

## THE SAMPLING REFERENDUM IN THE SERVICE OF POPULAR GOVERNMENT.

By FELIX E. HACKETT, M.A., Ph.D.

*(Read on Friday, 28th February, 1941.)*

The attitude which may be taken towards the method of sampling referenda as a measure of public opinion will depend mainly on two factors; the trust reposed on the technique of scientific sampling and the degree of acceptance of the democratic machinery of government.

Public opinion, scientific sampling and democracy are the three threads entwining the wide range of topics discussed in this paper. In the forefront is Dr. Gallup, who founded the American Institute of Public Opinion and who has secured an important status in the United States for this technique of measuring public opinion. It will, however, seem inexplicable how this has been achieved in such a short time unless it is recognised that the force wielded by public opinion in that country is "a real force impalpable as the wind yet a force all are trying to discover and nearly all to obey" and that there "public opinion is more than anywhere else a ruling power". (Brycc.) A brief description of the working of the British Institute of Public Opinion and the new qualitative mode of social investigation, Mass-Observation, established about the same time is followed by a short note on the War Time Social Survey based on the limited information available. It is evident that a mass of social and political data both interesting and valuable is now being collected in Great Britain.

The results supplied by the Sweepstake Draws are used to illustrate the mathematical laws of taking large samples from very large populations and to show how the voting in a sample poll can duplicate the voting of the whole electorate. Public opinion and democracy in Ireland are briefly discussed before outlining an inquiry schedule for an Irish sampling referendum.

It has not been possible to do more than indicate the difficulties of applying the technique of the sampling referendum in Ireland, but it is believed that they are not insuperable. Furthermore, it is consonant with and an expansion of that special characteristic of democratic machinery, the Referendum, which is embodied in the Constitution.

### **The American Institute of Public Opinion.**

Since 1936 sampling referenda have become familiar to readers of newspapers in the United States in the form of Gallup polls carried out under the auspices of the American Institute of Public Opinion, Princeton. The Institute is "a fact-finding organisation whose purpose is to measure public opinion on the political and social issues of the day and to report the facts for the benefit of all. . . . Its note

as an organisation is one of strict impartiality. It is not concerned whether the views of the people as shown by its survey are right or wrong, wise or unwise. It simply reports what these views are " (1).

As an example the results of a Gallup poll, on the position of the United States in reference to the present European conflict published on the 3rd January, 1941, may be quoted.

To the query " Do you think our country's future safety depends on England winning the war?" 68 per cent. answered " yes "; 26 per cent. answered " no ", and 6 per cent. were " undecided ".

To the query " If the United States stopped sending war materials to England, do you think England would lose the war?" 85 per cent. answered " yes "; 8 per cent. answered " no ", and 7 per cent. were " undecided ".

To the query " If Germany tried to invade England next year (1941) do you think she would be successful in conquering England?" 11 per cent. answered " yes "; 74 per cent. answered " no "; 15 per cent. were " undecided ".

As a comparison previous polls on this topic may be recalled. Before the invasion of Belgium and Holland, 95 per cent. believed in a victory for the Allies in two years. Subsequent to the armistice with France, 53 per cent. were in favour of more help to England short of going to war, of whom 15 per cent. were prepared even to go to war; 41 per cent. thought enough help was being given and 6 per cent. were in favour of less help.

In issues so momentous, the influence of such a sampling of public opinion may have an important influence in affecting or justifying the whole foreign policy of the United States, provided it can be shown that the methods of selecting the electorate for the poll may be regarded as reliable.

It has been, therefore, of great importance to produce convincing evidence of the reliability of these polls as sounders of public opinion. Is it possible to get a cross-section numbering from 3,000 to 60,000 out of the total 60,000,000 voters in the United States which shall be a microcosm, similar in structure in age, sex, social position and party ties to the macrocosm of the full electorate: just as Mirabeau thought the elected representatives should be " a reduced map " of the people? A model of a house may merely reproduce its rooms, doors and windows to scale; without paying attention to the details of furniture, pictures, and ornaments. The larger the model, the more one will expect the fine grain, as we may term it, of the original structure to be shown: so the smaller miniature electorate may only represent the coarse grain of the electorate. As the size of the sample taking part in the Gallup poll increases, it will have a finer grain and should include examples of all the significant varied types and classes amongst the voting population.

The Institute uses six controls to secure a representative cross section. The sample for a survey of the whole of the United States must contain the proper proportion of:

- (1) Voters from each State.
- (2) Men and women.
- (3) Farm workers and voters from towns in the following groups:—  
villages with populations below 2,500, towns having populations

between 2,500 and 10,000, towns having populations between 10,000 and 100,000, cities with populations between 100,000 and 500,000, and cities with populations over 500,000.

