<th>SE</th>
<th>NW</th>
<th>Sc</th>
<th>Y&amp;H</th>
<th>N</th>
<th>WM</th>
<th>EM</th>
<th>Wa</th>
<th>EA</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>£</td>
<td>1.30</td>
<td>1.12</td>
<td>0.96</td>
<td>0.95</td>
<td>0.85</td>
<td>0.77</td>
<td>0.82</td>
<td>0.77</td>
<td>0.79</td>
<td>0.74</td>
</tr>
<tr>
<td>70%</td>
<td></td>
<td>17.0</td>
<td>15.2</td>
<td>13.8</td>
<td>12.9</td>
<td>12.6</td>
<td>11.4</td>
<td>11.3</td>
<td>11.3</td>
<td>11.1</td>
<td>11.0</td>
</tr>
<tr>
<td>1973</td>
<td>£</td>
<td>2.03</td>
<td>1.85</td>
<td>1.41</td>
<td>1.52</td>
<td>1.30</td>
<td>1.42</td>
<td>1.40</td>
<td>1.32</td>
<td>1.42</td>
<td>1.18</td>
</tr>
<tr>
<td>4%</td>
<td></td>
<td>18.8</td>
<td>17.1</td>
<td>13.7</td>
<td>14.4</td>
<td>13.0</td>
<td>14.2</td>
<td>13.3</td>
<td>13.1</td>
<td>13.4</td>
<td>12.6</td>
</tr>
</tbody>
</table>

### Fig.A.11.5. Average Price of a Meal Out in a Commercial Catering Establishment in 1965 + 1975.

<table>
<thead>
<tr>
<th></th>
<th>G.B.</th>
<th>L/SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc</th>
<th>Wa</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td></td>
<td>66</td>
<td>72</td>
<td>58</td>
<td>75</td>
<td>60</td>
<td>77</td>
<td>67</td>
</tr>
<tr>
<td>1975</td>
<td></td>
<td>71</td>
<td>77</td>
<td>72</td>
<td>66</td>
<td>68</td>
<td>72</td>
<td>(H&amp;C.EDC, 1975)</td>
</tr>
</tbody>
</table>

### Fig.A.11.6. Service desired by the customer:1965, (N.C.I., 1966) & 1975 (H+C.EDC, 1975)

<table>
<thead>
<tr>
<th>(%)</th>
<th>1965</th>
<th>L/SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc</th>
<th>Wa</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table service</td>
<td>84</td>
<td>86</td>
<td>96</td>
<td>82</td>
<td>86</td>
<td>89</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Self service</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>&quot;do not mind&quot;</td>
<td>12</td>
<td>8</td>
<td>3</td>
<td>13</td>
<td>9</td>
<td>8</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Waiter</td>
<td>36</td>
<td>26</td>
<td>49</td>
<td>36</td>
<td>33</td>
<td>28</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Waitress</td>
<td>11</td>
<td>20</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>19</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>&quot;do not mind&quot;</td>
<td>47</td>
<td>43</td>
<td>38</td>
<td>49</td>
<td>46</td>
<td>47</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>background music</td>
<td>69</td>
<td>62</td>
<td>62</td>
<td>69</td>
<td>59</td>
<td>69</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>tipping separately</td>
<td>70</td>
<td>75</td>
<td>67</td>
<td>77</td>
<td>60</td>
<td>68</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>

### Fig.A.11.7. Time taken over a meal. (H+C. EDC, 1975)

<table>
<thead>
<tr>
<th></th>
<th>Sc.</th>
<th>E.England</th>
<th>W.Penn. + Wa</th>
<th>London</th>
<th>SE + SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self service</td>
<td>13</td>
<td>12</td>
<td>8</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Waiter/waitress</td>
<td>66</td>
<td>54</td>
<td>61</td>
<td>65</td>
<td>58</td>
</tr>
<tr>
<td>Counter service</td>
<td>19</td>
<td>33</td>
<td>28</td>
<td>21</td>
<td>35</td>
</tr>
</tbody>
</table>

### Fig.A.11.8. Expenditure on meals out (£), expressed as a percentage (%) of total food expenditure. (Family Expenditure Survey, 1970 & 1974)

<table>
<thead>
<tr>
<th></th>
<th>GtnL</th>
<th>SE</th>
<th>NW</th>
<th>Sc</th>
<th>Y&amp;H</th>
<th>N</th>
<th>WM</th>
<th>EM</th>
<th>Wa</th>
<th>EA</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>£</td>
<td>1.30</td>
<td>1.12</td>
<td>0.96</td>
<td>0.95</td>
<td>0.85</td>
<td>0.77</td>
<td>0.82</td>
<td>0.77</td>
<td>0.79</td>
<td>0.74</td>
</tr>
<tr>
<td>70%</td>
<td></td>
<td>17.0</td>
<td>15.2</td>
<td>13.8</td>
<td>12.9</td>
<td>12.6</td>
<td>11.4</td>
<td>11.3</td>
<td>11.3</td>
<td>11.1</td>
<td>11.0</td>
</tr>
<tr>
<td>1973</td>
<td>£</td>
<td>2.03</td>
<td>1.85</td>
<td>1.41</td>
<td>1.52</td>
<td>1.30</td>
<td>1.42</td>
<td>1.40</td>
<td>1.32</td>
<td>1.42</td>
<td>1.18</td>
</tr>
<tr>
<td>4%</td>
<td></td>
<td>18.8</td>
<td>17.1</td>
<td>13.7</td>
<td>14.4</td>
<td>13.0</td>
<td>14.2</td>
<td>13.3</td>
<td>13.1</td>
<td>13.4</td>
<td>12.6</td>
</tr>
</tbody>
</table>
Fig. A.11.8. Regional consumption of convenience foods by Caterers, G.B. 1971. (B.I.S., 1971).

<table>
<thead>
<tr>
<th>Region</th>
<th>SE</th>
<th>EA</th>
<th>SW</th>
<th>WM</th>
<th>EM</th>
<th>Y+H</th>
<th>NW</th>
<th>N</th>
<th>Wa</th>
<th>Sc</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>62.6</td>
<td>3.5</td>
<td>12.5</td>
<td>10.8</td>
<td>5.48</td>
<td>10.52</td>
<td>15.52</td>
<td>9.9</td>
<td>6.55</td>
<td>15.11</td>
<td>152.30</td>
</tr>
<tr>
<td>%</td>
<td>40.7</td>
<td>2.4</td>
<td>8.2</td>
<td>7.1</td>
<td>3.6</td>
<td>7.1</td>
<td>10.2</td>
<td>6.5</td>
<td>4.3</td>
<td>9.9</td>
<td>100</td>
</tr>
</tbody>
</table>

Fig. A.11.9. FOOD PRODUCTS USED BY CATERERS, BY REGION. (Attwood-Schlackman Catering Survey, 1972.)

(\% of caterers per Region using product)

<table>
<thead>
<tr>
<th>Product</th>
<th>Sc</th>
<th>N</th>
<th>NW</th>
<th>Y+H</th>
<th>Wa</th>
<th>EM</th>
<th>WM</th>
<th>SW</th>
<th>S, L + SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potato, Raw/unpeeled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chipped/peeled</td>
<td>16</td>
<td>20</td>
<td>12</td>
<td>10</td>
<td>15</td>
<td>9</td>
<td>12</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>part fried chips</td>
<td>7</td>
<td>3</td>
<td>4</td>
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<td>16</td>
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<td>6</td>
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<td>Dry cake/pudding mixes</td>
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<td>Margarine in packet or bulk</td>
<td>45</td>
<td>52</td>
<td>49</td>
<td>44</td>
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continued........
### Fig.A.11.9. FOOD PRODUCTS USED BY CATERERS, BY REGION (continued)

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<th>Product</th>
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<th>N</th>
<th>NW</th>
<th>Y+H</th>
<th>Wa</th>
<th>EM</th>
<th>WI</th>
<th>SW</th>
<th>S,L + SE</th>
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<td>54</td>
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<tr>
<td>Solid far for frying</td>
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<td>26</td>
<td>38</td>
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<td>25</td>
<td>16</td>
<td>18</td>
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<td>32</td>
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<td>Instant coffee</td>
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<td>27</td>
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<td>39</td>
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<td>5</td>
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<td>17</td>
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<td>5</td>
<td>15</td>
<td>9</td>
<td>9</td>
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### Fig.A.11.10. Percentage of regional population buying take-away food:


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<tr>
<th>L + S</th>
<th>E.A. + MIDS</th>
<th>Wa + SW</th>
<th>Lancs.</th>
<th>Y + NE</th>
<th>Sc</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>39</td>
<td>49</td>
<td>35</td>
<td>45</td>
<td>64</td>
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### Fig.A.11.11. Regional percentages of people buying different types of "Take-away" food. (Mintel, Oct. 1972)

<table>
<thead>
<tr>
<th>(%)</th>
<th>Fish + chips</th>
<th>Chinese food</th>
<th>Indian food</th>
<th>Chicken</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>L &amp; S</td>
<td>56</td>
<td>27</td>
<td>6</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>E.A. &amp; Mids</td>
<td>67</td>
<td>19</td>
<td>1</td>
<td>10</td>
<td>3</td>
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<tr>
<td>Wa, W + SW</td>
<td>82</td>
<td>9</td>
<td>-</td>
<td>9</td>
<td>-</td>
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<tr>
<td>Lancs</td>
<td>66</td>
<td>17</td>
<td>5</td>
<td>7</td>
<td>5</td>
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<tr>
<td>Y + NE</td>
<td>68</td>
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<td>2</td>
<td>14</td>
<td>6</td>
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<tr>
<td>Sc.</td>
<td>56</td>
<td>18</td>
<td>7</td>
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### Fig.A.11.12. Percentage eating out in foreign restaurants, 1965 (N.C.I. 1966)

<table>
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<th>(%)</th>
<th>G.B.</th>
<th>L/SE</th>
<th>NW</th>
<th>WI</th>
<th>Y+H</th>
<th>Sc</th>
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<th>SW</th>
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<td>ever visiting</td>
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<td>51</td>
<td>66</td>
<td>55</td>
<td>47</td>
<td>45</td>
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<td>43</td>
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<tr>
<td>Chinese</td>
<td>31</td>
<td>25</td>
<td>48</td>
<td>36</td>
<td>32</td>
<td>28</td>
<td>33</td>
<td>30</td>
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<tr>
<td>Indian</td>
<td>8</td>
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<td>11</td>
<td>6</td>
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<tr>
<td>Italian</td>
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<td>7</td>
<td>8</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>1</td>
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<tr>
<td>French</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
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<td>German</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
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Fig. A.11.13. (a) Preferred first drink of the day. (Birds Eye, 1967)

<table>
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<th>Beverage</th>
<th>North (%)</th>
<th>South (%)</th>
<th>Total (%)</th>
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<tr>
<td>Tea</td>
<td>64</td>
<td>73</td>
<td>68</td>
</tr>
<tr>
<td>Coffee</td>
<td>18</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Water</td>
<td>11</td>
<td>6</td>
<td>9</td>
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<tr>
<td>Fruit juice</td>
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<td>2</td>
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<tr>
<td>Milk</td>
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</table>

(b) Regional % of people who prefer early morning tea when in hotels.

