THE FUNCTION OF MARKETING RESEARCH IN THE DISTRIBUTIVE SYSTEM.

By DENIS HOLMES, M.A., B.Comm.

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Marketing research may be said to perform the same function in the economic system as the reconnaissance patrol performs in military manoeuvres. Its main purpose is to discover, as far in advance as possible, what are the intentions and probable future actions of "the enemy", who is, in this case, the general public.

Efficient marketing research will provide the producer with advance information about the trends in public demand, and enable him to regroup his forces and change his tactics as the situation demands. It will warn him when to shorten his lines in anticipation of a forthcoming depression; and when to launch forward with confidence in expanded production and intensive sales campaigning. It will enable the new producer to determine the best method and appropriate time to enter the market; and it will guide the entrepreneur in opening up new fields or challenging established organisations. In addition, it will reflect and regulate the success of the actions taken in all these spheres in consequence of its recommendations.

Marketing research is clearly not an exact science like mathematics or chemistry, and yet it is in many ways more exact and scientific in its methods than some of the social sciences.

In common with other economic sciences it makes use of mathematics, sociology, psychology, history, and any other sources which can be of assistance in its work. "The ideal market analyst is an unusual combination of a psychologist, statistician, accountant, engineer, sociologist, and other specialised types." It would be inaccurate, however, to regard marketing research as a mere synthetic by-product of these sciences; it possesses a technique and it is developing a tradition of its own which entitles it to rank, if not as a science in its own right, at least as a deliberate and purposive attempt to apply scientific methods to the solution of economic problems.

In general, marketing research activities may be conveniently divided into those concerned with the broader aspects of marketing conditions and those designed to provide solutions to specific problems in the marketing of particular commodities.

Marketing research organisations, however, cannot afford to engage in general survey work for purely scientific purposes, and such information of a general nature as they do amass is either incidental to particular investigations or acquired with a view to its potential value.

in these investigations. Only official, state-sponsored research work can succeed in filling the gaps left by commercial marketing research. Our main concern is with the usages of commercial marketing research; but the possibilities of employing the methods described for the solution of other economic and social problems will be apparent. Marketing research is still very largely in the pioneering stage, and it is not possible as yet to forecast where its boundaries will be drawn.

The Need for Marketing Research

The broad, general function of marketing research is to act as a link between producer and consumer and to bridge the gap created by the Industrial Revolution. We are concerned here to indicate the specific types of problem connected with marketing which are met with in everyday commercial activity and which constitute the subject-matter of the research techniques described below. Many of these problems, by reason of the very fact of their universality, are not generally recognised as such by manufacturers; or, if recognised, are usually regarded as inevitable risks which cannot be controlled or avoided in the process of marketing. The first essential, then, is to bring home to manufacturers the fact of the existence of these marketing problems; for it is only when these problems are formulated and set forth as something distinct from the uncontrollable elements of risk and luck that the entrepreneur will appreciate the value of the research methods designed to solve them. The objection that marketing research is nothing more than a common-sense approach to the problems of business, and that the experienced executive has no need of it and has managed successfully without it in the past, carries no weight when it is remembered that the problems of marketing were never consciously dissociated from the risks of production or methodically examined before the advent of marketing research. The independent craftsman may scoff at machine production and point to the quality of his own work and his past success; but once his competitors begin to avail themselves of the advantages of mechanisation, he will soon realise that he must progress with the times or be eliminated. In the same way, once any manufacturers in a particular industry or area recognise the advantages of marketing research, the remainder must soon fall into line or lose their position. The case for marketing research is established when once the nature of marketing problems is recognised, and in this respect there is much truth in the contention of Redmayne and Weeks that marketing research "represents an attitude of mind to which many firms are still strangers, and it would appear that there is far more scope for development in British industry in this direction than on the production side".1


The two principal sources of marketing facts are existing records and special investigations. Existing records comprise government and trade association data (which are seldom sufficiently specific to fit all the requirements), and manufacturers' own records (which usually cover only a small segment of the market and cannot supply all the types of data needed). Apart from these records the great bulk of the information required for research purposes has to be gathered by means of direct investigation among consumers and distributors. An additional source is listed by Nielsen2 as "Influence
Factors”, in which he includes professional men, such as physicians and architects, and experts from whom information on specific points may be gleaned. Simmat also mentions “the past experience of the agency in dealing with similar products, or possibly even with the same product in other parts of the world”, and adds that “the trade can supply quite a lot of information as to the attitude of dealers, sales trends, publicity and marketing methods, and sales resistance as represented by competitive products”. He concludes, however, that “the consumers themselves supply the greatest fund of information, as the consumer is the person who buys and uses the product in any case”.

This conclusion of Simmat’s would seem to be disputed by Nielsen in the light of more recent marketing experience. While it is undeniable that the consumer is the ultimate arbiter of the fate of every merchandising venture, it is not by any means as certain that the prospects of any venture can be best estimated in every case by means of a direct approach to the consumer. In some cases the consumer may be unwilling or unable to give an account of his preferences, and in such circumstances more reliable information may be obtained by gauging the cumulative impact of consumer-preference on the distributive system and by studying and projecting retail statistics than by relying on answers by individual consumers. As Nielsen puts it: “Neither consumers nor most retail dealers keep extensive records. And consumers do not always know the extent to which their brand selections have been influenced by various types of advertising and merchandising. The fact that answers can be secured to such questions does not prove that the answers are correct.” This is a criticism of the utility of consumer interviewing, and a discussion of it must be postponed until that subject is being dealt with. It is mentioned here as an indication of the change in attitude which has taken place regarding the primary sources of marketing data since 1931 when Simmat published his book in England. During that time there has been a rapid development in the scope and technique of marketing research, particularly in the perfection of indirect or inferential methods of acquiring data about the market.

Despite this development, there is still, however, a very prevalent tendency to identify marketing research with consumer investigation by means of the questionnaire technique, as though the two were synonymous. While questionnaire surveys still make up a considerable portion of the activities of marketing research, they do not by any means constitute the only means of gathering data about markets; and the tendency in recent years has been to favour the use of other and more scientific methods wherever possible.

Marketing Research Methods.

Lyndon Brown draws a distinction between three fundamental methods of marketing research, as follows:—

(i) The Survey Method.
(ii) The Observational Method.
(iii) The Experimental Method.

“The essential element in the Survey Method is that the data are furnished by an individual in a conscious effort to answer a question.”

*R. Simmat, “Market Research”, Chap. 1.*
As exemplified by the questionnaire technique, this method is the best known and the most widely used in marketing research; but it is not the most scientific method, nor is it, in some cases, the best available method. It is generally, however, by far the simplest and the least expensive of methods, and as such it merits careful examination before a decision is reached as to its value in comparison with the other more scientific, but also more expensive, methods.

Lyndon Brown divides the Survey Method into three basic forms: Factual surveys, Opinion surveys and Interpretative surveys. He emphasises the importance of the distinction, "because there is a vast difference in the scientific accuracy of information obtained by these forms of the questionnaire method". In a factual survey, the respondent is simply asked to give an answer to a specific question relating to particular goods or brands purchased; where they were purchased; what price was paid for them; and other questions of a similar nature. The errors attending factual surveys derive mainly from faulty memory, but also include "the inability to generalise, the desire to make a good impression, and various human tendencies which bias the report".

In opinion surveys, the respondent is asked to pass judgment on the merits of certain goods or brands, or to make an evaluation or appraisal of such qualities as design, colour, utility, etc. Besides being subject to the errors of bias and mis-statement associated with factual surveys, the opinion survey is also liable to be misinterpreted or misused by market analysts who "frequently believe that they are obtaining facts when they actually are merely obtaining opinions". The respondent may not always realise that he is expressing an opinion, and may believe that he is making a statement of fact; this, however, is not important so long as the distinction is clearly appreciated by the research worker. As Brown points out: "A clear-cut public opinion towards a manufacturer, or dealer, or a product is one of the strongest forces encountered in marketing;" and he goes on to quote H. G. Weaver, of the General Motors Corporation, as continually stressing the point that "an opinion, if strongly held, is more important than a fact—that such an opinion is in itself a fact, and should be regarded as such by the business man".

"Whether the opinion is right or wrong is beside the point," continues Brown; "where belief and fact are opposite, the businessman must conduct his operations in accordance with the belief. He may, in time, so educate the public that their opinions will change, but he cannot work counter to the opinion while it exists." Opinion surveys can thus be of great assistance to producers, but they must be very carefully organised and interpreted if they are to yield satisfactory results.

The interpretative survey seeks to uncover the reasons for likes and dislikes. The person interviewed is being asked to act as interpreter as well as reporter, and this introduces additional psychological complications. Brown concludes that "even if the person interviewed can introspect accurately, the information sought is of a much more personal and intimate character than that which is usually asked when a factual survey is made. All of these elements combine to make use of the survey method in the interpretative form the least accurate of all procedures in market analysis". Nevertheless, interpretative surveys form an integral part of marketing research work, because one of the most important questions which marketing research
sets out to answer is why customers buy one brand rather than another, what makes them change from one to another, and how copywriters and product designers can appeal most successfully to the public. The efficacy of the interpretative survey can be greatly increased by careful phrasing of the questionnaire and by the employment of highly-skilled investigators; in practical survey work it is generally possible by these means to obtain results which are broadly reliable.