- (4) Voters from all age groups.
- (5) Voters of above average income, voters of average income, voters of average income as well as persons on relief.
- (6) Democrats and Republicans as well as members of other political parties (1).

The actual number of persons in each of these categories is found by consulting various statistical sources. The census returns give for example the population classes by sex, age, urban and rural residence. Election returns show the number of Republicans, Democrats and of other political parties. Statistics relating to income are also available.

"Experience has shown that these six factors listed above are the most important factors describing opinion cleavages. If a cross-section is correct on those six counts it is highly likely to be a representative sample of the whole population" (1).

The Presidential election, which has been described as "the quadrennial round-up of U.S. citizens at the polls" (2), affords a critical testing of the methods used to obtain sample electorates. This test was first applied in 1936 by Dr. Gallup and other workers in the same field.

Prior to 1936, it had been the practice for various organs of opinion to take straw ballots of their readers to show the trend of opinion. The greatest of all straw ballots was taken by *The Literary Digest* in the Presidential election of 1936, in which Franklin D. Roosevelt was the Democratic Candidate and Alfred M. Landon the Republican Candidate. Names were selected from telephone directories and 2,376,523 votes were cast by mail. The result showed a victory for Landon and was in error by 19 per cent. on the votes cast for Roosevelt. "The practice of taking straw votes went out with a crash" (2).

The American Institute of Public Opinion laid the foundation of its prestige, by giving Roosevelt's poll of 60.2 per cent. within 6 per cent. and predicting Roosevelt's election. The survey carried out by Elmo Burns Roper for the magazine *Fortune* was even closer, showing that the popular sentiment for Roosevelt was 61.2 per cent. In 1940 Dr. Gallup gave 52 per cent. as the probable strength of the Roosevelt poll with a margin of 4 per cent. Roper gave 55.2 per cent., whereas the popular vote has been calculated to be about 54.6 per cent. Another poll conducted by the American Opinion Forecast reported a 52 per cent. sentiment for Roosevelt (2).

A keen election, such as in 1940, in which a large percentage of the voters go to the polls, furnishes a good check on the accuracy of these sampling surveys. But it would be demanding too much to expect them to predict the result of the complicated machinery of the electoral college, where the votes in the electoral college go by States to the party securing the absolute majority. It is evident that, if the two great parties are nearly equal in strength in a State, even a fine grain sample may not have a sufficient margin of accuracy to be trustworthy. In the 1940 election Dr. Gallup allowed himself a 4 per cent. margin of probable error and he did not dare jeopardize his record by venturing to predict the result. Indeed he wrote to the newspapers sub-

scribing to his poll that he did not believe the data "justify a prediction of the outcome of the election" (2).

At this stage it may be of interest to go into more detail into the origin of these surveys. They were initiated originally for business firms to study public taste in standard articles and to assess the value of advertising methods. The acceptance in the United States of the validity of a similar technique for sounding opinion on public affairs must, it would appear, be credited, largely, to the work of Dr. George Gallup. He was born in 1901 and graduated from Iowa State University in 1923. He was head of the Department of Journalism in Drake University, 1929-31; Professor of Journalism and Advertising, North Western University, 1931-32. He became director of research for the Young and Rubican Advertising Agency in 1932. He has been Pulitzer Professor of Journalism in Columbia University since 1935. It is stated that he originated the method of measuring the comparative interest of readers in news features and advertising in newspapers and magazines. He used this method to make editorial and advertising surveys for *Liberty*, *Saturday Evening Post*, *The Literary Digest* and *Collier's Weekly* in 1931. To apply a similar technique to take regular surveys of opinion he founded and became director of the American Institute of Public Opinion, 1935. He has been also responsible for a method of measuring the radio audiences of individual programmes (3).

The connection of Dr. Gallup with advertising agencies may, no doubt, prejudice the academic and conservative mind against him, as if he were a type of charlatan with a new nostrum for the ills of democracy. But we cannot ignore the admitted fact that the work of the Institute, of which he is the director, has in a very short time attained an important status. A correspondent of the *Manchester Guardian* writing from New England, August 1, 1940, states that Dr. Gallup's surveys and organisation have given him a position where his estimates are accepted as the nearest thing to certainty about what the average American thinks.

The Committee of the Stafford Lectures, Princeton, invited him to give one of the Stafford Lectures in 1939, stating that during the four years in which he has been the active director of the American Institute of Public Opinion "he has brought the Institute into a very conspicuous place on the American political scene".

In a foreword to his lecture on "Public Opinion in Democracy" the status of these lectures is explained.

"By long tradition the Stafford Little Lectures at Princeton have been concerned with fundamental problems of public policy. Since the series was inaugurated by Grover Cleveland just forty years ago, leaders in many phases of national and international affairs have served as lectures. A theme running through four decades of discussion has been the problems and opportunities arising within a democratic society. Although occasional excursions into other fields have taken place, the concern of free citizens in the preservation of democratic institutions has exercised a pull to bring back the discussions to the central theme.