(N.C.I., 1968)

<table>
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<tr>
<th>Region</th>
<th>Wa</th>
<th>SW</th>
<th>EA</th>
<th>SE</th>
<th>L/SE</th>
<th>Mids</th>
<th>N</th>
<th>Sc</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>88</td>
<td>86</td>
<td>86</td>
<td>85</td>
<td>82</td>
<td>82</td>
<td>73</td>
<td>54</td>
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Fig. A.11.14. Customers' choice of breakfast beverage. (N.C.I., 1968)

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<th>Sc</th>
<th>SW</th>
<th>N</th>
<th>EA</th>
<th>Mids</th>
<th>SE</th>
<th>L/SE</th>
</tr>
</thead>
<tbody>
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<td>Tea (%)</td>
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<td>56</td>
<td>50</td>
<td>48</td>
<td>44</td>
<td>35</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>Coffee (%)</td>
<td>37</td>
<td>44</td>
<td>50</td>
<td>52</td>
<td>56</td>
<td>65</td>
<td>64</td>
<td>73</td>
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Fig. A.11.15. The nationwide "perfect meal", 1947 and 1973. (Gallup, 1973)

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<th>Year</th>
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<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc.</th>
<th>Wa.</th>
<th>SW</th>
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<td>46/57</td>
<td>43/87</td>
<td>51/72</td>
<td>51/73</td>
<td>36/75</td>
<td>48/70</td>
<td>49/84</td>
</tr>
<tr>
<td></td>
<td>sole</td>
<td>17/4</td>
<td>22/4</td>
<td>22/-</td>
<td>12/2</td>
<td>15/3</td>
<td>20/8</td>
<td>13/3</td>
<td>11/6</td>
</tr>
<tr>
<td></td>
<td>roast chicken</td>
<td>14/3</td>
<td>9/5</td>
<td>22/2</td>
<td>11/6</td>
<td>17/-</td>
<td>16/8</td>
<td>13/-</td>
<td>11/3</td>
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<tr>
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<td>roast potatoes</td>
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<td>14/4</td>
<td>13/3</td>
<td>16/4</td>
<td>13/3</td>
<td>10/3</td>
</tr>
<tr>
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<td>peas, sprouts</td>
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<td>7/6</td>
<td>5/5</td>
<td>3/-</td>
<td>1/-</td>
<td>8/2</td>
<td>4/-</td>
<td>5/-</td>
</tr>
<tr>
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<td>trifle &amp; cream</td>
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<td>3/6</td>
<td>2/-</td>
<td>7/-</td>
<td>1/-</td>
<td>4/-</td>
<td>3/-</td>
<td>5/2</td>
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<td>51/73</td>
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<td>22/4</td>
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<td>15/3</td>
<td>20/8</td>
<td>13/3</td>
<td>11/6</td>
</tr>
<tr>
<td></td>
<td>sherry</td>
<td>14/3</td>
<td>9/5</td>
<td>22/2</td>
<td>11/6</td>
<td>17/-</td>
<td>16/8</td>
<td>13/-</td>
<td>11/3</td>
</tr>
<tr>
<td></td>
<td>prawn or shrimp cocktail</td>
<td>13/4</td>
<td>14/5</td>
<td>5/2</td>
<td>14/4</td>
<td>13/3</td>
<td>16/4</td>
<td>13/3</td>
<td>10/3</td>
</tr>
<tr>
<td></td>
<td>steak</td>
<td>5/2</td>
<td>7/6</td>
<td>5/5</td>
<td>3/-</td>
<td>1/-</td>
<td>8/2</td>
<td>4/-</td>
<td>5/-</td>
</tr>
<tr>
<td></td>
<td>red or white wine</td>
<td>4/2</td>
<td>3/6</td>
<td>2/-</td>
<td>7/-</td>
<td>1/-</td>
<td>4/-</td>
<td>3/-</td>
<td>5/2</td>
</tr>
<tr>
<td></td>
<td>trifle or apple pie &amp; fresh cream</td>
<td>17/4</td>
<td>22/4</td>
<td>22/-</td>
<td>12/2</td>
<td>15/3</td>
<td>20/8</td>
<td>13/3</td>
<td>11/6</td>
</tr>
<tr>
<td></td>
<td>cheese and biscuits</td>
<td>14/3</td>
<td>9/5</td>
<td>22/2</td>
<td>11/6</td>
<td>17/-</td>
<td>16/8</td>
<td>13/-</td>
<td>11/3</td>
</tr>
<tr>
<td></td>
<td>coffee</td>
<td>13/4</td>
<td>14/5</td>
<td>5/2</td>
<td>14/4</td>
<td>13/3</td>
<td>16/4</td>
<td>13/3</td>
<td>10/3</td>
</tr>
<tr>
<td></td>
<td>liqueur or brandy</td>
<td>5/2</td>
<td>7/6</td>
<td>5/5</td>
<td>3/-</td>
<td>1/-</td>
<td>8/2</td>
<td>4/-</td>
<td>5/-</td>
</tr>
</tbody>
</table>

Fig. A.11.16. First Course Dish Choice, When Eating Out, 1965 (N.C.I., 1966)

(a/b = What customers want/what caterers believe customers want.)
Fig. A.11.17. Second Course Dish Choice, When Eating Out, 1965. (N.C.I., 1966)

\( \frac{a}{b} = \text{What customers want/what caterers believe customers want} \)

<table>
<thead>
<tr>
<th></th>
<th>G.B.</th>
<th>SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc.</th>
<th>Wa.</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat (%)</td>
<td>42/60</td>
<td>47/54</td>
<td>46/56</td>
<td>38/65</td>
<td>41/62</td>
<td>38/69</td>
<td>42/59</td>
<td>37/60</td>
</tr>
<tr>
<td>Poultry (%)</td>
<td>26/10</td>
<td>22/5</td>
<td>23/7</td>
<td>30/15</td>
<td>29/3</td>
<td>28/6</td>
<td>33/11</td>
<td>25/24</td>
</tr>
<tr>
<td>Mixed grill (%)</td>
<td>21/12</td>
<td>18/10</td>
<td>22/26</td>
<td>17/7</td>
<td>23/5</td>
<td>24/15</td>
<td>23/11</td>
<td>27/11</td>
</tr>
<tr>
<td>Fish (%)</td>
<td>4/1</td>
<td>4/1</td>
<td>5/-</td>
<td>7/2</td>
<td>4/-</td>
<td>5/2</td>
<td>1/-</td>
<td>4/2</td>
</tr>
<tr>
<td>Shell fish (%)</td>
<td>3/1</td>
<td>4/-</td>
<td>7/-</td>
<td>1/-</td>
<td>6/-</td>
<td>1/-</td>
<td>1/2</td>
<td></td>
</tr>
</tbody>
</table>

Fig. A.11.18. Vegetable Choice, When Eating Out 1965. (N.C.I., 1966)

\( \frac{a}{b} = \text{What customers want/what caterers believe customers want} \)

<table>
<thead>
<tr>
<th></th>
<th>G.B.</th>
<th>SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc.</th>
<th>Wa.</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>potatoes (%)</td>
<td>78/63</td>
<td>78/61</td>
<td>83/53</td>
<td>68/57</td>
<td>74/51</td>
<td>81/71</td>
<td>81/59</td>
<td>72/67</td>
</tr>
<tr>
<td>Peas (%)</td>
<td>29/50</td>
<td>28/31</td>
<td>26/70</td>
<td>30/37</td>
<td>24/51</td>
<td>27/63</td>
<td>32/41</td>
<td>29/68</td>
</tr>
<tr>
<td>Brussel sprouts (%)</td>
<td>26/19</td>
<td>23/19</td>
<td>20/19</td>
<td>30/31</td>
<td>21/11</td>
<td>25/15</td>
<td>33/8</td>
<td>28/17</td>
</tr>
<tr>
<td>Cabbage (%)</td>
<td>5/12</td>
<td>6/2</td>
<td>6/16</td>
<td>4/19</td>
<td>13/5</td>
<td>2/6</td>
<td>6/11</td>
<td>3/5</td>
</tr>
<tr>
<td>Cauliflower (%)</td>
<td>15/10</td>
<td>14/3</td>
<td>18/7</td>
<td>12/9</td>
<td>19/14</td>
<td>25/13</td>
<td>15/13</td>
<td>13/8</td>
</tr>
<tr>
<td>Green beans (%)</td>
<td>15/7</td>
<td>20/11</td>
<td>14/5</td>
<td>14/7</td>
<td>14/5</td>
<td>11/4</td>
<td>16/8</td>
<td>11/5</td>
</tr>
<tr>
<td>Carrots (%)</td>
<td>8/5</td>
<td>7/4</td>
<td>18/16</td>
<td>9/-</td>
<td>10/8</td>
<td>6/8</td>
<td>5/5</td>
<td>4/2</td>
</tr>
<tr>
<td>Asparagus (%)</td>
<td>11/3</td>
<td>11/5</td>
<td>3/-</td>
<td>14/-</td>
<td>13/-</td>
<td>12/4</td>
<td>12/-</td>
<td>13/3</td>
</tr>
<tr>
<td>Broccoli (%)</td>
<td>6/2</td>
<td>7/6</td>
<td>6/-</td>
<td>7/2</td>
<td>4/-</td>
<td>5/2</td>
<td>2/-</td>
<td>8/-</td>
</tr>
</tbody>
</table>