Most research workers would probably agree that the survey method, when properly employed and carefully controlled and interpreted, is sufficiently reliable for practical purposes in the solution of those marketing problems to which it is generally applied. Lyndon Brown, however, regards the survey method as a necessary, but not a permanent, evil. He explains its extensive employment as being due to the fact that "it is a temporary stop-gap, which is used at the present time because the more scientific methods have not been developed to the point where it is always practical to employ them in market research and analysis." He sees, however, that "the survey method may be handled with sufficient care so that it can overcome many of its limitations," and reluctantly admits that "in view of its prevalence, a well qualified market analyst must devote a good share of his attention to the methods by which the survey may be employed in the best possible manner." In this attitude he is in line with the American tendency to strive after ever greater scientific accuracy and to eliminate the human factor as far as possible. The alternative "more scientific methods" of marketing research which he envisages as ultimately supplanting the survey technique are the observational and experimental methods. A brief account of the nature of these methods is given below, from which it will appear that they too have their limitations. It would seem that no conceivable improvement or development in scientific research methods could serve to eliminate the margin of error introduced by the human factor, or to supersede completely the method of direct consumer survey in the investigation of consumer habits and preferences.

The Observational method "relies upon direct observation of physical phenomena in the gathering of data." Brown compares it to "the newer psychological approach which studies psychological problems from the physical and mechanical point of view, observing only overt behaviour and drawing conclusions from the actions or responses which are observed. The older psychology relied largely upon introspection and the ability of individuals to describe their feelings, emotions, motives, method of thinking and similar phenomena." Observational marketing research consists in making inventories of brands actually possessed by the consumers visited rather than asking them what brands they use as in the survey method. In the investigation of retail sales and the habits of purchasers the observational method makes use of periodic checks of stocks held by a sample of retailers, or stations observers in the shops to record the procedures of customers; no questions are asked either of the shop-keepers or of the customers, the information being acquired instead through a study of their actual conduct. Inasmuch as it records market behaviour directly, this method is therefore more objective and accurate than the survey method. The "human element" is largely eliminated, if we except the investigator, who is specially trained and whose work is controlled and checked; but, on
the other hand, an element of artificiality is introduced, in so far as this method can only reveal what people have done or are doing, and must make the assumption that the expressed or observed physical conduct provides a sufficient basis for interpreting the probable motives behind behaviour. “This assumption,” according to Brown, “may or may not be true, and in many cases it is probably a severe limitation on the use of the procedure.” Other disadvantages attaching to the observational method are that it is usually more costly than the survey method and takes longer to complete. It is also more restricted in its use than the survey method because, as Brown puts it, “there are many phases of market analysis in which it has not yet been found possible to employ the method, instead of the survey procedure.”

“The experimental method is essentially the procedure of carrying out on a small scale a trial solution to a problem.” It is probably the most scientific of all methods, but its use is greatly restricted through the difficulties of complying with the conditions for successful experiments. Chief among these conditions is the necessity of holding constant all elements which affect the result except the one being measured, and of ensuring that the conditions of the test are essentially the same as the conditions which will be found in the “greater universe”, or total operation to which the conclusions drawn from the experiment are to be applied. While these requirements may easily be met in the case of experiments in the physical sciences, the marketing research worker finds himself again confronted with the human factor. This makes it impossible to conduct marketing experiments with the accuracy and precision of the laboratory, but it is none the less possible to gain much valuable marketing information by means of carefully prepared tests and experiments. This is particularly true in the case of sales promotion and copy-testing for advertising purposes; judicious pre-testing and experimentation on a small scale can usually serve to provide an accurate indication of the probable success of new selling methods or advertising appeals, and much waste of time, money and materials can thus be avoided. Other instances where the experimental method may be successfully employed are in the determination of popular price levels in relation to sales, and in connection with the methods of finishing and packing products. Brown concludes that the experimental method will become increasingly important in the solution of marketing problems as experience is gained in the best manner of controlling the many variables involved. While it is not possible in marketing experiments to hold all other variables constant, and to apply conclusions on the basis of “other things being equal,” Brown suggests that this difficulty may be overcome by the perfection of devices such as the rotation of experiments and correction for variations.

Comparing the survey, observational and experimental methods, Brown shows by means of examples that the accuracy of results obtained varies very considerably according to which of the three is employed; and that it is, therefore, most important to select the one best suited to each particular problem. In some cases it may be possible to choose between alternative methods, while again it is often possible to combine them or to check one against another. Brown’s final summing-up is that: “In general, the survey method is the least accurate, least reliable, and least scientific of the techniques used in market analysis. The observational method is far more objective.
and should be used in place of the survey method wherever practicable. The experimental method is the soundest method of all and should be employed wherever possible. But, in view of the many practical limitations on its use and the pitfalls which arise from the difficulty of controlling all factors other than the phenomenon being studied, it is often impossible to employ the experimental method satisfactorily. While the market analyst endeavours constantly to avoid the use of the survey method, wherever possible, he is faced with the practical fact that the use of the observational and experimental methods may often remain an ideal towards which he should constantly strive, and that he must meanwhile often remain content with the substitute survey method."

The theoretical distinction between the three fundamental methods of marketing research described by Lyndon Brown is sufficiently plain; but in practical research work there is no clear division between the fields in which they are employed, despite the fact that their respective merits and limitations render some of them more suitable for certain types of investigation than the others. The survey method is employed alike in the investigation of consumers, shop-keepers, wholesalers, and business and production executives; the observational method is used mainly in connection with retail outlets, but it is also employed in checking stocks held by sample panels of consumers, and in recent years has been used with great success to record the listening habits of radio-owners; the experimental method can be introduced in any field, provided it is carefully controlled. It may be used to pre-test advertising copy-appeals in specially-selected areas or through particular media, or it may be used to determine the reaction of retailers to new merchandising schemes, or to test the comparative merits of various retail outlets. While there is thus no rigid distinctive between the fields in which the three methods are employed there are certain established lines of procedure which apply to them all in whatever circumstances they are used.

MARKETING RESEARCH PROCEDURE.

This procedure involves three distinct steps: the collection of facts; the analysis of the facts collected; and their graphic presentation. These three fundamental steps may be further sub-divided in tracing the various stages of an investigation. Lyndon Brown distinguishes the eight basic steps set out below as the correct procedure for a scientific analysis of the market; but it will be apparent from the ensuing discussion that the first four steps are concerned with the collection of facts, the fifth and sixth with their analysis, and the seventh with their presentation. The eighth step, while of great importance, does not fall strictly within the research procedure itself, but serves as a most useful check on the accuracy of the work performed in the other steps. The eight steps are:

1. The Situation Analysis.
2. The Informal Investigation.
3. Planning the Investigation.
5. Tabulation and Analysis.

I. The Collection of Facts.

(1) The Situation Analysis.

This preliminary step is designed to establish the exact nature of the problem to be solved by means of a thorough survey of all available and relevant data concerning the producer himself and his activities, the activities of his competitors in the field, and the consumer market as a whole which is shared between them. The great importance of the situation analysis lies in the fact that it helps to define clearly the object of the investigation and to prepare the way for the formulation of the most fruitful lines of enquiry. In many cases the producer himself may not be aware of the exact nature of the problem confronting him, and his statement of the position to the marketing research executives may be too vague and general to be of use. It is their responsibility to analyse the situation completely, making use of all the information which the producer himself can supply from his records and experience, and availing of whatever other sources of information have a bearing on the subject. If this work is properly done, it may often result in the whole subject appearing in quite a different light, so that the course of the subsequent investigation is materially altered.

In general, there are two main factors to be considered at the outset: (a) The general nature of the product concerned in relation to every other product competing for the attention of the consumer market; and (b) the particular nature of product under investigation in relation to all other brands of the same product. With regard to the first factor, it will be necessary, if the product is an article of widespread, everyday use, to consider to what extent its consumption is due to habit or to choice, and whether its rank as a necessity makes it indispensable and immune from competition by allied products, or subject to competition and possible elimination even by products of an entirely different nature. In considering this point, it is not sufficient to look at the past and present importance of the product; an attempt must be made to estimate its potential resistance to new competing demands, and to ascertain in what order of importance it is established in the demand schedules of the various sections of the community. In the case of a “luxury” or “semi-luxury” product, particular attention must be paid to its appeal to different income groups, and to the stability of this appeal as an indication whether the product is satisfying a genuine, permanent want or merely a passing, temporary fashion. The second factor is also concerned with the question of competing alternatives in the demand schedule of the con-
sumer. Not only may the consumer choose coffee rather than tea, he may also choose Brand A coffee rather than Brand B. From the viewpoint of the individual producer, the immediate effects of both choices are equally important; but the ultimate effects of the two choices may be of very different importance to the individual producer, who might well hope to regain a market lost to a rival brand by improving his marketing methods, but who would have little prospect of success if the market as a whole for his product had been lost, and his particular share of it captured, not by a rival brand, but by a rival product.

A careful analysis of this nature should serve to bring out clearly two important points. Externally, it should reveal the present status of the product in the market, its past record and its future prospects; and internally it should show the attitude of the producer himself towards this product and its marketing; whether he regards it as of prime importance or as a sideline to other activities, what selling and advertising methods he employs as compared with those of his competitors, and what are the intrinsic merits of the product itself and the possibilities for its improvement and increased use. A study and comparison of these points will then enable a decision to be reached as to the most significant features of the situation, and a precise estimate can be made of the problems involved and the lines of enquiry most likely to be of assistance in their solution.