"The year 1939 finds the problems of democracy again uppermost in our minds. The lectures this year have been planned to cover five facets of the problem of making democracy work: the place of a labour movement, the function of executive leadership, the preservation of free enterprise, the regulation of economic activity and the function-

ing of public opinion. It was believed that recent events had lent a new significance to these aspects of the general problem.

“ The development during the last few years of the public opinion survey or unofficial poll has raised in particular a host of new and far-reaching questions on the practical working of the democratic process and to treat of this aspect the Public Lecture Committee invited to Princeton a pioneer and leader in the field of public opinion survey, Dr. George Gallup.”

It has sometimes been urged that pre-election surveys may have vicious or harmful effect in creating a so-called “ bandwagon movement ” amongst voters who wish to be on the winning side. Dr. Gallup deals (4) with this question and declares that a careful analysis of all pre-election surveys “ fails to reveal any tendency for the more popular candidate to improve his position after the publication of survey results ”. He admits that this is not a conclusive proof that such an influence does not exist, and urges that the onus of proof now rests on those who put forward the “ bandwagon ” theory.

### **Public Opinion in the United States.**

We cannot evaluate the work of the American Institute of Public Opinion without some consciousness of the American scene. There the democratic theory has been applied to place the supreme power in the whole mass of the citizens. There a Constitution was evolved to realise the ideal of popular government, with its proud beginning: “ We, the people of the United States ”. Lincoln gave expression to its spirit in the tremendous sincerity of his words at Gettysburg that “ government by the people, for the people and of the people shall not perish from the earth ”. It is no wonder that Bryce could write in the *American Commonwealth* (1888): “ In no country is public opinion so powerful as in the United States: in no country can it be so well studied ”, and he devotes a considerable space to its analysis in chapters entitled: *The Nature of Public Opinion; Government by Public Opinion; How Public Opinion Rules in America; Organs of Public Opinion; National Characteristics as Moulding Public Opinion; Classes as Influencing Opinion; Local Types of Opinion; East, West and South; The Action of Public Opinion; The Tyranny of the Majority; The Fatalism of the Multitude; Wherein Public Opinion Fails; Wherein Public Opinion Succeeds:*

He sums up:—

“ One of the chief problems of free nations is to devise means whereby the national will shall be, most fully expressed, most quickly known and most unresistingly and most cheerfully obeyed. . . . Of all the experiments which America has made, this is what best deserves study, for her solution of the problem differs from all previous solutions, and she has shown more boldness in trusting public opinion, in recognising and giving effect than has yet been shown elsewhere. Towering over Presidents and State governors, over Congress and State legislatures, over conventions and the vast machinery of party, public opinion stands out, in the United States, as the great source of power, the master of servants who tremble before it.”

Frequent elections, the Initiative, the Referendum, and the Recall are all devices used in the United States to ensure that the legislator and official shall act in harmony with the popular will, but they are clumsy, elaborate, and expensive. In such a society, the simpler

technique of the sampling referendum found it easy to win popular co-operation. It offered the people a way of expressing their opinion impersonally, independent of the varied methods of various pressure groups, telegrams, letters, delegations and interviews—a way also of “getting by” the operation of the party machine.

Even under a party system, a legislator has to consider all the interests of his home district; he has need of something as sensitive as the antennæ of a wireless station to catch the waves of opinion emanating, not only from his own supporters but from all the citizens in his own district. Interviews of deputations and talks with representative men are the obvious means and must always continue to be used to bring him into close contact with the streams of sentiment or opinion. Only a fraction of the voters in a constituency can be covered in this way. Popular opinion according to Bryce is split amongst three classes: an active group who, in a way, fashion popular opinion around them consisting of journalists, politicians of all grades, and the educated members of a community who take an interest in affairs: a passive group, who take a less active interest and are to a large extent influenced and led by the active group: and finally a large section which remains emotionally inert except on the occasion of the discussion of great national issues. At other times, they are disposed to leave the decision of affairs to their elected representatives. Without some quantitative means of sounding opinion, a legislator may go quite astray at normal times, in judging the reactions of his constituency to special policies which do not arouse the usually inert voter to vocal expression.

It might be feared that the effect of frequent sounding of opinion would be to put a public representative into leading strings.

Dr. Gallup (1) meets this contention by pointing out:—

“*First*—it is well understood that the people have not the time or the inclination to pass on all the problems that confront their leaders. They cannot be expected to express judgment on technical questions of administration and government. They can pass judgment only on basic general policies. As society grows more and more complex there is greater and greater need for experts. Once the voters have indicated their approval of a general policy or action, experts are required to carry it on.