Fig. A.11.19. Preferences for main restaurant/hotel meal beverages, 1965. (N.C.I. 1966)

(a) Tea or coffee

<table>
<thead>
<tr>
<th></th>
<th>GB</th>
<th>L/SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc.</th>
<th>Wa.</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>tea (%)</td>
<td>18</td>
<td>22</td>
<td>28</td>
<td>12</td>
<td>23</td>
<td>15</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>coffee (%)</td>
<td>59</td>
<td>60</td>
<td>71</td>
<td>57</td>
<td>55</td>
<td>56</td>
<td>52</td>
<td>59</td>
</tr>
</tbody>
</table>

(b) Wine or beer

<table>
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<th></th>
<th>GB</th>
<th>L/SE</th>
<th>NW</th>
<th>WM</th>
<th>Y+H</th>
<th>Sc.</th>
<th>Wa.</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>beer/cider</td>
<td>25</td>
<td>19</td>
<td>22</td>
<td>32</td>
<td>26</td>
<td>18</td>
<td>34</td>
<td>18</td>
</tr>
<tr>
<td>wine</td>
<td>44</td>
<td>52</td>
<td>32</td>
<td>41</td>
<td>33</td>
<td>54</td>
<td>40</td>
<td>29</td>
</tr>
<tr>
<td>liqueurs</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>13</td>
<td>12</td>
<td>15</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>spirits</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>aperitif/sherry</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
COMMERCIAL CATERING COMPANIES' QUESTIONNAIRE:  
- KEY POINTS FOR STRUCTURED INTERVIEW.

1. **Type of Organization.** Does the company consist of a restaurant, hotel or "pub" chain, or more than one type of outlet?

2. **Type of market.** What type of customers are being catered for?  
   (i.e. Businessmen, holidaymakers, .............)

3. **Number of Units.** How many units are there in Britain?

4. **Location of Units.** (a) What is the geographical spread and concentration of units?  
   (b) What type of location is chosen, if any?  
   (i.e. urban / rural / .............)

5. **Price.** What is the main meal price range, and the average (approx.) price paid per customer?

6. **Meals.** Which meals are available?

7. **Food.** Are meal sales the primary concern of units, or is it this a subsidiary function?

8. **Suppliers.** Does the company have a central supplier who distributes to all outlets - if not, how is the food bought?

9. **Menus.** Is there nationwide standardization of menus, or does menu content vary geographically?

10. **Managers.** How much freedom do the individual unit managers have as regards menu planning and content?

11. **Regional preferences.** Are any regional food commodity preferences apparent?  
    (e.g. lamb, beef, .............)

12. **Response to preferences.** Does the company respond to perceived differences in demand for various foods/dishes. If so, is this in terms of purchasing or menu structure?

13. **Traditional regional dishes.** Are any traditional regional dishes featured on menus? If so, please stipulate "what" and "where".

14. **Personal opinion.** How do you perceive regional food preferences in commercial catering throughout Britain? Do they exist..... where and how?

15. **Evidence.** Is your company aware of any work done on regional food preferences within the commercial catering industry, or any individual or organization with an interest in it?
<table>
<thead>
<tr>
<th>ORGN. CODE</th>
<th>TYPE OF UNITS IN ORGANIZATION</th>
<th>PREDOMINANT TYPE OF MARKET</th>
<th>NO. OF UNITS</th>
<th>GEOGRAPHICAL LOCATION OF UNITS IN BRITAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>hotels, restaurant public houses</td>
<td>leisure</td>
<td>3,500</td>
<td>national</td>
</tr>
<tr>
<td>B</td>
<td>hotels restaurants cafeterias</td>
<td>travel, business leisure</td>
<td>1,263</td>
<td>national</td>
</tr>
<tr>
<td>C</td>
<td>hotel restaurants cafeterias, pubs</td>
<td>general</td>
<td>187</td>
<td>national</td>
</tr>
<tr>
<td>D</td>
<td>hotel restaurants pubs</td>
<td>general</td>
<td>109</td>
<td>London + SE, WM, NW, Sc.</td>
</tr>
<tr>
<td>E</td>
<td>hotel restaurants cafeterias</td>
<td>travel (business + leisure)</td>
<td>20</td>
<td>England + Sc.</td>
</tr>
<tr>
<td>F</td>
<td>hotel, restaurant</td>
<td>business</td>
<td>40</td>
<td>England + Wa (maj=SE &amp; Y+H)</td>
</tr>
<tr>
<td>G</td>
<td>hotels</td>
<td>business</td>
<td>64</td>
<td>national</td>
</tr>
<tr>
<td>H</td>
<td>hotels</td>
<td>general</td>
<td>63</td>
<td>England + Sc. (maj= L + S)</td>
</tr>
<tr>
<td>I</td>
<td>hotels</td>
<td>holiday business</td>
<td>51</td>
<td>England</td>
</tr>
<tr>
<td>K</td>
<td>hotels</td>
<td>general</td>
<td>40</td>
<td>Sc, N, NW, Y+H</td>
</tr>
<tr>
<td>L</td>
<td>hotels</td>
<td>general</td>
<td>40</td>
<td>England + Sc.</td>
</tr>
<tr>
<td>M</td>
<td>hotels</td>
<td>tourist, local</td>
<td>31</td>
<td>Maj= NW + N., Wa, WM, EM</td>
</tr>
<tr>
<td>N</td>
<td>hotels</td>
<td>tourist/holiday business</td>
<td>25</td>
<td>national</td>
</tr>
<tr>
<td>O</td>
<td>hotels</td>
<td>holiday</td>
<td>12</td>
<td>Sc.N, SE, SW</td>
</tr>
<tr>
<td>P</td>
<td>hotels</td>
<td>travel, tourist business</td>
<td>11</td>
<td>national</td>
</tr>
<tr>
<td>Q</td>
<td>steak house restaurants</td>
<td>general</td>
<td>150</td>
<td>national</td>
</tr>
<tr>
<td>R</td>
<td>&quot;fast food&quot; restaurants</td>
<td>shopper, office worker, etc.</td>
<td>410</td>
<td>national</td>
</tr>
<tr>
<td>S</td>
<td>restaurants, cafeterias</td>
<td>leisure</td>
<td>70</td>
<td>London, SE EA, NW</td>
</tr>
<tr>
<td>T</td>
<td>in-store restaurants</td>
<td>shopper, office worker, etc.</td>
<td>67</td>
<td>England (not N)</td>
</tr>
<tr>
<td>U</td>
<td>in-store restaurants</td>
<td>shopper, office worker, etc.</td>
<td>57</td>
<td>national</td>
</tr>
<tr>
<td>V</td>
<td>in-store restaurants</td>
<td>shopper, office worker, etc.</td>
<td>48</td>
<td>England + Sc.</td>
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### Fig. A.11.25. TABULATED RESULTS OF COMMERCIAL CATERING COMPANIES' STRUCTURED INTERVIEWS.