(2) The Informal Investigation

The informal investigation arises out of and is a continuation of the situation analysis. Brown defines its primary objective as two-fold: "To develop the hypothesis to be used in the final study, and to obtain a 'feel' of the market." In this step, the wide range of subjects covered in the situation analysis is narrowed down, and by means of random talks with executives, consumers and retailers the most important aspects of the situation are uncovered and concentrated upon. No definite form of approach or prepared questionnaire system is employed, since it is not known yet precisely what kind of information is being sought, and casual conversations about the product and its use may serve to bring out the most important and least expected facts. In this connection, Brown stresses the importance of the informal investigation as a corrective of the danger that the research may in large part result in "mere confirmation of facts which are too well known to warrant the expenditure of large sums of money merely to demonstrate the obvious."

Informal consumer interviews should be scattered as widely as possible, although it is unnecessary to prepare detailed representative samples. The best procedure is to become as friendly with the consumer as possible, to arouse interest in the product, and by means of occasional leading questions to learn from the conversation and remarks of the consumer what is the attitude towards the product and its use. Informal retailer and wholesaler interviews are conducted on the same lines. In the case of retailers, two types of approach are possible. The interviewer may pose as a shopper in order to observe the manner in which the products are offered to the consumer, and to find out the extent and nature of "brand-pushing", price-cutting and other selling devices on the part of the retailer; or he may make an "open" interview, revealing that he is conducting a research for a
certain product, and inviting the retailer to give his opinions about it. Finally, informal "key" interviews should be sought with executives of the company itself; with salesmen and other employees possessing specialised knowledge; with competitors; with executives of advertising media; and with specialists possessing technical knowledge about the product.

(3) Planning the Investigation.

The determination of the purposes of the analysis is the culmination of the situation analysis and informal investigation. By carefully limiting the scope of the enquiry in advance to those aspects which he has discovered to be the most vital, the research worker can avoid becoming involved in side issues, and his final report, instead of being so detailed and comprehensive that its purport is obscure and its implementation well nigh impossible, will be clear-cut and precise. The problem then remaining is to re-state these basic purposes in the best possible form, so that the objects of the investigation may be unambiguous and susceptible to definitive solution.

Having defined the purpose of the investigation, the next step is to decide how it can best be fulfilled. The chief consideration is to weigh the nature of the problem against the reliability of the methods proposed for its solution; if the data which may be expected to result from the employment of certain methods would be sufficient to provide a basis for solving the problem, and if no other more reliable or more expeditious means of achieving this suggest themselves, then these methods should be adopted. Wherever possible, however, alternative methods of checking data should be employed, so that the deficiencies of one method may be compensated for by another, and the resultant information be as free as possible from distortion or inaccuracy attributable to the technique used in gathering it.

According to statistical theory a moderately large number of items taken at random from a very large group are almost sure to have the characteristics of the larger group. The truth of this principle has been demonstrated mathematically, and the only problem remaining is that of defining and selecting the "representative sample". In order that a sample may be defined as representative, two statistical requirements must be fulfilled: it must be large enough to be reliable, and it must be random enough to be proportional. The difficulties attached to the selection of a representative sample derive principally from the second of these requirements, because of the size and complexity of the "major universe" from which the random sample has to be drawn. It is not possible to overcome this difficulty simply by increasing the size of the sample, because in order to double the accuracy of any sample the number of cases it includes must be quadrupled, and the cost of ensuring accuracy in this way would be prohibitive. There are many examples of false information resulting from the selection of large samples where a true picture could be obtained from much smaller but more representative ones. In selecting the sample it

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1 "Accuracy of returns is directly proportionate to the square root of the size of the sample. . . . When the number of questionnaires reaches 5,000 or above, it requires the addition of many replies to make any appreciable difference in accuracy. Only below this point (5,000) does the application of this principle have much practical value.

If the error is .85 with 5,000 interviews, it will be .60 with 10,000 interviews, and it will be .42 with 20,000 interviews,"—A. B. Blankenship, "Consumer and Opinion Research ", Chap. 9.
should be borne in mind that "increased size of the sample reduces errors of chance, and increased representatives of the sample reduce errors of bias," and the object should be to arrive at the most economical combination of these factors.

Because of the great numbers of people involved and the amazing diversity and complexity of modern ways of life, class approximations must necessarily be of a somewhat arbitrary nature if they are to avoid becoming too intricate and complicated to be of use in practical fieldwork. It may be possible to advance many sound arguments in theory against the advisability of an arbitrary breakdown of the population by "classes", income-groups or living-standards. In practice, however, it has been found that the most practicable method of classifying the population is on the basis of the standard of living; and, on the average, purchasing power provides a sufficiently reliable guide to market potential. The two most important factors influencing the standard of living are the size of the income and the size of the family.

The extent to which the composition of the sample will influence the survey will depend upon the particular nature of the investigation. In preparing the sample, the director of the investigation will have in mind the particular problem which he intends to solve by means of the survey, and he will take into account any factors which may limit the market automatically to a certain class of consumer. For example, the commodity in question may be used exclusively by women, or by elderly people, or by people following a particular trade; in all of which cases the area to be covered by the sample is automatically narrowed down. In many investigations it is possible to confine the field still further in the preparatory stages by concentrating attention on areas or occupations which are known to contain exclusively or preponderantly representatives of the type of consumer under investigation. Another valuable distinction which can sometimes be drawn is that between the buyer and the user of the product. In some cases it is the buyers of the product who have to be interviewed, while in others the required information is to be sought from the actual users; but in both cases there are opportunities for defining the source of the data explicitly and thereby setting more accurate limits to the scope of the sample.

From the point of view of the organisers, and eventual interpreters, of the survey, it is desirable that the classification of those interviewed should be as detailed and informative as possible. In many cases there are marked differences between the buying habits and preferences of various strata of the community, and these differences, which may be of great significance for marketing purposes, may remain unsuspected unless the classification is fine enough. It has been found, however, that the possible advantages of detailed classification tend to be offset by the practical difficulties of assigning each person interviewed into the correct category, and in order to reduce this danger of misgrouping the number of categories now employed rarely exceeds three. While this limitation must necessarily entail an arbitrary lumping together of persons in many different walks of life, it is nevertheless broadly indicative of the principal divisions of society, as well as being readily applicable in large-scale surveying. It is probably the best compromise that can be devised in the circumstances of the prevailing lack of detailed information about social groupings.

While this threefold classification of the community has been in

4 Blankenship, op. cit., p. 113.
use for several years, the standards of differentiation and the methods employed to recognise members of each group have varied considerably. At first it was customary to make the division on the lines of income, and to classify persons according to whether they received, say, over £500, £500 to £250, or under £250 per annum. This system was open to the obvious objections that it made no provision for size of family or number of earners in family, and that it assumed the standard of living to be determined by income alone. In addition, it proved a very difficult system to operate since there was no means ordinarily available of determining the income of each person interviewed, and in consequence classification often depended upon the guesswork or bias of the individual investigator. It is now coming to be generally recognised that the important factor is not the amount of money coming in to each earner, but how much is spent on day-to-day living requirements in each family. Standard of living is determined by expenditure rather than by income, and it is standard of living rather than wealth that the class breakdown is intended to reflect. Consequently, the modern tendency is to classify people according to external features which can be seen and recognised by investigators.

The only other point which we shall mention here is that of cost. No definite standards can be laid down as to the average cost of research work, but budgets can be worked out in advance for any particular investigation, based upon past experience and taking into consideration the extent and probable duration of the proposed enquiry. If this budget is itemised, the expenditure on each phase of the inves-

1 The class breakdown used by the British Market Research Bureau, Ltd., is briefly as follows:

"AB": Luxury standard of living; "C": Adequate standard of living and a few luxuries; "D": Tolerable standard of living but no luxuries; "E": Bare subsistence standard of living or below. In most of their investigations, categories "D" and "E" are lumped together, as "A" and "B" have already been merged, and the resultant threefold class breakdown into "AB", "C" and "D" is roughly approximate to the "upper", "middle" and "lower" classes of popular recognition.

It is interesting to compare this breakdown with that suggested by R. Simmat ("Market Research", Chap. 2), in which he gives the following definitions:

"A": Those to whom the matter of everyday expense is of no consequence;
"B": Those who are reasonably well off; persons who can afford to live well, but yet who cannot afford to live heedless of expense;
"C": Those who are generally known as belonging to the "middle classes"; persons who keep up a respectable appearance, live moderately well, but who definitely cannot ignore questions of prices paid for various commodities;
"D": Those who have incomes just sufficient to provide them with the bare necessities of life.

It is apparent that any attempt to use Simmat's definition would lead to great confusion, particularly as regards groups "B" and "C" which sufficiently resemble each other to overlap in large numbers of "borderline" cases. The object of the British Market Research Bureau grouping is to reduce the numbers of "borderline" cases to a minimum, and a comparison of their system with Simmat's reveals that the main difference exists in the middle categories, where these cases are most common, and not in the two extremes, which are more readily identifiable, and which correspond closely in both definitions.