<table>
<thead>
<tr>
<th>ORGN CODE</th>
<th>TYPE OF LOCATION OF UNITS</th>
<th>MAIN MEAL PRICE RANGE, (£ PRICE)</th>
<th>MEALS AVAILABLE</th>
<th>IS FOOD PRIMARY OR SUBSIDIARY FUNCTION?</th>
<th>FOOD SUPPLIERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>rural + in suburbs</td>
<td>50p - £3</td>
<td>midday + evening</td>
<td>primary</td>
<td>nominated + local</td>
</tr>
<tr>
<td>B</td>
<td>travel: urban: holiday</td>
<td>10p-£10+ (£2-50)</td>
<td>All</td>
<td>subsidiary</td>
<td>central</td>
</tr>
<tr>
<td>C</td>
<td>travel: urban holiday</td>
<td>30p-£10+</td>
<td>All</td>
<td>both</td>
<td>40% central, 60% nominated</td>
</tr>
<tr>
<td>D</td>
<td>urban</td>
<td>50p-£8</td>
<td>midday + evening</td>
<td>primary</td>
<td>80% nominated</td>
</tr>
<tr>
<td>E</td>
<td>motorways; leisure</td>
<td>20p-£4+ (£2)</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated</td>
</tr>
<tr>
<td>F</td>
<td>variable</td>
<td>(£2)</td>
<td>All</td>
<td>subsidiary 35% turnover</td>
<td>nominated + local</td>
</tr>
<tr>
<td>G</td>
<td>variable</td>
<td>(£3)</td>
<td>All</td>
<td>subsidiary 35% turnover</td>
<td>nominated</td>
</tr>
<tr>
<td>H</td>
<td>urban areas</td>
<td>30p-£10</td>
<td>All</td>
<td>subsidiary 50% turnover</td>
<td>central + nominated</td>
</tr>
<tr>
<td>I</td>
<td>variable</td>
<td>£1-50-£4 (£2-50)</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated</td>
</tr>
<tr>
<td>J</td>
<td>variable</td>
<td>-</td>
<td>All</td>
<td>subsidiary</td>
<td>60% local</td>
</tr>
<tr>
<td>K</td>
<td>variable</td>
<td>30p-£5 (£1-80)</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated</td>
</tr>
<tr>
<td>L</td>
<td>provincial town centres</td>
<td>£1.50-£3</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated + local</td>
</tr>
<tr>
<td>M</td>
<td>small + large towns</td>
<td>(£2)</td>
<td>All</td>
<td>subsidiary</td>
<td>All local</td>
</tr>
<tr>
<td>N</td>
<td>only in city centres</td>
<td>50p-£10 (£2)</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated + local</td>
</tr>
<tr>
<td>O</td>
<td>holiday areas</td>
<td>inclusive charge</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated</td>
</tr>
<tr>
<td>P</td>
<td>major roadways</td>
<td>£2-£6 (£3)</td>
<td>All</td>
<td>subsidiary</td>
<td>nominated few local</td>
</tr>
<tr>
<td>Q</td>
<td>variable</td>
<td>£1-£2.50 (£1.60)</td>
<td>midday + evening</td>
<td>primary</td>
<td>nominated</td>
</tr>
<tr>
<td>R</td>
<td>shopping centres</td>
<td>20p-£1</td>
<td>midday + evening</td>
<td>primary</td>
<td>nominated + local</td>
</tr>
<tr>
<td>S</td>
<td>urban; shows + exhibitions</td>
<td>40p-£10</td>
<td>midday + evening</td>
<td>both</td>
<td>90% nominated</td>
</tr>
<tr>
<td>T</td>
<td>urban</td>
<td>(£1.25)</td>
<td>midday/snacks</td>
<td>subsidiary</td>
<td>nominated or local</td>
</tr>
<tr>
<td>U</td>
<td>urban</td>
<td>(£1)</td>
<td>midday/snacks</td>
<td>subsidiary</td>
<td>central</td>
</tr>
<tr>
<td>V</td>
<td>urban</td>
<td>(£1.10)</td>
<td>midday/snacks</td>
<td>subsidiary</td>
<td>90% central</td>
</tr>
<tr>
<td>CODE</td>
<td>MENU CONTENT</td>
<td>DEGREE FREEDOM OF UNIT MANAGERS</td>
<td>REGIONAL COMMODITY PREFERENCES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>----------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>standardized</td>
<td>very limited</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>geog. variation in hotels only</td>
<td>only re menu content in hotels</td>
<td>significant only in Sc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>upmarket variation</td>
<td>extremely limited</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>variation only in hotels</td>
<td>negligible</td>
<td>in some areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>varies within stipulated items</td>
<td>considerable</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>varies between units</td>
<td>reasonable</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>varies by market not region managers propose menu content</td>
<td>none</td>
<td></td>
<td></td>
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<td>H</td>
<td>limited variation</td>
<td>reasonable</td>
<td>none</td>
<td></td>
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<tr>
<td>I</td>
<td>varies between hotels</td>
<td>very great</td>
<td>none</td>
<td></td>
<td></td>
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<tr>
<td>J</td>
<td>enormous variation</td>
<td>very great</td>
<td>none</td>
<td></td>
<td></td>
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<tr>
<td>K</td>
<td>varies by local demand</td>
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<td>some</td>
<td></td>
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<tr>
<td>L</td>
<td>varies within stipulated items</td>
<td>limited</td>
<td>none</td>
<td></td>
<td></td>
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<td>M</td>
<td>varies between hotels</td>
<td>very great</td>
<td>none</td>
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<tr>
<td>N</td>
<td>standard guidelines nationwide</td>
<td>very limited</td>
<td>none</td>
<td></td>
<td></td>
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<tr>
<td>O</td>
<td>varies by locality freedom within guidelines</td>
<td>none</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>P</td>
<td>varies by locality</td>
<td>limited</td>
<td>yes—especially in Sc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>standard nationwide</td>
<td>none</td>
<td>particularly in bakery products &amp; Sc.</td>
<td></td>
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<tr>
<td>R</td>
<td>some local</td>
<td>none</td>
<td>noticeable between NW+SE &amp; SE</td>
<td></td>
<td></td>
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<tr>
<td>S</td>
<td>some variation</td>
<td>reasonable</td>
<td>noticeable between NW+SE &amp; SE</td>
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<tr>
<td>T</td>
<td>some variation by locality considerable within guidelines</td>
<td>in pies and fish</td>
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<td>U</td>
<td>negligible variation</td>
<td>none</td>
<td>limited in N &amp; Mids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>negligible variation</td>
<td>none</td>
<td>bakery products Sc., fish</td>
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**Fig.A.11.25. TABULATED RESULTS OF COMMERCIAL CATERING COMPANIES**

**sheet 4. STRUCTURED INTERVIEWS.**

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<thead>
<tr>
<th>ORGN. CODE</th>
<th>RESPONSE TO VARYING REGIONAL DEMAND</th>
<th>ANY TRADITIONAL REGIONAL DISHES ON MENUS?</th>
<th>PERCEPTION OF REGIONAL PREFERENCES IN CATERING</th>
<th>AWARE OF ANY RESEARCH INTO REG. PREPS. IN CATERING.</th>
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<tr>
<td>A</td>
<td>none</td>
<td>none</td>
<td>only in individually owned units</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>none</td>
<td>none</td>
<td>in up-market sector only</td>
<td>manufacturers market research</td>
</tr>
<tr>
<td>C</td>
<td>only in tourist area</td>
<td>not regularly</td>
<td>not viable economically</td>
<td>No</td>
</tr>
<tr>
<td>D</td>
<td>some in purchasing &amp; menu content</td>
<td>none</td>
<td>stronghold = Lancashire</td>
<td>No</td>
</tr>
<tr>
<td>E</td>
<td>None</td>
<td>none</td>
<td>only in &quot;take-away&quot; sector</td>
<td>No</td>
</tr>
<tr>
<td>F</td>
<td>no conscious policy</td>
<td>only local fish</td>
<td>not in hotel sector</td>
<td>No</td>
</tr>
<tr>
<td>G</td>
<td>only in price + type of meals demand</td>
<td>in Sc., Wa., Devon + Cumbria</td>
<td>not popular among businessmen</td>
<td>Tourist Board own competition</td>
</tr>
<tr>
<td>H</td>
<td>none</td>
<td>few in Sc., + N. England</td>
<td>only as tourist &quot;gimmick&quot;</td>
<td>H + C EDC, Tourist Board</td>
</tr>
<tr>
<td>I</td>
<td>none</td>
<td>negligible</td>
<td>do not exist in hotel sector</td>
<td>No</td>
</tr>
<tr>
<td>J</td>
<td>none</td>
<td>feature a few local specialities</td>
<td>caterer or customer causes demand?</td>
<td>No</td>
</tr>
<tr>
<td>K</td>
<td>individual manager response to demand</td>
<td>mainly in Sc., as a tourist &quot;gimmick&quot;</td>
<td></td>
<td>Tourist Board</td>
</tr>
<tr>
<td>L</td>
<td>wide range menus</td>
<td>only few in Sc.</td>
<td>not in up-market sector</td>
<td>No</td>
</tr>
<tr>
<td>M</td>
<td>none</td>
<td>none</td>
<td>not in hotel sector</td>
<td>No</td>
</tr>
<tr>
<td>N</td>
<td>conscious policy of not responding</td>
<td>only as a tourist &quot;promotion&quot; for one night</td>
<td>moving trade not evident</td>
<td>No</td>
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<tr>
<td>O</td>
<td>no conscious policy</td>
<td>only in Sc.+ SW &quot;home-cooking&quot; preferred in N</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>in menu structure</td>
<td>in tourist areas</td>
<td>limited to promotions</td>
<td>Tourist Board</td>
</tr>
<tr>
<td>Q</td>
<td>in menu structure</td>
<td>none</td>
<td>negligible</td>
<td>No</td>
</tr>
<tr>
<td>R</td>
<td>affects menu structure</td>
<td>a few-mostly Sc., N + SW</td>
<td>only featured if demanded</td>
<td>H + C EDC, Smethurts</td>
</tr>
<tr>
<td>S</td>
<td>in menu content + dish preparation</td>
<td>practically none</td>
<td>only in up-market sector</td>
<td>H + C EDC, Smethurts</td>
</tr>
<tr>
<td>T</td>
<td>in menu content</td>
<td>practically none</td>
<td>very real differences</td>
<td>only from own sales mix</td>
</tr>
<tr>
<td>U</td>
<td>slight: in menu content</td>
<td>none</td>
<td>insignificant</td>
<td>No</td>
</tr>
<tr>
<td>V</td>
<td>only in Sc. use different suppliers</td>
<td>none</td>
<td>not viable economically</td>
<td>No</td>
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</table>

INDIVIDUAL COMMERCIAL ESTABLISHMENTS POSTAL QUESTIONNAIRE

1. **Type of Establishment.** Is the establishment a restaurant or a hotel, and is it independent or part of a chain organization?

2. **Meals.** What meals do you serve? (breakfast / lunch / dinner)

3. **Price.** What is the main meal price range per customer?

4. **Food Suppliers.** Do you have one central supplier, numerous local suppliers, or ............?

5. **Regional Dishes.** Could you please give examples of local regional dishes featured on your menus? (Sample menus would be very welcome.)

6. **Market for Regional Fare.** Which customers prefer the regional dishes? (locals / British tourists / foreign visitors).

7. **Popularity.** How popular are the regional dishes? (not very / average / quite / very).

8. **Personal Opinion.**
   (a) Do you feel that there are regional food preferences throughout Britain?
   (b) Is there a significant demand for regional fare within the commercial catering industry?

9. **Evidence.**
   (a) Are you aware of any recent research/publications on regional tastes?
   (b) Does this information influence you menu structure?
Tabulated Results of Individual Commercial Caterers' Questionnaire. FIG.A.11.27. sheet:1.

<table>
<thead>
<tr>
<th>Region</th>
<th>Establishments</th>
<th>Meals</th>
<th>Price range</th>
<th>Suppliers</th>
<th>Examples of Regional Dishes</th>
<th>Regional Dishes Preferred by:</th>
<th>Popularity of Regional Dishes</th>
<th>Reg. Profits in G.B.</th>
<th>Signif. Demand</th>
<th>Aware of Info?</th>
<th>Does this Affect Menu?</th>
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<tr>
<td></td>
<td>Chain</td>
<td>%</td>
<td>%</td>
<td>Self</td>
<td>Many Local</td>
<td>All</td>
<td>Local</td>
<td>Foresters</td>
<td>In</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>SOUTH EAST:Total %</td>
<td>13</td>
<td>47</td>
<td>48 48 5 24</td>
<td>52 24</td>
<td>33 5</td>
<td>86</td>
<td>24 24 53</td>
<td>10 29 29 53</td>
<td>67 33 33 62</td>
<td>10 90 5 5</td>
<td>5 5</td>
</tr>
<tr>
<td>% Independent Units</td>
<td>100</td>
<td>48</td>
<td>49 48 5 24</td>
<td>52 24</td>
<td>33 5</td>
<td>86</td>
<td>24 24 53</td>
<td>10 29 29 53</td>
<td>67 33 33 62</td>
<td>10 90 5 5</td>
<td>5 5</td>
</tr>
<tr>
<td>% Chain Units</td>
<td>100</td>
<td>50</td>
<td>50 50 50</td>
<td>50 50</td>
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<td>80</td>
<td>80 80 80 80</td>
<td>80 80 80 80</td>
<td>80 80 80 80</td>
<td>80 80 80 80</td>
<td>80 80 80 80</td>
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<tr>
<td>EAST ANGLIA: Total %</td>
<td>17</td>
<td>83</td>
<td>67 67 16 16</td>
<td>67 16</td>
<td>83 16</td>
<td>100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
</tr>
<tr>
<td>% Independent Units</td>
<td>100</td>
<td>69</td>
<td>69 69 31 8</td>
<td>62 15 46</td>
<td>8 8 92</td>
<td>Many</td>
<td>82 8 31 31</td>
<td>16 16 69</td>
<td>62 38 54 46</td>
<td>8 92 8</td>
<td>8 8</td>
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<tr>
<td>% Chain Units</td>
<td>100</td>
<td>100</td>
<td>100 100 100</td>
<td>100 100 50</td>
<td>100</td>
<td>Few</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
</tr>
<tr>
<td>SOUTH WEST: Total %</td>
<td>13</td>
<td>87</td>
<td>73 73 27 7</td>
<td>20 57 13</td>
<td>40 13 7 7 87</td>
<td>53 20 53 27</td>
<td>13 27 60</td>
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<td>100</td>
<td>100</td>
<td>100 100 100</td>
<td>100 100 50</td>
<td>100</td>
<td>Some</td>
<td>75 25</td>
<td>25 25 25 25</td>
<td>75 25 25 25</td>
<td>75 25 25</td>
<td>75 25 25</td>
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<tr>
<td>% Chain Units</td>
<td>-</td>
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<td>100 100 100</td>
<td>100 100 50</td>
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<td>25 25 25 25</td>
<td>75 25 25 25</td>
<td>75 25 25 25</td>
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</tr>
<tr>
<td>E.Midlands: Total %</td>
<td>100</td>
<td>67</td>
<td>67 67 67 67</td>
<td>67 33 16</td>
<td>16 100</td>
<td>Some</td>
<td>50 33 16 16 16</td>
<td>33 33 16 16 33</td>
<td>50 50 50 50 50</td>
<td>67 33 33</td>
<td>33 33 33</td>
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<td>100</td>
<td>86</td>
<td>43 43 57 14</td>
<td>57 28 14 14</td>
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<td>57</td>
<td>28 14 14 14</td>
<td>14 14 14 14 14</td>
<td>57 43 57 43</td>
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<td>% Chain Units</td>
<td>-</td>
<td>100</td>
<td>100 100 100</td>
<td>100 100 100</td>
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<td>100</td>
<td>100 100</td>
<td>100 100</td>
<td>100 100</td>
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<td>100 100</td>
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<tr>
<td>W.Midlands: Total %</td>
<td>14</td>
<td>96</td>
<td>43 43 57 14</td>
<td>57 28 14 14</td>
<td>100</td>
<td>57</td>
<td>28 14 14 14</td>
<td>14 14 14 14 14</td>
<td>57 43 57 43</td>
<td>71 28 28 28</td>
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### Tabulated Results of Individual Commercial Caterers' Questionnaire, FIG.A.11.27, sheet: 2.

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<th>Price Range</th>
<th>Suppliers</th>
<th>Examples of Regional Dishes</th>
<th>Regional Dishes Preferred by:</th>
<th>Popularity of regional Dishes</th>
<th>Reg. Pref. in GB</th>
<th>Signif Demand</th>
<th>Aware of Info?</th>
<th>Does this Affect Menu?</th>
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<td></td>
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<td>Lunch Only</td>
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<td>All local</td>
<td>&quot;Not very&quot; Average in %</td>
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<td>Total</td>
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<td>under £2</td>
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</tr>
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<td></td>
<td>% Chain Units</td>
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<td>50</td>
<td>Few</td>
<td>25</td>
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<td>100</td>
<td>50</td>
<td>100</td>
<td>75</td>
<td>Few</td>
<td>25</td>
<td>75</td>
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<tr>
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<td>100</td>
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<td>21</td>
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<td>50</td>
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<td>100</td>
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<td>100</td>
<td>75</td>
<td>100</td>
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<td>10</td>
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<td>100</td>
<td>75</td>
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<td>70</td>
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<td>50</td>
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<td>70</td>
<td>10</td>
<td>20</td>
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<td>National Average %</td>
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<td>36</td>
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---

**Fig. A.11.27**
FIG.A.11.28. REGIONAL DISHES FEATURED ON INDIVIDUAL COMMERCIAL CATERERS' MENUS THROUGHOUT BRITAIN.

SCOTLAND: The dishes most often mentioned by Scottish caterers are herrings in oatmeal, soups, smoked and grilled salmon, Scotch beef, venison, haggis, "mince and tatties", neeps and tatties, and a variety of local game and fish. Heilan' steaks, Edinburgh fog, Murrayfield gateau, whisky ice-cream, scallops, Cullen Skink, and, of course, porridge, are also noted.

WALES: Similarly in Wales, soup (cawl) and local fish and seafood are listed, but the prevalence of local lamb, pork and poultry dishes shows the most marked contrast to other regions.

NORTH: Fresh salmon, Cumberland sausage, Westmorland Tatie Pot, Lakeland lamb, Cumberland beef, Northumberland cutlets, Cumbria Hot Pot, Game Border Tart, Cumberland Rum Nicky and many other dishes are enumerated predominantly by the independent caterers of the North.

NORTH WEST: In the North West, Lancashire Hot Pot with pickled beetroot, Lancashire steak pie and black pudding are featured along with Cheshire gammon, Cheshire cheese and meat loaf, local game, tripe, and numerous fish dishes, by the independent establishments.

YORKSHIRE & HUMBERSIDE: In Yorkshire and Humberside, roast beef and Yorkshire pudding is most commonly mentioned, along with local stews and fish dishes.

MIDLANDS: Only local game and pies are specifically noted by caterers of the East Midlands, while those of the West Midlands list jugged Shropshire hare, Wye salmon and local fruit pies.

EAST ANGLIA: The most commonly mentioned dishes in East Anglia are a plethora of local fish and seafood which overshadow the occasional game, venison and samphire.

SOUTH WEST: In the South West are mentioned local fish and seafood dishes along with pies and pasties, Sodbury ham in cider, guinea fowl in cider, Devonshire chicken in cider, pork fillet in cider, Cotswold Cottage pie, lamb in various sauces, Somerset pork loin, Dorset Knobs, Dorset Blue Vinney cheese, and of course, clotted cream.

SOUTH EAST: Colchester pie, Aylesbury duckling, Pigeon pie, Hare pudding, grilled mackerel, jugged hare, veal and venison pies, are all mentioned once by the caterers in the South East along with a range of various local fruit pies.
Fig. A.11.22. Where the British take their main holidays in Britain.
Gower Economic Press (1975/6) (Tourist Board Regions)

<table>
<thead>
<tr>
<th>Scotland</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highlands &amp; Islands</td>
<td>Northumbria</td>
</tr>
<tr>
<td>Gremian</td>
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<tr>
<td>South</td>
<td>South East</td>
</tr>
</tbody>
</table>

Fig. A.11.30. Where foreign visitors go in Britain. (N.C.I., 1969).
Percentage of all foreign visitors spending one night or more in:

<table>
<thead>
<tr>
<th></th>
<th>London</th>
<th>Stratford</th>
<th>Oxford</th>
<th>Cambridge</th>
<th>Glasgow</th>
<th>Edinburg</th>
<th>Scotland</th>
<th>Seaside</th>
<th>NW &amp; Lakes</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>84</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>15</td>
<td>24</td>
<td>20</td>
<td>28</td>
<td>14</td>
<td>13</td>
</tr>
</tbody>
</table>

Fig. A.11.31. Where visitors to Britain eat out. (N.C.I., 1969).

<table>
<thead>
<tr>
<th>Establishment:</th>
<th>in restaurants</th>
<th>in cafes, snack bars, chain restaurants</th>
<th>in hotel restaurants</th>
<th>in pubs</th>
<th>in Dept. stores</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>%:</td>
<td>42</td>
<td>37</td>
<td>23</td>
<td>8</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Fig. A.11.32. First dish choice of "Locals" in Dwyfor(%), compared to the most popular dishes among "Visitors"(%), as mentioned by caterers.

<table>
<thead>
<tr>
<th>MEAT</th>
<th>LOCALS</th>
<th>VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;meat&quot;</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>&quot;meat&quot;</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>&quot;meat&quot;</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>&quot;meat&quot;</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>&quot;poultry&quot;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>&quot;poultry&quot;</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>&quot;poultry&quot;</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>&quot;poultry&quot;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>&quot;poultry&quot;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>&quot;fish&quot;</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>&quot;fish&quot;</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>&quot;fish&quot;</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>&quot;fish&quot;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>&quot;fish&quot;</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEAFOOD</th>
<th>LOCALS</th>
<th>VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;seafood&quot;</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>&quot;seafood&quot;</td>
<td>2</td>
<td></td>
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<tr>
<td>&quot;seafood&quot;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>&quot;seafood&quot;</td>
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<td></td>
</tr>
<tr>
<td>&quot;seafood&quot;</td>
<td>2</td>
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<td>&quot;seafood&quot;</td>
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<td></td>
</tr>
<tr>
<td>&quot;seafood&quot;</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOREIGN DISHES</th>
<th>LOCALS</th>
<th>VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italian</td>
<td>5</td>
<td>(-)</td>
</tr>
<tr>
<td>French</td>
<td>1</td>
<td>(no reply)</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
<td>(no reply)</td>
</tr>
<tr>
<td>Indian</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>&quot;other&quot;</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

| SALAD          | 2      |          |
| "speciality"   | 2      | 1        |

| OTHER          | 2      | 1        |
### APPENDICES TO CHAPTER 12.

#### Fig. A.12.1. BROAD CATEGORIES OF REGIONALLY PREFERRED DISHES IN VARIOUS CATERING SECTORS.

(X = marked preference for; (X) = marked aversion to...

*in the following sectors:* - H = household; S = school; P = hospital (patients); E = employee; C = commercial.