Consumer classification used by other marketing research organisations (e.g., the A. C. Nielsen Company in America and Britain, and the London Press Exchange in Britain and on the Continent), is along broadly similar lines. It is very unusual for more than four classifications to be used, and three is the generally accepted number.
tigation can be gauged and controlled, and the sources of any inaccurate estimates will become readily apparent. The cost per reply to an investigation will depend mainly upon the nature and length of the questionnaire employed. Lyndon Brown estimates that this cost may vary from ten cents to five dollars per interview, the higher figure being approached when lengthy questionnaires were used and the sample consisted of widely dispersed business leaders. Costs also vary in accordance with the prevailing economic situation. "During 1929 it was not unusual to pay a dollar an interview for consumer questionnaires, and costs were seldom below fifty cents. In 1934 twenty to twenty-five cents a call was ample to allow for each interview, including the cost of supervision." 1 The costs of marketing research in Britain have increased as the procedure became more elaborate and scientific. Redmayne and Weeks, writing in 1931, quoted an estimated cost of two shillings per reply "as a rough indication of the fact that an investigation of 1,000 replies might cost in the region of £100. ... The 1,000 replies might fairly cost either £50 or £150, depending on the way certain expenses were charged and on the difficulties of the investigation." 2 In 1945 Olaf Ellefsen, of the British Market Research Bureau, addressing a Great West Road Chamber of Commerce, estimated that "... it will cost you about £2,000 or so for reports on your own and your competitors' sales for 12 months; and a consumer investigation covering 2,000 people will cost you between £500 and £1,500, according to how much information you want from them." 3 It would be a great mistake, however, to judge the value of marketing research by the money it costs; in relation to the services it can perform; and in proportion to the vast sums spent on marketing and advertising goods, the cost of marketing research is not excessive; and as time passes and it becomes firmly established its cost should become even less.

(4) Gathering Data.

It has been shown above that questionnaire surveying of consumers remains the most common method of gathering primary marketing data, and it is, therefore, with the drafting of questionnaires and the control of field work that this section of the paper is mainly concerned. Reference will also be made to observational and experimental methods of gathering data, in particular by means of dealer research; but it is not possible within the limits of this paper to deal in any detail with these methods, or to devote any attention to the secondary sources of marketing data.

**Questionnaire Surveying.**

Questionnaire surveying of the consumer market may be carried out either through the post or by means of personal interview. Each of these methods is widely used, and the choice between them depends upon the particular nature and circumstances of the investigation rather than upon any intrinsic superiority of one method over the other. In general, postal surveying is more appropriate for widespread investigation and for covering male respondents, while per-

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1 Brown, *ibid.*, p. 266.
2 Redmayne and Weeks, "Market Research", Chap. 5, p. 94.
3 Olaf Ellefsen, B.M.R.B., from a paper read on April 24, 1945.
sonal interviewing is usually to be preferred for lengthy questionnaires and for covering female respondents. There are many exceptions to these broad distinctions, however, and the relative merits and limitations of both methods must be carefully considered before selecting one or the other in any particular instance.

Postal enquiry is useful in cases where simple answers are required from persons in widely separated parts; as, for instance, in the preliminary investigations for a new firm or new product. Detailed mailing lists make it possible to compile representative samples for any required marketing investigation, and careful wording and testing of questionnaires helps to minimise errors of bias and misunderstanding. The great difficulty remains, however, of securing replies to postal enquiries. Unless the subject of enquiry is one of outstanding interest, it is rare to receive more than 20 per cent. replies, and a 10 per cent. response is generally the best that can be expected. The "average man" is generally not sufficiently interested to vouchsafe information about his buying habits or brand preferences in response to a postal request, with the result that a carefully prepared sample may be completely distorted through lack of replies. It may be assumed that of those who do reply many will do so from an interested motive, and will tend to give the answers they imagine will be acceptable to the manufacturer rather than strictly truthful replies. In investigations dealing with the use of luxury goods or the utilisation of leisure hours (e.g., motor car ownership and radio listening), the replies will also tend to be distorted by the conscious or unconscious element of snobbishness, and may reflect the type of person the respondent would like to be regarded as rather than the person he is in fact.

Many experiments have been tried to increase the percentage of replies to postal questionnaires and to secure a greater degree of truthfulness in them. The most common inducement offered to attract replies is the promise of a free sample, but this device will obviously tend to increase rather than diminish the element of prejudice in the replies. Some investigators attempt to overcome this difficulty by the more expensive method of sending free samples to all those circularised before making enquiries; or again, by drafting the questionnaire in such a way that it is not apparent on whose behalf the investigation is being conducted. Others rely on a carefully-phrased covering letter in which they endeavour to secure satisfactory returns by appealing to whatever motive is calculated to have the most influence on the recipient.

The amount of information which can be obtained through postal enquiry is necessarily restricted, because not only must the postal questionnaire be brief and simple but it must also be self-explanatory. In a personal interview it is possible to obtain more detailed and elaborate information, as well as to interpret the meaning of any question which is not readily grasped; and, in addition, the personal investigator can often arrive at a reliable estimate of the trustworthi-

1 "The shorter the questionnaire, the greater the percentage of replies. A questionnaire sent out to newspaper readers consisting of only one question pulled 76 per cent. returns."—R. Simmat, op. cit., C. 5.

2 In the case of men, a covering letter which points out that by replying they will be assisting in the compilation of important statistics may help to increase the returns; while in the case of women it may be more effective to stress the desire to satisfy the individual taste by learning the opinions of consumers.
ness of the answers and may be able to acquire additional incidental information of much value. Contrary to general belief, the cost of postal surveying is not necessarily lower than that of personal interviewing, because, reckoning cost on the basis of returns, the lower cost per questionnaire sent out by post is offset by the much larger number which must be sent out. Postal surveying is principally of use in reaching consumer groups who are difficult to interview personally because of their widespread distribution or because of the nature of their occupations. The most obvious example of such a group is the business man and head of the household, who is out at work during the daytime, and who can be interviewed only at his place of employment or in the evening at home; neither of which occasions is very suitable for conducting satisfactory interviews. The opinions of such people can best be obtained by postal enquiry, and their compliance and accuracy of response, particularly in the upper income groups, will usually be very satisfactory in response to this type of approach.

Except where special considerations of this nature apply, however, it is generally more advantageous to employ the personal interview method. It has fewer disadvantages than the method of postal enquiry, and they are more readily controlled.

In both the personal interview and postal surveys, the care with which the questionnaire is drafted is the most important single factor upon which the results depend. Before any attempt is made to draft a questionnaire, a precise and definite decision must be reached as to the exact information which is to be sought. As has been shown above (3), there are many cases where it will not be at all apparent at first sight how the required information can best be elicited, and in what sequence and detail the questions ought to be arranged.

The drafting of the questionnaire is a delicate and specialised task, and it is important that the questions be correctly phrased and arranged. In longer and more detailed questionnaires additional problems arise in connection with such matters as the sequence of questions, the provision of alternative sets of questions following an initial "yes" or "no", and the phrasing in simple but accurate language of questions dealing with sensation, opinion, interest, habit and other features of personal interpretation. Particular care has to be taken not to bias the answer by asking a leading question or by using words or phrases with strong associations of like or dislike. If the questionnaire deals both with the general consumer attitude towards a particular product and with specific consumer preferences as between certain brands of that product, it is generally better not to introduce any brand names until the general questions have been answered. "Once the brand has been revealed, the respondent will tend to give answers favourable to that brand." Answers may also be biased through the use of devices such as check-lists for recording them; items placed at the head of the list will tend to get most replies.

1 In the U.S.A., another method of acquiring information from consumers which has been tried is the telephone survey. The A. C. Nielsen Co. tried this method in an effort to discover listenership to sponsored radio programmes, but it was found to be impracticable because of uncertainty as to who would answer the 'phone, and because of the difficulties of acquiring reliable information through that medium. In addition, as Lyndon Brown shows (op. cit., p. 214): "Limiting an analysis to such a highly selective group is almost certain to distort the sample."

while items which are not mentioned on the list and to which investigators do not refer specifically will tend to be forgotten by respondents. In connection with this point about the method of recording answers, it is important to remember that in many cases provision has to be made for vague and uncertain replies. Any attempt to force all replies into certain pre-determined categories will produce an unreal emphasis in the results, which may be avoided by providing a "Don't know" or "No opinion" category in addition to the blunt "Yes" and "No" divisions.

Another problem which arises in the drafting of questionnaires is that of establishing an atmosphere or relationship with the subjects of the investigation. Many people are inclined to be suspicious, uncommunicative or hostile when first approached with a questionnaire, and the problem of eliciting satisfactory replies will be greatly simplified if the opening questions are designed to overcome this attitude and to establish cordial relations. This is especially true where the questionnaire is rather lengthy or where the subject-matter is of a personal or seemingly obscure nature. A common solution of this difficulty is the inclusion of an initial question or series of questions having a general bearing on the main subject of the survey, or perhaps quite unconnected with the main part of the questionnaire, calculated to have a "softening-up" effect and to inspire the confidence of the respondents. In some cases these questions are quite irrelevant to purpose of the survey and will be ignored in the subsequent tabulation, but it is generally desirable that they should bear some relation to the object of the investigation in addition to their function of breaking down reserve and making the interview possible.

There are so many unsuspected pitfalls connected with the wording of questionnaires that it is the almost invariable practice of marketing research organisations to try out proposed questionnaires on a small scale before finally deciding on their form. This trying-out is known as a "Pilot Survey", and is generally conducted in the field on a sample similar to but smaller than the one to be used in the survey. Tabulation of the results of this Pilot Survey will generally reveal at once if replies are not forthcoming to certain questions, or if the wording of any question is influencing the answers. The questionnaire can then be corrected, or if necessary re-drafted, and much waste of time and expense avoided.