<table>
<thead>
<tr>
<th>DISHES:</th>
<th>Wa</th>
<th>Sc</th>
<th>H</th>
<th>Y&amp;H</th>
<th>NW</th>
<th>EM</th>
<th>WM</th>
<th>SW</th>
<th>EA</th>
<th>SE</th>
<th>L</th>
</tr>
</thead>
<tbody>
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<tr>
<td>bacon + ham</td>
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<td>(P)</td>
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<td></td>
<td></td>
<td></td>
<td>(P)</td>
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<td>(P)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>lamb</td>
<td>SPC</td>
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<td></td>
<td></td>
<td></td>
<td>(P)</td>
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<tr>
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<td>S</td>
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<tr>
<td>pork</td>
<td>SPE</td>
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<tr>
<td>plaice</td>
<td>PE</td>
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<tr>
<td>hake</td>
<td>EC</td>
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<tr>
<td>sole, skate, fish-in-sauce, etc.</td>
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<td>S</td>
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</tbody>
</table>
FIG.A.12.2. BROAD CATEGORIES OF REGIONALLY PREFERRED VEGETABLES IN VARIOUS CATERING SECTORS.

(X = marked preference for...; (X) = marked aversion to...)

(in the following sectors:- H = household; S = school;
P = hospital (patients); E = employee; C = commercial.)

<table>
<thead>
<tr>
<th>VEGETABLES</th>
<th>Wa</th>
<th>Sc</th>
<th>N</th>
<th>YNH</th>
<th>NW</th>
<th>EM</th>
<th>WM</th>
<th>SW</th>
<th>EA</th>
<th>SE</th>
<th>L</th>
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<tbody>
<tr>
<td>fresh green</td>
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<td>(H)</td>
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<td></td>
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<tr>
<td>root</td>
<td>H</td>
<td>(H)P</td>
<td>PE</td>
<td>(S)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>peas</td>
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<td></td>
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<td>carrots</td>
<td></td>
<td></td>
<td>SC</td>
<td>HP</td>
<td>S</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&quot;mushy&quot; peas</td>
<td></td>
<td>S</td>
<td>SPC</td>
<td>SPEC</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>broccoli, spinach, celery, courgettes, unusual veg...</td>
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<tr>
<td>baked beans</td>
<td>P</td>
<td>SP</td>
<td>H</td>
<td>H</td>
<td>ES</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>P</td>
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<td>chips</td>
<td>S</td>
<td>P</td>
<td>P</td>
<td>SP</td>
<td>S</td>
<td>S</td>
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<td>boiled, creamed</td>
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<td>PE</td>
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<td></td>
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<tr>
<td>scallop, croquette, duchesse</td>
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FIG.A.12.3. BROAD CATEGORIES OF REGIONALLY PREFERRED DESSERTS IN VARIOUS CATERING SECTORS.

<table>
<thead>
<tr>
<th>DESSERTS</th>
<th>Wa</th>
<th>Sc</th>
<th>N</th>
<th>YNH</th>
<th>NW</th>
<th>EM</th>
<th>WM</th>
<th>SW</th>
<th>EA</th>
<th>SE</th>
<th>L</th>
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<tbody>
<tr>
<td>fresh fruit</td>
<td>(P)</td>
<td>(H)</td>
<td>(S)</td>
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<td></td>
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<td>milk puddings</td>
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<td>HE</td>
<td>HE(S)</td>
<td>SE</td>
<td>SP</td>
<td>PE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(S)</td>
</tr>
<tr>
<td>ice-cream</td>
<td>HE</td>
<td>PC</td>
<td></td>
<td>S</td>
<td>S</td>
<td>H</td>
<td>HPC</td>
<td>C</td>
<td></td>
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<tr>
<td>yoghurt</td>
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<td>S</td>
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<td>LIGHTER DESSERTS</td>
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<td>(E)</td>
<td>(E)</td>
<td>S</td>
<td>(E)</td>
<td>PC</td>
<td>PEC</td>
<td>C</td>
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<td>SP</td>
<td>SPE</td>
<td>SPE</td>
<td>PE</td>
<td>S</td>
<td>S</td>
<td>(P)</td>
<td>(P)</td>
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<tr>
<td>tart</td>
<td>SP</td>
<td>E</td>
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<td>P</td>
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<td>P</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
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<td>(S)</td>
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<td>CHEESE &amp; BISCUITS</td>
<td>SP</td>
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<td>E</td>
</tr>
</tbody>
</table>
**FIG.A.12.4. REGIONALLY PREFERRED BEVERAGES**

*(X = marked preference for...; (X) = marked aversion to...)*

*(in the following sectors:- H = household; S = school; P = hospital (patients); E = employee; C = commercial.)*

<table>
<thead>
<tr>
<th></th>
<th>Wa</th>
<th>Sc</th>
<th>N</th>
<th>X&amp;H</th>
<th>NW</th>
<th>EA</th>
<th>WM</th>
<th>SW</th>
<th>EA</th>
<th>SE</th>
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</tr>
<tr>
<td>tea</td>
<td>C</td>
<td>E</td>
<td>HE</td>
<td>E</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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*HEC HC indicates a marked preference for hot beverages in commercial sectors.*
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(Each article forms part of the same series which was commissioned by the "Catering Times" (Northwood Publications Ltd., 10-16 Elm Street, London WC1 OEP) during 1974.

The original of each article deals with the origin, historical development and traditions associated with the traditional regional dishes of one particular named region of Britain, and includes a selection of recipes to illustrate various regional preferences and idiosyncracies.

The published articles are the product of editing by the Editor of the Catering Times at his sole discretion.)

"Wales: land of lamb and leek." Catering Times, Jan.9th., 1975, pp.4+5

"The Celtic North: 'She can cook a bit o' steak, aye, and make a girdle cake'." Catering Times, Feb.6th, 1975, pp. 5+6.


"Dishes of the West Midlands!" Catering Times, April 10th, 1975, pp. 4 + 5.

"Fish and swimmers - East Anglia's favourites". Catering Times, May 8th, 1975, pp. 12 + 13


"Highland Fare" (fare of the Highlands of Scotland) Catering Times, Oct., 2nd., 1975, pp. 3 + 4.

"If you can't eat it, pot it". (fare of the North West) Catering Times, Nov., 6th., 1975, pp. 3 + 4

"Yorkshire Fare". (fare of Yorkshire and Humberside) Catering Times, Feb.12th., 1976, pp. 3 + 4

"Fare of the South East". Catering Times, June 17th., 1976, pp.3, 4, 5 + 6

"Fare of the East Midlands". - awaiting publication
REGIONAL FOOD PREFERENCES

A summary report based on a thesis submitted for the degree of PhD

by

Mary-Lorraine Hughes
(Swann Research Studentship)

Department of Hotel, Catering and Tourism Management
University of Surrey
1976
SUMMARY

The thesis is concerned with an interdisciplinary investigation of the regional food preferences of the British population.

The existence, nature and prevalence of current food preferences within geographical regions of Britain, in terms of food groups, food commodities, dishes and nutrients, are examined in the domestic situation and within school, hospital, industrial and commercial sectors of the catering industry.

Definitions of 'food' and 'food preferences' are derived, the factors governing preferences are considered, and the historical development of each type of catering is briefly reviewed.

Food consumption is used as the main indicator of preference but an insufficiency of available raw data and very few pertinent secondary sources of information, necessitate the use of personal communication as a research technique.

Regional household food preferences are identified primarily by use of published data, while preferences of school children and hospital patients are investigated by collection of dish 'uptake' statistics acquired from local education and health authorities. Indications of regional preferences of employees are derived from published data, some dish 'uptake' statistics and also from personal interviews with industrial caterers. The nature of the commercial catering sector is found to restrict the acquisition of raw data and so preferences are researched mainly by personal interviews and postal questionnaire.

The findings indicate that regional preferences are most pronounced in the household situation, and slightly less so in school and hospital catering. Although some regional preferences do emerge from within employee catering, differences in food consumption also seem to relate significantly to the type of occupation. Regional preferences are least apparent in the commercial sector and especially the popular market, although more expensive establishments appear to be increasingly featuring traditional regional fare, particularly in tourist areas.

Consideration is also given in the thesis to the development of regional food preferences, their modification within the catering industry, future influences upon them and the possible uses to be derived from their identification.
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INTRODUCTION

Aim

The aim of the research is to establish which foods are preferred in various areas of Britain, and to build up a gastronomic map of regionally preferred dishes, not only in the home, but also in sectors of the catering industry.

First of all it is necessary to establish what people consider food to be and what determines and governs the actual food considered to be preferable.

Historical reasons for the existence of regional differences in food consumption are considered and contemporary factors examined in order to elucidate why variations in taste exist between geographical locations within Britain.

Furthermore, the food chosen by people in various situations and in different types of catering establishments is compared to establish similarities or differences caused by feeding motivation and environment, over and above regional biases.

Not only the actual foods consumed, but also intimately related aspects of regional feeding habits are examined, such as time and nomenclature of meals, effect of the environment, mode of meal production and service.

Scope of the research

Regional food preferences are elucidated in terms of:

(i) food groups (e.g. meat, vegetables, fruit,......)
(ii) food commodities (e.g. beef, pickled onion, tinned peach,......)
(iii) dishes (e.g. roast beef & Yorkshire pudding, haggis, fish-a-chips, ......)
(iv) nutrients (i.e. the chemical constituents of food)
(v) types of food (e.g. fresh foods, "convenience" foods, frozen foods, dehydrated foods, "cook-freeze" dishes, ......)

and a regional food preference is demonstrated when a particular food or combination of foods is chosen, rather than another, by the majority of a regional community over an appreciable length of time.

Throughout this study, "preferences" are primarily judged to be reflected by the foods or dishes chosen for consumption, or actually consumed, within a given set of conditions, as indicated either by actual statistics (original or published) or by informed opinion.
The factors governing food preferences are considered individually and bearing in mind that all their influences inter-relate, it is essential to appreciate a collective and integrated view of their effect. Social influences have an effect on which of the available foods are chosen: personal physiology and psychology can influence choice and even the food itself plays a part in affecting preferences. Most of the factors presuppose the existence of other influences: all are interdependent. Inherited features are interwoven with cultural influences: the whole mass of experience of a lifetime can mould a preference which may be local, regional or national, religious or ethnic: indeed, may be associated with any kind of group.

Factors Affecting Regional Food Preferences

Food Preferences

- Availability factors (3.5.)
- Social factors (3.6.)
- Personal factors
  - Psychological (3.7.)
- Physiological (3.8.)
- Functional properties of food (3.9.)
- Sensory attributes (3.10.)

- Geography
- Technology
- Transport
- Location factors
- Economics
- Culture/tradition
- Religion/taboo
- Food ways
- State ways
- Social class
- Status concepts
- Occupation
- Household composition
- Education
- Travel
- Immigration
- Convenience
- Advertising
- Brand psychology
- Symbolism
- Personality
- Time
- Appetite
- Hunger
- Nutritional needs
- Health
- Specific satiety
- Circadian rhythms
- Heredity
- Allergy
- Functionality of food (3.9.)
- Sensory attributes of environment (3.10.)
The 10 food preference regions are identical to those of the Registrar General, 1.4.'70 to 31.3.'74, which are abbreviated as follows and consist of:

<table>
<thead>
<tr>
<th>Region</th>
<th>Abbreviation</th>
<th>Contents</th>
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<tbody>
<tr>
<td>Scotland</td>
<td>Sc</td>
<td>The whole of Scotland</td>
</tr>
<tr>
<td>Wales</td>
<td>Wa</td>
<td>The whole of Wales</td>
</tr>
<tr>
<td>North of England</td>
<td>N</td>
<td>Cumbria, Northumberland, Tyneside, Durham and part of North Yorkshire</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>Y &amp; H</td>
<td>part of North Yorkshire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West and South Yorkshire, Humberside, Lincolnshire (parts of Lindsey)</td>
</tr>
<tr>
<td>North West</td>
<td>NW</td>
<td>Lancashire, Cheshire, Greater Manchester, Merseyside, High Peak District of Derbyshire</td>
</tr>
<tr>
<td>East Midlands</td>
<td>EM</td>
<td>rest of Derbyshire, rest of Lincolnshire, Nottinghamshire, Leicestershire, Northamptonshire</td>
</tr>
<tr>
<td>West Midlands</td>
<td>WM</td>
<td>Salop, Staffordshire, Warwickshire, Herefordshire, Worcestershire, Birmingham</td>
</tr>
<tr>
<td>South East</td>
<td>SE</td>
<td>Oxford, Bucks, Beds, Berks, Hants, Herts, Essex, Surrey, Kent, East + West Sussex, Greater London</td>
</tr>
<tr>
<td>East Anglia</td>
<td>EA</td>
<td>Cambridgeshire, Norfolk, Suffolk</td>
</tr>
<tr>
<td>South West</td>
<td>SW</td>
<td>Avon, Gloucs, Wilts, Dorset, Somerset, Devon, Cornwall</td>
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</table>

Chapter 4 describes the regional configurations of Britain within which food preferences are investigated, while Appendix 4 presents and evaluates certain relevant climatic, socio-economic and industrial regional factors which could influence contemporary food preferences.
Types of catering

Food, usually in the form of 'dishes' and 'meals', is eaten in a variety of different situations, and to satisfy different needs.

Regional food preferences and feeding habits are therefore investigated within the following situations:

I ..... (a) in the home (a domestic situation)  
       (b) in substitute  
          domestic situations (i) at school (State)  
          (ii) in hospital  
                 (National Health Service)  

II .. (c) within commercial catering  
      which includes: 'take-away' food service  
      cafes and snack bars  
      restaurants  
      hotel food facilities  
      catering services allied to  
      transportation,  
      places of entertainment  
      and recreation.

Chapter 5 briefly reviews the historical influences upon regional food preferences. The first part deals generally with the British diet in the home since the Middle Ages, while succeeding individual sections highlight the major developmental stages of school, hospital, employee and commercial catering in Britain.

Research methodology for regional food preferences ranges from significant use of published secondary data particularly in the household situation, to dish uptake against menus in the case of the captive markets in school and hospital catering, and thirdly to reliance on subjective information, gleaned by personal communication, on the part of experienced commercial caterers, in both large national organizations and individual units throughout the regions of Britain. Employee feeding, which in part has a captive market but which is also served by commercial catering units is necessarily researched by more than one method: partly through secondary data, but predominantly by means of dish uptake statistics substantiated by the informed opinion of experienced individuals within the industry.
THE FINDINGS

Chapters 7 to 11 discuss and present graphically the results of the research into regional food preferences:

Chapter 7 ... regional food preferences in the home
Chapter 8 ... " " " in school catering
Chapter 9 ... " " " in hospital catering
Chapter 10 .. " " " in employee feeding
Chapter 11 .. " " " in commercial catering

Synopses of regional food preferences in individual sectors of the catering industry

School catering

From all sources of information it would seem that only in Scotland is there a demand for soup in school meals. The Scottish preference for mince, made-up meat dishes, pies and traditional dishes such as haggis, bridies and stovies is also apparent. The South East and South West seem to be the stronghold of preference for roasted meats, although other traditional dishes such as meat puddings are declining in popularity everywhere. Beef appears to be preferred in the north and lamb and mutton in Wales and the south of England, while offal, unpopular everywhere, only seems to find a reasonable degree of favour in Wales. Beefburgers, mince and some other convenience foods such as fish fingers appear to be particular favourites in most regions. Pasta and curry now appear on all regional menus but the more usual "foreign" dishes and snack items are more prevalent and popular in southern regions.

"Chips" and baked beans are now ubiquitous favourites. Nevertheless, Scots appear to have a marked preference for anything with a high potato content, root vegetables find most favour in specific northern areas and green vegetables are most enjoyed in the south. Spaghetti, rice and other vegetable substitutes show an increasing gradient of acceptability towards the South East.

The heavier desserts find greatest popularity in the Midlands, Wales, North and Scotland. Only strudels find popularity in the South, and this is an example of the acceptance of "foreign" dishes more readily in this part of the country. Confectionery is least popular in the South East, milk puddings most popular in the East Midlands, while cheese and biscuits only seem to be enjoyed in the South West. Fresh fruit, like vegetables, is a southern preference.
Hospital catering

Thick soups with a high carbohydrate content are particular favourites as "starters" to a main meal in Scotland and the North of England. Tomato and oxtail soups appear to be preferred in southern regions, leek soup in the North West and asparagus in the midlands.

"Roasts" (and other meat dishes) seem to be considered more as midday dishes in northern regions, but as equally suitable for the evening meal in southern regions. Bacon and ham seem to be least popular in Wales, and beef and veal least popular in the North West. Lamb is most popular in the South East, while pork in any form is distinctly very unpopular in Scotland. At a main meal offal dishes seem to gain most favour in the West Midlands and South West. Made-up dishes, and especially mince, are most popular in Scotland, which fact is substantiated by Brown et al (1969) and the S.H.C.S. (Scottish Hospital Catering School, 1973).

Cod appears to be the preferred fish in southern and midland regions; plaice in Wales and haddock in Yorkshire & Humberside. Fish cakes are a Scottish favourite, both at a main meal and at breakfast: the findings of Brown et al (1969) agree with this and the fact that herring is also enjoyed in Scotland. Fish fingers are a northern and midland preference.

Pastry products are particularly enjoyed in Scotland, the North and Midlands in the evening and puddings are relatively popular in the Midlands and Wales. Salads are comparatively unpopular in all regions and are only eaten in the evening in the North. However, there is a significant demand for cold meat and hot vegetables in East Anglia.

Caterers greatly overestimate the popularity of sandwiches which are considered to be an evening meal item, and are not even available in the extreme north or south of the country.

Cheese dishes are least liked in the North of England (Brown et al, 1969), while egg dishes are particularly disliked in the North West, in contrast to their popularity there at breakfast.

"Foreign" fare appears to gain most acceptance in the South East, as Brown et al (1969) also discovered; although some are popular in the West Midlands at midday.

It is interesting that traditional regional dishes such as haggis, scotch egg, Lancashire Hot Pot and pickled beetroot, Cornish pasty and Yorkshire meat-&-potato pie are most popular in their region of origin: this is substantiated by Brown et al (1969).
Both the present findings and published sources (Brown et al, 1969 and the S.H.C.S., 1973) indicate that green vegetables are most popular in the south, and root vegetables and potatoes in the north and Scotland. The traditional "mushy" peas of the North West and Yorkshire & Humberside remain most popular in these regions. Chips are decidedly preferred in the North (Brown et al (1969) also found this), roast potatoes are the Welsh favourite and boiled potatoes are preferred in the West Midlands. Lighter desserts are preferred at the evening meal in all regions, but especially in the south. Heavier puddings are predominantly a northern, and milk puddings a midland, preference. Most pastry desserts are preferred in the north, except tarts which are quite definitely a Welsh preference. Cakes are also most popular in Wales. The unpopularity of fruit and ice-cream in Scotland was also discovered by Brown et al (1969), although the S.H.C.S. (1973) found ice-cream and fruit to be favourite desserts.

Employee catering

As far as 'starters' are concerned the most obvious regional difference is the great popularity of soup (especially if thick) in Scotland.

Of the main dishes, "roasts" are very popular everywhere, but they seem to be especially so in the Midlands. Pies, especially, containing meat, are northern favourites: in Scotland they are preferred if based on minced meat.

Indeed, any minced product, preferably including a large amount of potato, is enjoyed in Scotland, while 'stodgier' pies and puddings are enjoyed in the North and Midlands, and sliced meats and drier foods in the South. Made-up meat dishes are enjoyed in Scotland and northern areas of England, while offal finds greatest favour in the North West. There appears to be a preference also for lamb in the North West, for poultry and pig meats in Wales.

Cod and plaice are enjoyed most in the South East, the latter also being a Welsh favourite, along with hake. Haddock is preferred in Scotland and the North, and particularly in Yorkshire. Skate, sole, whiting, other less usual fish and sea-food appear mostly on southern menus. Products such as fish fingers and fish cakes are enjoyed most in the East Midlands.
Foreign dishes, in all types of employee catering outlets, are most popular in London and the South East. Curry is the exception as it has a high acceptance in the West Midlands. An elaborately named dish only sells in the south: to sell well in the north it has to be given a simple and familiar sounding name. Although spicier foods are apparently preferred in the south, it is in the Midlands and North that pickles are most popular.