The instructions given to the investigators will vary according to the nature of the survey: for example, in a random survey it may suffice to tell each investigator to interview a certain number of people in a certain area, while in a controlled or stratified survey it will be necessary to give more precise details as to the required breakdown of sex, age, income-grouping, occupation, etc. In every case, it is essential to ensure that the interviewers fully understand the questionnaire itself and the field in which they are to work.

It is inevitable that much must be left to the discretion of the individual investigator, since only general characteristics can be indicated and many exceptional or borderline cases will occur; but a certain degree of uniformity can be attained by careful selection and exemplification of each category.

A very important question now arises in connection with the technique of personal interviewing and the "briefing" of investigators: is it advisable to tell the investigators what the object
of the survey is and what problems it is hoped to solve as a result of it? Even a well-trained and experienced investigator may unconsciously bias the answers if he knows the object of the survey and the firm for whom it is being conducted, although he is aware of this danger and may strive not to be influenced. In some investigations it is not possible to avoid mentioning brand names in the questionnaire, and thereby revealing the sponsors of the survey directly or indirectly; but apart from these cases, there would appear to be no advantage to be gained by revealing this information to the investigators, while it may well prove harmful to do so.

This question is closely connected with the manner of conducting the interview. It will clearly be necessary for the investigators to supplement the bald series of questions on the questionnaire sheet with introductory remarks and explanatory answers. A good investigator will conduct interviews in a friendly, conversational manner, and must be able to cover all the questions and clear up vague or contradictory answers without antagonising the respondent. The danger is that the uniformity of the survey may be upset by the personal mannerisms and phrasings of the investigators. Interviewers are frequently asked why the information is required, and it is an advantage if they can honestly say that they do not know. Simmat says: "The ideal procedure is to ask all the questions from memory, then, when the housewife has closed the door, fill them in on the blank." There is no doubt that this method helps the investigator to put the person interviewed at ease, and for a short and simple questionnaire it is probably the best method. For longer and more detailed questionnaires, however, it would be difficult to obtain satisfactory results in this manner. Not only would the investigator have to remember the wording and sequence of the questionnaire, but it would also be necessary to sort out and memorise answers given in an indirect, conversational manner. It is probable that an interview conducted in this manner would take appreciably longer to complete, since some points would inevitably have to be recovered in order to get a complete set of replies. The investigator who conducts an interview with questionnaire sheet in hand may perhaps find it more difficult to gain some people's confidence, but against this is the advantage of visibly pursuing a set of inquiries of fixed length and ordered sequence, which in practice has a psychological effect in expediting the interview. Again, it has already been shown that even small changes in the wording of questions may tend to bias the answers, and in a conversational interview conducted from memory it would be practically impossible not to embellish or alter in some way the wording of the questionnaire sheet.

So far in the discussion of consumer research, attention has been confined to the technique of questionnaire surveying by post and by personal interviewing. The merits of both of these techniques have been considered, and it has been shown that one or other of them can be used successfully in almost all marketing problems arising on the side of consumption. Most of these problems, however, are not constant or static in their nature; with the possible exception of certain specific problems which are clearly defined and capable of conclusive solution (such as the determination of the opportune time for opening a new business or launching a new product) the problems connected with marketing are continually changing and do not admit of a final solution. Hence it is that consumer research, if it is to be of lasting
value, must provide a moving picture rather than a still portrait of the consumer market. It was shown above that this task may be accomplished in some cases by means of questionnaire surveying of continuous samples; but if more than simple, routine data are required the cost of organising such a survey on a thorough basis would be too great to permit of its being repeated often enough to keep up with market developments. What is needed is a “Consumer Panel,” of the same nature as the “Retailer Panels” which are described below, from which regular observations or records could be obtained over a wide field at low cost. There are many difficulties attached to the operation of such a panel, and the introduction of scientific methods of marketing research has been less apparent here than in the case of retailer research. It is, however, one of the most important potential methods of developing better marketing information.

The Nielsen Radio Index Service in the U.S.A. provides an excellent example of continuous, scientific research, and the observational technique employed in radio research can also be applied to other fields of consumer investigation. Nielsen shows how the operation of the Radio Index Service, involving periodic personal visits to a representative cross-section of homes, can be combined with research into the circulation, readership, and sales effect of magazines. The cost of such observational magazine research by itself would be prohibitive, but when combined with the radio operation it becomes practicable, and Nielsen anticipates that: “When, in the post-war period, more audimeters can be manufactured, we expect to cover the entire country and, at the same time, start to use the magazine data we have been compiling.” With regard to the possibilities of combining the Radio Index Service with a Consumer Panel to secure a record of purchases, he is not so optimistic. While such a Panel could provide much valuable information by way of supplementing Retailer Panels, its operation would be extremely difficult because of the task of getting complete and accurate records from a representative sample of consumers, entailing such problems as the prevention of self-analysis and distortion and the devising of methods for checking errors and omissions.

The further extension of observational methods of consumer research is largely a matter of the cost involved. Once successful techniques have been established in one field, it is often possible to extend their activities into others at little increase in cost (as in the case of Nielsen Radio Index Services and Magazine Research Services). The key to the development of more scientific, comprehensive and regular consumer research is, therefore, most likely to be found in the combination of surveying and sampling techniques on the one hand and in co-operation and joint research work by manufacturers on the other.

Observational marketing research may be conducted at many points along the line of distribution from factory to home. Factory sales departments, wholesalers, travelling salesmen, exporters and importers, and many other distributive agents and “middle-men” may be brought within its scope; but the most usual and generally the most fruitful source of observational data is either the retailer or the consumer. It was shown above that observational consumer research is a difficult and costly undertaking, and it is therefore in the retail field that the methods of observational research have been chiefly employed and developed.
There are two principal ways in which observational retailer research may be conducted. It may be done on a random basis by sending investigators to observe retail selling methods and brand stocking, either with or without the knowledge of the retailers concerned; or it may be done on a prepared, continuous basis involving not only the consent but also the co-operation of a panel of retailers. The first method is chiefly of use in conducting preliminary informal investigations. Very little information as to brand stocking and consumer preference can be gained without the assistance or permission of the retailer, and for detailed, factual investigations of demand curves the second method has to be employed.

The value and importance of this method of dealer research, which was first developed about 1934 and has grown steadily in America and Britain since then, lies in the fact that it enables a continuous and accurate index of consumer purchases by brands and areas to be compiled without having to resort to any direct records of sales by retailers. A large number of retail sales are effected without any written record or check being kept, and even where such records are made they are often incomplete and inaccurate. By basing the calculation of consumer sales not on these records but on regular observations of actual amounts in stock the chances of oversight and error are reduced to a minimum and the results obtained are at once more scientific and more comprehensive. The necessary calculation consists simply at the time of each observation in deducting stock-in-hand from the total of stock at the last observation plus deliveries of stock between observations, and equating the result with consumer sales during the period. The only element which is not directly controlled by physical observation is that of deliveries of stock to the retailer, and there are methods of checking the totals shown by invoices which make it practically impossible for any major error in these figures to pass unnoticed. While this research method is thus extremely simple in theory it is, nevertheless, fundamentally sound and scientific, and it has been found in practice that the data obtained by it are completely reliable as well as being more detailed and informative than those obtainable by any other technique known at present.

The technique of observational dealer research (known as "store auditing" in the United States) has so far been employed mainly in connection with grocery products. There is no theoretical reason, however, why it could not be extended to many other fields, particularly to those in which branding and packaging make for ease in enumeration. The details of its procedure and the significance of its findings can best be illustrated by practical example.

The British Market Research Bureau has established a panel of 1,000 grocer and chemist shops representative of the whole of Britain in these trades, which it has been operating for its clients since the years before the war. By agreement with the proprietors of these shops, and for a small payment, a personal survey is made every four weeks in which certain stocks are counted and deliveries noted from invoices. Attention is concentrated mainly upon soap powders and milk food drinks, and as a result of the monthly check a Retail Index is compiled analysing the position of the leading brands of these products in the market. Besides revealing the fluctuations of demand for these products as a whole and the relative popularity of each brand by areas, the Retail Index also furnishes valuable information about trends in shop purchases, dealer stocks, brand distribution, and re-
etail display and promotion. It is thus possible to construct a continuous picture of all the factors influencing changes in brand strength, and to give timely and detailed warning of any sources or potential sources of sales decline and brand switching.

The organisation and operation of the Retail Index entails central preparation and direction of field work spread all over the country. This is effected by the system of area control, each of the five areas into which the country is divided being under the charge of an Area Supervisor to whom the local investigators are responsible and who, in turn, is responsible to the central office. This system helps to ensure prompt and reliable returns, and greatly facilitates the work of supervision and checking. The actual procedure of compiling the Index involves the three stages of preparation, field work, and tabulation, and a brief description of each of these stages follows.

**Preparing the Check.**

Each collaborating shop is notified by post a week before the investigator calls. Lists of the products to be checked are enclosed with this notification, varying slightly as between grocer shops in the Northern and Southern areas respectively, and as between grocers' and chemists' shops. The check papers are prepared at the central office, under the direction of the Contract Supervisor, and distributed by post to the individual investigators. Detailed charts and files provide information as to the number of collaborators in each district, their division into grocers' and chemists' shops, and the fees payable to each. There are also details regarding shops where special checks are to be carried out, and the intervals at which such checks are to be made.