Egg and cheese dishes appear to be preferred in the South West, although a number find favour in Scotland, especially if they contain potato.

Salads are predominantly favoured in southern regions, especially by female workers, although they do attain reasonable uptake levels in the northern regions in summer.

Chips are favourites nationwide, although in the south more unusual types of potato often provide reasonably popular alternatives.

Peas are generally most popular, especially in the Midlands, while "mushy" peas are the favourites in the North West. Green vegetables tend to be southern favourites, while root vegetables find greatest favour in the north. More unusual vegetables usually only sell reasonably well in the south.

The heavier desserts, such as pies, tarts and sponges with custard are the undisputed favourites within employee catering, particularly in northern regions. Lighter desserts do find a market in the south, among female workers, and in office workers' restaurants. Cakes, to finish a meal, are markedly a Welsh preference. Milk puddings are also reasonably popular, especially in the Midlands and the North West. Cheese and biscuits find little favour, especially in canteens: in southern staff restaurants they are tolerably popular.

Most beverages from vending machines are drunk in the South; most served manually being consumed in Scotland. Coffee is markedly more popular in the South, while tea predominates in the North.

Commercial catering

Published data reflect the generalizations that soup is particularly favoured in Scotland (especially if thick), poultry is favoured in Wales and fish is enjoyed most in eastern areas of England. Green (and more unusual) vegetables are preferred in the south and root vegetables in the north, while there seems to be a trend away from heavier to lighter desserts, especially in southern regions, apart from a liking for ice-cream in Scotland.
Commercial caterers find most regional differences in bakery products, the variety and quality of which seems to increase on travelling northward. Meat dishes show some differences in as much as lamb is particularly enjoyed in the North West and Wales (the only region where mutton is eaten), beef is chosen most in southern restaurants, and pork is extremely unpopular in Scotland. Offal finds most favour in Lancashire. Forequarter cuts of meat are preferred in the North and Midlands and hind-quarter cuts in the South. Large portions and "filling" dishes are a marked northern preference, while sauces over meats are preferred in the south. Infact, all "foreign fare" is more popular in southern regions: in London in particular tastes are markedly more cosmopolitan.

Apart from the idiosyncratic "mushy" peas in the North West, vegetables show few marked differences except that green vegetables seem more popular in the south, root vegetables in the north, and unusual and 'foreign' ones are rarely served north of the Wash. "Starters" and desserts vary little regionally.

More detailed analyses of regional food preferences, in terms of food commodities, food groups, dishes and meals, appear in chapter 7 to 11 inclusive and within the associated appendices of the main text.

CONCLUSIONS

Chapter 12 compares and contrasts regional food preferences in the various types of catering operation, and within the catering industry as a whole, and attempts to produce a profile of food and dish preferences in each region.

Chapter 13 attempts an explanation of why there are regional preferences and an elucidation of the influences which produce and govern them.

Chapter 14 reviews future considerations that could have an effect upon regional preferences and enumerates points which have been raised during the course of the study which deserve further investigation.
Prevalence of regional food preferences within the sectors of the catering industry

Regional food preferences, as indicated by food consumption statistics and informed opinion, appear to be most prevalent within household catering: indeed caterers from all sectors of the catering industry are of the opinion that regional tastes are most marked in the domestic situation (personal communication, 1973-1976). Pupils' school meal preferences appear to reflect the home influence as do the dish choices of hospital patients. There is a degree of overlap between the employee and commercial catering sectors as many workers eat in a commercial establishment, and so the preferences which emerge from an examination of employees' regional feeding habits are in part similar to those in the home but also reflect tastes in a commercial situation.

The smallest number of actual regional distinctions are apparent within the commercial catering industry where some caterers (especially those within multiple units organizations) seem to dictate a nationwide similarity of available food, although there appears to be a very recent realization of the existence of and the demand for regional fare both by the customer and the caterer.

Regional concentrations of food preferences

Empirically, it seems that certain distinct food preferences exist in each of the food preference regions of Britain, although probably fewest specifically identifiable preferences or aversions exist in the North, Midlands, South West and East Anglia.

A greater number of marked differences in taste are obvious between the north and south than between eastern and western areas. The high carbohydrate (e.g. cereal) and low protein (e.g. meat and vegetable) intakes of Scotland are reversed in the South East, and in London in particular. The high acceptance level of foreign fare in London and the South East is exactly opposite to the strict avoidance of such dishes in northern regions of England, in all but the commercial sector.

Geographical gradients of preference are identifiable in some food commodities. For example, lamb, fresh green vegetables and fruit become noticeably less popular when travelling north through Britain, while beef, root vegetables, potatoes and cereals become more popular. Marked exceptions include the significant preference for bulky and 'filling' foods in the West Midlands and Yorkshire and Humberside, and the idiosyncratic high level of fat intake in Wales.
In the catering industry of Scotland, and perhaps the North West of England, the indigenous traditional regional dishes are much more popular than is traditional fare elsewhere, and especially in the south. Although traditional dishes are featured within the commercial catering sector of all regions, they are found to be selected most in this catering sector in Scotland, parts of the north of England and in certain tourist areas. The increased interest in regional dishes which has become apparent during the present research period is probably in part attributable to their promotion by the Scottish and English Tourist Boards. In contrast, traditional regional fare is less apparent within the catering industry of Wales, where the Welsh Tourist Board has not undertaken a comparable scheme, although one or two commercial caterers in Wales who do feature local dishes report a definite market for them. This further demonstrates the exploitation potential of regional fare.

Possible applications of the findings

The research information can be used to provide people with what they want and to simultaneously derive nutritional and economic benefits. Specifically, regional food preference research can even satisfy a psychological need. The mass production of fare has recently spurred a reassertion of the need for individuality which regional dishes are increasingly being found to fulfil. Some commercial caterers have found there to be a substantial market for regional dishes among local residents and both British and foreign visitors to an area (English, Scottish and Welsh Tourist Boards, personal communication, 1975 & 1976). Indeed, all restaurateurs might derive benefit from a knowledge of the regional market situation as regards preferred food commodities, apart from the traditional fare.

Should the depressed economic climate of 1973-1976 continue beyond this date and more expensive food for consumption both in the home and in 'eating out' situations exceed the means of a large proportion of the population, then a return to the use of more economic cuts of meat and more carbohydrate foods could be experienced. An increased consumption of made-up meat products, stews and farinaceous dishes could herald a resurrection of regional fare, much of which was originally developed to combat economic restraints of previous periods of history. Being aware of regional preferences should enable food manufacturers, distributors and marketers, and also caterers to derive benefit even in times of economic austerity.
The nutritional advantages of being aware of regional food preferences are manifold and the potential benefit, in view of advancing technology, is significant. Detailed knowledge of diets in the various parts of Britain would ensure that necessary adjustments could be made efficiently to local food-orientated welfare programmes, that food subsidies could be wisely and discriminatingly applied, that import controls could be adjusted to meet requirements and that food technology could direct its increasing proportion of the food production in this country along acceptable avenues.

Food preferences are not only regionalized in Britain: similar principles apply elsewhere. When nutritionists try to introduce a new food substance into a malnourished community, they inevitably encounter a multitude of prejudices and beliefs, seldom grounded in fact. These have to be understood, and then overcome; usually by adapting the colour, texture, flavour or origin of the new food to suit the ingrained preferences of the community they wish to assist. How very much easier their job would be if these various preferences were already elucidated, both in terms of commodities and perhaps, more importantly, in terms of the variables governing them.

Elimination of both food and financial waste would alone justify research into regional preferences, and indicates its importance. At the time of the last Government Statistical Inquiry into the Catering Trades in 1969 (DTI, 1972), annual sales of meals in the commercial catering sector alone amounted to some £700 million, and in employee catering to £80 million. When the daily provision of school meals and hospital meals are considered, in addition to the feeding of all other institutionalized persons as well as the armed forces, the enormity of the catering industry both in terms of food consumption and finance begins to emerge.

The Ministry of Agriculture, Fisheries and Food has calculated that at least 10% of food bought by the housewife is ultimately wasted (Buss, 1973), and catering inquiries have discovered that the percentage of food wasted within the industry is significantly greater than this (Glew, 1974). Numerous studies in all branches of catering have shown that food wastage could be drastically reduced if people were only offered the food which they prefer (Hollinghurst & Bolton, 1974).

Advancing technology has made it possible for complete meals to be produced in a central kitchen: cooked, blast-frozen and then distributed to various outlets for reheating immediately prior to consumption. The potential saving in production and labour costs will, however, not be achieved if people do not receive on their plates the food they find acceptable.
The growing realization that more and cheaper vegetable protein than meat can be produced per acre of land by growing soya beans for example, than by using the same acre for animal grazing land could well lead to less meat being available. Were meat to be at a premium its scarcity value would limit its purchase to the more prosperous South East, and elsewhere alternatives such as texturized vegetable protein (TVP) would be increasingly used. Already TVP is being accepted within the substitute catering sectors of northern England and the expected advances of technology, which could make TVP products indistinguishable from meat, will further increase its acceptability.

The forms in which TVP will be most acceptable will probably conform closely to the existing pattern of regional preferences: for example, ersatz 'mince' would be most popular in Scotland; 'meat' pies in the north 'joints' in Wales and sliced 'meat' in the south.

**Regional food preferences in the future**

Increasing inter-regional and international communication does cause increasing similarity of life styles and habits. When a person leaves his native land he may learn a new language or change his style of dress, but his eating habits die hard (Pyke, 1968).

It is probable that regional and national differences in food preferences, which are deeply rooted in history, culture and tradition, will persist into the foreseeable future, and that any further investigation of regional food preferences will conclude, as has the present study, that in the words of a Latin proverb

"De gustibus non est disputandum"

(There is no disputing about taste).
NOTES

410 pages constitute the full thesis, about 100 pages of which make up the appendices. The thesis includes 130 figures, consisting of graphs, histograms, tables and maps.

The assistance of 320 named organizations is gratefully acknowledged, 250 sources of reference are included, and publications by the author, based on the thesis, are listed.

Copies of the thesis are deposited in the University Library and those seeking access to it should write to the University Librarian, University of Surrey, Guildford, Surrey GU2 5XH.

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