To each investigator is sent a list of the shops which he is to check, with appropriate check forms for each. These forms contain columns for recording stock, purchases, source of purchases, cost price and date of purchases, as well as a memorandum of stocks at the previous check. Together with these forms each investigator receives forms for recording the advertising display of each collaborator, and for obtaining receipts for fees paid; a money order to cover the payments to all shops visited in his district; addressed envelopes, labels, etc., for return of completed check forms; and memoranda dealing with special checks or queries to be made, or with discrepancies observed in previous checks.

**Field Work.**

Each investigator has a particular district allocated to him or her. The number of shops which have to be checked in each district is determined by their distance apart and the transport facilities available. In an average district, about seven or eight shops can be checked in a day. As far as possible, the investigator tries to call at each shop at the time most convenient to the proprietor. This helps to establish a friendly atmosphere and to encourage cooperation on the part of the shopkeeper. The method of acquiring the necessary information varies from shop to shop. In some shops the investigator is permitted to roam around at will, taking stock and examining invoices; while in others he has to be satisfied with statements from the retailer. It is, therefore, very important that investigators be well-trained and alert, so that they may perceive any discrepancies between the information received and their own knowledge of present and past stocks.
Tabulation.

The completed forms are returned by the investigators to the central office, where they are counted and checked for errors before dispatch to the Tabulating Department. If any discrepancies appear at this stage, it may be possible to secure a particular re-check before tabulation commences. The first stage in tabulation is done by hand, the completed forms being checked, sorted and counted by a special Retail Index Department. From this Department the totals are passed on to the Comptometers Department, where they are tabulated and analysed by machine. In their final summarised form they are sent, via the Methods Department for checking and recording of work performed, to the Charting Department for graphic presentation.

One of the principal advantages attaching to the Retail Index is that it shows each producer availing of it not only his own position in the market but also the positions of all his competitors and semi-competitors. He is thus in a much stronger position than if he were dependent solely on his own sales figures, because he can determine whether his absolute gains and losses of sales represent proportionate gains or losses, and he can devise suitable action accordingly.

Dealer Research in America.

The Food, Drug and Liquor Index of the A. C. Nielsen Company is operated in the U.S.A., Canada, Great Britain and Northern Ireland. In principle it is the same as the Retail Index operated by the British Market Research Bureau, but its activities are on a larger scale. 6,000 chain and independent stores go to make up the panel employed, and these are carefully distributed amongst the various territories, city sizes, store sizes and classes of neighbourhood. Contracts are made with each store, and with the headquarters of each chain organisation, and compensation is given in the form of cash and marketing information. The store panel is audited every sixty days (as compared with every four weeks in the case of the B.M.R.B. Retail Index), and the resulting sales figures are claimed to be about 98 per cent. accurate. The contracting dealers agree to save all their invoices, including those for occasional cash purchases, and to keep a record of any deal-splitting. A special auditing method reveals instantly any failure on the part of the dealer to keep invoices or to record split deals. The cash compensation paid to dealers is sufficient to insure considerable care in their part of the work.”

II. The Analysis of Facts.

(5) Tabulation and Analysis.

This stage of the research procedure is mainly statistical but it involves a great deal more than routine counting and tabular sum-

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1 “The U.S. Census of Distribution was used as the principal guide in selecting stores in the United States, and in Canada a government census was also available. In the United Kingdom, however, a private census conducted by A. C. Nielsen Co., Ltd., was used.”—Nielsen, “Advances in Scientific M. R.”, p. 6.

2 This has been demonstrated conclusively by a great number and variety of checking methods. The high degree of accuracy is readily understandable when it is realised that the Nielsen Food Index stores in the U.S. serve the needs of nearly 2,000,000 consumers.—Ibid., p. 9.
marising of the data. Before the mass of information collected in the field is ready for productive statistical treatment and orderly presentation it must be corrected, edited and tested. This work must be handled very carefully, and calls for much experience and intimate knowledge of the details of the investigation. Its object is to insure that no erroneous, inconsistent or incomplete returns will affect the accuracy and significance of the tabulation, and that the data obtained will be tabulated in the most revealing manner possible. To achieve this end, it is necessary to have a clear understanding of the purposes of the investigation and the exact procedure employed in its conduct; and it is therefore desirable that this part of the research be carried out directly by the organisers or under their close supervision.

The testing of the data may be carried out during its actual collection in the field; but in the case of large-scale investigations it is advisable to repeat these tests when the field-work is completed. Returns from different areas by different investigators should be checked against one another to establish their general consistency. If the returns from any one region show marked discrepancies from the others, it may be necessary to recheck them in the field in order to determine whether the discrepancies reveal the actual peculiarities of that region or whether they are due to inaccurate or biased work on the part of the investigators concerned. A random survey of the returns from all areas should quickly reveal the need for any re-checks of this nature or for general re-checks of specific questions. In the preparation and testing of the questionnaire any ambiguity or incompleteness in the framing of the questions should have been corrected, but it sometimes happens that when the completed returns are to hand the answers to particular questions are incomplete, unstandardized or contradictory. In many cases this is not the fault of the questionnaire itself but may be traced to the omission or non-enforcement of standardized instructions to the investigators.

Either of two courses may be adopted in dealing with faulty returns of these descriptions: they may be corrected or they may be rejected. In cases where the answers are incomplete or inconsistent, it is often possible from a study of the returns to fill in the missing information or to select the intended response. Where answers are obviously inaccurate, however, and there is no means of determining the correct information from a study of the returns, they should be excluded altogether from the tabulation. In the same way, answers which are unstandardized or mistaken may have to be excluded, although it may be possible to segregate the irrelevant ones and permit the remainder, if substantial enough, to go forward for tabulation. If there are any inaccuracies in the replies to the most important questions, great caution should be exercised in making corrections. Except where the correction is self-evident, the matter should be referred back to the fieldworkers concerned; if doubt still exists as to the necessary corrections or completions, the only course open is to recheck the information concerned in the field. It is better to verify doubtful or incomplete returns at the cost of some extra time and trouble than to proceed to the immediate tabulation of unsound data.

In addition to the correction, rejection and testing of inaccurate data, the editors of the returns are also concerned to prepare them for tabulation in the most suitable and convenient manner possible. This is mainly a matter of standardization and classification, and it is governed by the details of the "breakdowns" which are required from
the tabulation. Different units of measurement may be employed by investigators in recording quantities, periods of time or prices, and these should all be reduced to standardised units of the most convenient denomination. Expressions of opinion or reasons for using particular products may be recorded in a variety of ways, but it is generally possible after a study of the returns to group the great majority of them under one or other of a few general replies. In many cases it would be impossible to tabulate replies without first grouping them in this way; but care should be taken that in the process of general classification individual answers of peculiar importance are not lost. It may sometimes happen that an important clue to consumer attitude is contained in these replies, and it is, therefore, advisable to study the wording of them closely.

The validity of the sample itself should be checked again before tabulation in order to establish its reliability and proportionality. This is purely a matter of statistics and mathematics, and does not affect the nature of the data themselves although it may result in changes in the manner in which they are expressed. Three common methods for measuring the reliability of a sample are: (a) the cumulative frequency method; (b) the group rotation method; (c) the estimation of probable error; while tests for the proportionality of each significant class or group in the sample are carried out by means of direct comparison with the total universe concerned. Details and examples of the application of these methods for testing reliability and proportionately are given by Brown.¹

The process of tabulation is essentially that of counting the data and summarising the results. There are, however, many different ways in which data can be combined and summarised, and in choosing between them it is necessary to bear in mind the subsequent step of drawing conclusions from the tabulation. It may be necessary to carry out more than one tabulation before all the required conclusions can be reached, and it is advisable to experiment with alternative methods of tabulation to ensure that no significant combination or treatment of the available data is overlooked. Tabulation may be done either by machine or by hand, and both methods are commonly employed in marketing research. Two types of tabulating machine are on the market, and during the war their use has been developed and extended considerably by official authorities amongst belligerents on both sides. Their use involves the transfer of the data to specially prepared punched cards, which are then sorted into categories and counted mechanically and the results decoded and presented in tabular form. Trained operators are needed for machine tabulation, and for this reason, as well as for financial reasons, some research companies make use of the services of tabulating organisations for this part of the work instead of buying machines of their own and training personnel to use them. Machine tabulation has certain advantages over hand tabulation where investigations are on a large-scale, but it also has its disadvantages. It is ideal for such purposes as census-taking, where the large volume of data involved renders its cost low. For large-scale work it is also much speedier than hand tabulation, for once the initial operations of coding the schedules, punching the cards and running them through the machine are completed the subsequent counting can be done at the rate of several hundred cards per minute. Its greatest advantage is that it enables any required cross-classifica-

tion or special breakdown to be made very rapidly, without the need of recounting the data over again for each one; and the data may easily be retabulated in any required form if this should be necessary at a later stage. In addition, it is more accurate in counting than the manual method, although mistakes may occur during the coding and decoding of the data. Apart from its unsuitability for small-scale investigations, machine tabulation has another serious weakness. The result of employing machine tabulation to obtain a large number of breakdowns and cross-classifications may be to confuse the whole analysis by providing an unmanageable mass of detail, and the very ease with which these numerous breakdowns may be obtained may tend to make the task of selecting the most important ones more complicated. Nevertheless, machine tabulation has much to commend it, particularly for routine or repeated surveys, and its use is limited only by the scarcity of machines and operators. The form in which tables are set up, the columnar and linear headings and rulings employed, and the order in which the statistical data are placed will depend upon the circumstances of each investigation. In all cases the object is to set up the tabulations in the manner best calculated to bring out the most significant meaning from the data.

In drawing conclusions from the tabulation, it is the relationships between the facts discovered that are of importance. "Absolute facts, by themselves, are likely to be meaningless." The most significant facts and relationships are not always the most immediately apparent, and an important part of the work of drawing statistical conclusions consists in studying the summarised tables with a view to discovering new breakdowns and generalisations, and if necessary making other special tabulations. All the various forms of statistical treatment should be considered, as the same data may present many different aspects and possibilities when treated in summarised form with ordinary arithmetic averages and percentages, or when analysed according to frequency distribution. The application of these various statistical methods is a highly-specialised undertaking, and the final decision as to the best method or methods to use in any given investigation can only be arrived at after careful study and experimentation. Whatever the method adopted, however, its object and fundamental character will be to make generalisations about the facts under review. It is only by means of these statistical generalisations that the vast amount of data involved can be reduced to a comprehensible form, and Brown shows that the whole procedure of marketing research, from the original sampling in the field to the final summarisation in the tabulation, is a series of successive generalisations. "By the use of the various means (Arithmetic, Geometric, Harmonic, Mode, and Median), we reach an ultimate reduction to one single concept. Thus there is no limit to the extent to which we may generalise statistically."

There is, consequently, a grave danger of over-generalising, and gaining brevity and abstraction at the cost of losing some vital detail. Every generalisation and average is a substitute for more precise information, and every abstraction loses in detail what it gains in clarity. By means of examples, Brown shows how the tendency to over-generalise may result in the loss of some vital fact or single instance which is statistically unimportant but which may be of supreme value.

1 A fuller account of machine v. hand tabulation is contained in "The Questionnaire Technique.", by Albert B. Blankenship, q.v.
In solving the marketing problem under investigation. "Of what significance, he asks, "is such information as the average size of stores, the average age of automobile buyers?" It is of far greater practical value to know the relative turnover of each store-size and the preference of car drivers in each age-group. Accordingly, as a corrective to the tendency towards over-generalisation, he advocates the increased use of frequency distributions, setting out the characteristics and proportions of various classes and sections. "It is well to bear in mind that statistics, since it is a science of applied numbers, bases all its conclusions on sheer preponderance of evidence. Realizing the real nature of statistical methods, we can keep their limitations in mind, and avoid setting the stage for false or unimportant interpretations."

As a check, on the "pure preponderance" of statistical methods, Brown recommends that statistical conclusions be tested where possible by weighing the "negatives" to the conclusions. He illustrates this by showing that in a test of brand popularities it may be very misleading to conclude that the brand receiving most first preferences in the sample checked is the most popular. It may easily happen that the same brand is placed last in preference by an equally significant proportion of the sample, and that another brand, although receiving fewer first preferences, also receives fewer low preferences and is the most generally popular of all brands. "The important fact, in the last analysis, is not an average vote of popularity. What we need is the statistical conclusions represented by frequency distributions which show the relative numbers voting each way on all makes."

(6) Interpretation of Results.

Specific marketing recommendations are drawn from the statistical conclusions reached in tabulation by a process of deductive logic. How far the research worker should go in making these recommendations and interpreting the results of his findings is a question on which there is some difference of opinion.

It must be remembered that most business problems do not admit of complete solutions, and that recommendations are concerned only with the most likely means of improvement. No simple chain of cause and effect can be traced in the problems of marketing, and recommendations which seek to provide a simple, cut-and-dried solution are almost certain to be in conflict with some of the facts.

Violent sweeping changes should be avoided, and the impact upon the organisation of the company should be effected gradually and in a planned series of progressive changes. Although this method is not spectacular it is sound, and by helping to absorb the shock of innovation it is more likely to be accepted by the company executives, particularly if it is accompanied by a careful analysis depicting the concrete gains to be anticipated from each step in the proposed course of action.

III. Graphic Presentation of Facts.

(7) Preparation of the Report.

The object in preparing the report is to set out the conclusions and recommendations of the investigations as clearly and concisely as possible, against a background of the nature, objectives and methods of the research employed. Every stage of the investigation should be clearly described, and details of the statistical data obtained should
be furnished so that the source and reliability of the conclusions and recommendations may be apparent. It is important that the presentation of results should be prepared in the most illuminating and interesting manner consistent with accuracy and pertinence, but it is possible that Lyndon Brown over-stresses the necessity for a striking presentation. His attitude is that the report must be "sold" to the executives of the company which commissioned the investigation, and that every device of illustration and presentation must be availed of to gain their acceptance. To this end he advocates the preparation of two reports in most cases—the technical report and the "popular" report. The technical report is detached, scientific, complete in every detail, logically arranged and meticulously accurate. It is designed for presentation to the technicians and specialists of the research department of the company, and "requires no attention-holding devices."

The popular report is briefer, takes into consideration the personal characteristics of those for whom it is prepared, avoids statistical terminologies and concepts as much as possible, places emphasis on the practical use and sales possibilities of the findings, is arranged in a psychological rather than a logical manner, and is dramatized to the utmost. It is carefully calculated to produce a favourable reaction on the part of the executives and directors in cases where it is presumed that these officials have neither the time nor the inclination to study more technical and less spectacular presentations.

Before criticising this approach of Lyndon Brown's, it is well to bear in mind that he arrives at it after a study of many research reports and their reception and eventual fate. His first concern is that the findings of research should not go to waste, and that every means be employed to gain recognition and acceptance of the value of the recommendations arrived at on the part of those with whom rests the final decision about putting them into practice, namely, the company directors. He gives instances of perfectly sound research work and wise recommendations which were filed away and forgotten "because the executive has concentrated his attention on some minor error in presentation, or for some other reason is not sold." This conclusion he reaches is that the success of the research depends upon the degree to which skilful presentation of the results can succeed in impressing and convincing the executives, and that in most cases this involves the preparation of two separate reports. The popular report is a condensed and illustrated version of the technical report, and is commonly delivered orally with the aid of large maps, charts, and other visual aids to presentation. Its aim is to supplement the technical report, and, by emphasising the chief points contained therein, to increase the chances of its findings being understood and acted upon. Although he admits that "most firms which are sufficiently advanced in their executive thinking to employ market analysis work either have a technical man on their staff, or will see to it that a technician checks over the work," Brown is apparently of the opinion that expert advice of this nature is not sufficient to satisfy general executives who "are not trained research men" and who "cannot, or will not, follow detailed technical reports."

(8) The Follow-up.

As it was pointed out above, the "Follow-up" is not strictly a part of the procedure of marketing research, but is rather a consequence of the preceding work and a criterion of its
value. The form which it assumes will depend upon the nature of the recommendations, and will generally involve some change either in the product itself or in selling methods. Any fundamental alteration in the product itself, in its production and packing, or in the sales organisation and price policy of the company will generally be brought about gradually, and it may be some time before the full results of the new system are discernible. In such cases it is important to make sure, when assessing the effect of the changes, that no new factors have come into operation in the meantime, and that the tendencies being measured may fairly be attributed to the recommendations adopted as a result of the research. In the case of advertising campaigns, new methods can generally be introduced more rapidly, whether by way of a change in copy-appeal, in direction and concentration, or in the media used. In order to measure the results of an advertising appeal properly, another market investigation should be undertaken; and in this way the errors and omissions of one investigation may be checked and rectified in a later one, and a continuous, up-to-date series of reliable marketing information can be developed.

MARKETING RESEARCH IN IRELAND.

Marketing research has not as yet developed to any extent in Ireland. One of the reasons for this is to be found in the predominantly agricultural economy of Ireland; the application of marketing research methods to the distribution of agricultural produce is a difficult undertaking, and the main development of marketing research techniques has taken place in the realm of industry. The rapid extension of marketing research in connection with food products in America was greatly facilitated by the prevalence there of branded and processed food preparations, making for ease in enumeration and classification as well as providing a framework of organised competition between brand producers who were able and willing to meet the cost of instituting marketing research. Agricultural production and the distribution of food products in Ireland is largely controlled by individual farmers and merchants; there is very little processing or branded competition, and a large proportion of foodstuffs are marketed in a perishable or semi-prepared condition. It is difficult to see how marketing research could be adapted to these conditions, or how its financing could be borne. The only economic solution would appear to lie in the institution of co-operative or state-sponsored marketing research on a national basis.

The employment of marketing research in other fields in Ireland has also been hampered by the agricultural nature of the Irish economy. It is a difficult and costly undertaking to prepare representative samples and carry out reliable surveys in a country where 50 per cent. of the population is scattered over rural areas and more than one-third of the remainder are concentrated in the capital city. Before any comprehensive marketing research techniques can be employed, it is necessary to obtain detailed statistics about the distribution, age-grouping and income-classification of the population, and this task presents some unusual complications in Ireland.

The Irish Department of Industry and Commerce has, however, compiled statistics and undertaken surveys of various kinds which comprise a valuable source of the necessary preliminary data for
marketing research, and in this respect Ireland has a potential advantage over many countries where statistical research is less advanced. Chief among these sources are the Census of Distribution, the Census of Population, and the Irish Trade Journal and Statistical Bulletin. Another source of important information for marketing research purposes is the Statistical and Social Inquiry Society of Ireland.

For the purposes of detailed, quantitative analyses, or for observational or experimental marketing research, it would be necessary to supplement the available sources of statistical information by private investigation. For ordinary consumer survey purposes, however, a selection and comparison of existing statistics and trade records should normally suffice to provide a basis for the preparation of representative samples. The most recent available data as regards population is contained in the 1941 Register of Population, which was compiled in connection with the introduction of rationing. This Register furnishes a classification of the population by areas, ages and conjugal conditions, and is sufficiently detailed for use in local, regional or national survey work. Two important classifications are not included in its scope, however: occupations and income-groupings. Occupational groupings (under rather broad headings) may be obtained from the decennial Census of Population, but the problem of income-grouping, or "class breakdown", is rather more difficult to solve. The Census of Production, compiled at yearly intervals, throws a certain amount of light on this question by giving the aggregate wages and salaries earned and the total numbers employed in each of the main industries; while the recent White Paper on National Income and Expenditure (March, 1946; P. No. 7356) contains a valuable classification of non-agricultural income-ranges. The essential criterion of social classification for marketing research purposes is expenditure rather than income, and the precise structure of the social pyramid in any country can only be determined by widespread investigation of standards of living.

Marketing research in Ireland has, for these reasons, been confined to date to the organisation of occasional random surveys of consumer markets and retail outlets for particular products. There is no continuous surveying, and the methods of observational and experimental marketing research have not yet been introduced. There are, however, encouraging prospects for the future development of marketing research in Ireland. The benefits and advantages which it can bring to individual Irish producers and to the national economy as a whole are very real; much of the preliminary statistical survey work required is already in existence; and there are progressive organisations in Ireland which are well-fitted to undertake its development.

It is interesting to note in connection with the Irish Census of Distribution that the Nielsen Food, Drug and Liquor Index in the U.S. and Canada was prepared from similar sources in these countries.

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DISCUSSION ON MR. HOLMES' PAPER.

Mr. D'Arcy.—I have great pleasure in joining in this vote of thanks to Mr. Holmes. His paper is most informative and timely and I am specially grateful to him for bringing before us this question of marketing research
which, as he points out, is becoming more and more an essential factor in production and distribution under modern methods.

I am not competent to follow Mr. Holmes in his critical examination of the various methods practised in carrying out marketing surveys. I notice, however, that most of his material in that field appears to relate to methods which have been followed in the United States of America. The account of those methods is impressive at first hearing, but I would sound a note of caution as to how far we should be persuaded by the Americans. There is undoubtedly a great deal of ballyhoo in American research in economic fields, and we should be wary of their pseudo-scientific approach and remember not to be overwhelmed by the technical jargon which they use so fluently. The illustration which Mr. Holmes gives of the issue of two reports on the one marketing survey—one carefully dressed up for the directors and the other, in technical language, for the technicians—savour somewhat of shock-salesmanship.

When, however, we consider the intricacies of these methods of marketing research and surveys and the immense trouble taken to ascertain public opinion, half of me cannot help feeling that this country has been spared the blessings of this particular development of civilisation and progress. Some of the survey methods seem to obtrude rather too much on our private lives. The mother who has to interrupt some urgent household duty to answer the door and to give her opinion on the merits or de-merits of pink as against some other coloured pills, or whether she prefers some household commodity in round, square or triangular containers, might not be patient with the inquirer. A result of intensive work of this kind would probably result in a new demand for those notices which one sees on gates warning off hawkers and canvassers, to whom would be added market research workers.

If the avowed purpose of market research with its intricate and expensive methods of survey is to be an ally in competition as between producers of rather similar commodities, it becomes merely another form of advertising with all its defects and its tendency to increase wasteful overhead costs. It is from that field that the idea must be diverted. Clearly we cannot eliminate from our economic system wasteful production methods unless we can measure fairly precisely consumers’ demand. Nor can we relate services to potential consumption without the necessary data. From that aspect, a relatively small industrialised country such as ours wants marketing research as urgent as the highly industrialised country. To take one example—Transport services—which are a monopoly system here. Under a competitive system, consumers are not only sought for eagerly, but new demands from them are even evoked. In the absence of some consumers’ organisation, there is a tendency for the monopoly system to fail to cater fully for consumers and the demand can only be measured by the methods of marketing research or by a survey of consumers’ needs. It might be a pity if we were deprived of our pet grumbles and everyday grouse about the inefficiency of the transport service, but we, no doubt, could readily find a new grumble if that particular one were removed. It is clear, however, that in a consumer survey of transport needs lies our hope for a better transport service and for an improvement also in the distribution of many other goods and services that is now so deficient.

Mr. Holmes in his reference to our lack of industrial development, overlooked perhaps the relative importance of our agricultural produce and the vital need for marketing research to ensure that we keep in touch with consumers’ needs and demands at home and on the export market.
It took a Great War with its attendant deprivations of certain imported and home produced foodstuffs to force consumers into a relatively high consumption of such a beneficial food as eggs. Will this consumers' demand persist when alternative foods become available? Marketing research can help to give the answer so as to guide the volume of production. During the War a considerable canned meat industry developed here worth, in 1945, nearly £2,000,000. Is there a permanent future for that war-time industry in the export market or when other foods become freely available will that Irish industry fade away to only negligible proportions? An important factor in that problem is consumers' demand for our canned beef in regard to taste and price. Marketing research may be able to provide the answer. Our general cattle industry is vital to us. Within our memory there has been a switch over from large joints of beef to small ones caused by the changing food and domestic habits of the people. That switch must have caused heavy loss to farmers which might have been prevented by early marketing research into consumers' demand.

Planning is a much abused word, but when it means a national effort to adjust agricultural production to present and future consumers' needs so as to avoid loss and dislocation to both producers and distributors, it is entitled to honour. Marketing research should be the handmaid of planning just as much in this country as in highly industrialised commodities.

Dr. Beddy joined in the congratulations to Mr. Holmes upon his paper. The subject selected was undoubtedly of considerable importance, particularly in America where it appeared to have developed as an offshoot of high-pressure salesmanship. It was understandable that in such a country there would be ample scope for market research. The size of the population was such that there was a large market at the doorstep of manufacturing concerns. The market was a highly complex one. On account of the mixture of races, manufacturers had to cater for a wide variety of preferences, and in addition the country itself is so large that different climatic considerations, which affect public taste, necessitated a greater variety in output. The American manufacturer aimed, at producing for a market which differed entirely from our market. So also, British manufacturers cater not only for the home market but for world-wide demand, and hence aimed at variety in much the same way as the Americans. In our country, with a market of only three million people, there was obviously much less scope for market research, particularly of the costly intensive type. The country had adopted the policy of protecting domestic industries by measures which excluded or limited imports of competitive goods. Because of the relatively small market, Irish manufacturers could not hope to produce the wide variety of products obtainable on a world market, but against this there should be the advantage of cheapness arising from standardisation. The Irish manufacturer, unlike either the American or British manufacturer, did not aim at catering for a fractional part of the market. In many cases the Irish manufacturing organisation had to cater for the entire market or a very substantial proportion of it, and hence from this standpoint market research should follow rather different lines from that adopted elsewhere. The Irish manufacturer would be more likely to be anxious to ascertain the extent of the public taste for a standard article or standard articles of first-class workmanship at a price which should be lower than the price which would be necessary to defray the cost of producing a
wide variety of products of the same general type. In Ireland we have the advantage of having our own industries, and if the price which we must pay is a certain lack of variety we should be able to set against this firstly improved quality and secondly lower costs, and it is with these considerations in view that those engaged in market research might discharge most valuable functions.

Mr. Lyon said that he would have to draw attention to two mis-statements of fact which appeared on the last page of the paper. The first was in reference to the 1941 Register of Population. More recent data regarding the population of Eire was obtained at a corresponding Register of Population taken in 1943 according to which the total population of the State was 2,992,034. This figure was published in the Statistical Abstract, 1945. The second referred to the Census of Production which Mr. Holmes stated is compiled at five-yearly intervals. This is not so. The Census of Industrial Production has been taken annually since 1931 and reports on these Censuses have been published. The last report was in respect of the year 1938. Since then, on account of the recent period of emergency, separate annual reports were not published but the results of the production in each of the industries as ascertained at the annual inquiries were published in the issues of the Irish Trade Journal and Statistical Bulletin. At present there is going through the press, a volume in which the statistics which thus appeared in piecemeal fashion in the Irish Trade Journal will be brought together in one Report.

The reader of the paper is to be congratulated on its contents and notwithstanding that in his reading of it he found it necessary, because of its length and, as he said, in consideration of his audience, to omit certain pages and paragraphs dealing with methodology I would recommend all those who have copies of the paper to read through every line of it; they will appreciate the amount of work which Mr. Holmes had done. While the paper was entitled “The Function of Market Research in the Distributive System” it was really a description of how an ordinary statistical inquiry should be conducted, giving the choice of three methods. It will be a very useful handbook for all those engaged in the drawing up of questionnaires and who are called upon to conduct inquiries of a statistical nature.