*Second*—it is not the province of the people to initiate legislation but to decide which of the programmes offered they like best. National policies do not spring full blown from the common people. Leaders knowing the general will of the people must take the initiative in forming policies that will carry out the general will and must put them into effect” (4).

The last four years have been a period of governmental activity in implementing new social policy in the United States. There has been ample opportunity during that time to test public sentiment. Over 1,000 surveys have been carried out on political and social questions. Even at a distance and with our limited acquaintance with the details of the life of the United States the outstanding importance of many of these questions can be recognised and, in fact, most of them have had mention in our newspapers.

*Politics and Government.* Federal spending programme, unemployment relief and its administration, Presidential popularity, Supreme Court, New Deal agricultural policy, soldiers’ bonus, social security,

third term sentiment, Republican and Democratic Party candidates for the Presidency.

*Labour.* Sit-down strikes, use of militia to eject strikers, Federal regulation of labour unions, craft unions and industrial union, wage-hour legislation, child labour amendment.

*War and Peace.* Responsibility for the European War, Neutrality Act revision, war referendum, sending the Army and Navy abroad.

*Business issues.* Stock market regulation, inflation, Government ownership of railways, responsibility for the depression (1).

How wise are the common people? It has been said of the motion picture magnates and other purveyors to public entertainment that the average intelligence of the mass could be rated as that of the mental age of twelve. Yet the verdict on the surveys, Dr. Gallup reports, is that, collectively, the American people display a remarkably high degree of commonsense. Few of those asked to vote in a survey may have any accurate or complete knowledge on any important issue of the day. They have not sufficient information to arrive at a well-founded judgment. They belong to the inert group of the electorate. In *Modern Democracies* (1922), Bryce, again reviewing Public Opinion in the United States, considers that the average American "if he be no good judge of measures, he is no bad judge of men. Here his shrewdness helps him; here his respect for honesty and courage comes in." Dr. Gallup concludes: "It would, of course, be foolish to argue that the collective views of the common people always represent the most intelligent and most accurate answers to any question." But results of sampling referenda on hundreds of issues do indicate, in his opinion, that great faith can be placed in the collective judgment or intelligence of the people (4).

### Methods of Sampling Public Opinion in Great Britain.

Under this heading may be grouped three diverse methods which have been developed recently to record trends in public opinion in Great Britain: the sampling referenda carried out by the British Institute of Public Opinion, the method of Mass-Observation and the War Time Social Survey initially set up by the Ministry of Information in collaboration with the National Institute of Economic and Social Research.

In 1936, the British Institute of Public Opinion was founded to work on similar lines to the American Institute to which it was affiliated. The British Institute is directed by Henry W. Durant, a graduate of the London School of Economics, who has had many years' experience of statistical work. After a year of experimental work, it began publishing results of its surveys in the weekly news review, *Cavalcade*. In 1938, the *News Chronicle*, having investigated the aims and methods of the Institute, secured the exclusive rights to publish its findings in Great Britain and all countries of the British Empire except Canada.

A survey is initiated in the offices of the *News Chronicle* by a conference representative of the staff of the newspaper and of the Institute. A list of 15 to 20 questions is cut down to 11 likely to prove of the greatest public interest. Two questions remain unchanged. The first estimates the standing of the Prime Minister on the form: "Are you satisfied with \_\_\_\_\_ as Prime Minister?" The second

repeat question inquires how the person interviewed voted at the last election and which party he or she would vote for at a general election held immediately. These two questions show the trend of political opinion. Just as in the United States great care is taken to frame the questions in simple language and in such a way as not to bias the answers. Questions may be tried out on special groups before the final form is reached.

The method of selecting the persons to be interviewed is described and discussed under the section dealing with "The practice of sampling".

As yet there has been no opportunity of testing the technique developed in London for English conditions by predicting the result of a national plebiscite like a general election. Upwards of six by-elections have been used as tests, sometimes with as small a sample as 500. In only one case was there a failure to predict the result, Batley and Morley (1939). In this case the forecast of the British Institute was 6.1 per cent. out as compared with the expectancy of 3.0 per cent. The error has been assigned to a big swing of opinion in the twenty-seven hours which elapsed between the time of the Institute poll and the election (5).

It is quite evident that in hotly contested elections there may be violent fluctuations of opinion which are too rapid for even the sampling referendum. Indeed it is not possible to assign an absolute invariable value to the result of an election, especially a by-election. Unfavourable weather conditions, for example, could play havoc with the percentage of voters who could face the difficulties of reaching the polling booth. A sampling referendum estimates the division of opinion *when it is made* with reasonable accuracy. If the complete poll is carried out shortly afterwards, in circumstances not dissimilar and presenting no unusual obstacles to all electors voting, then it is reasonable to look for agreement.

The results of the British surveys have not attracted as much attention as Dr. Gallup's polls in the United States, possibly because they have less international value, perhaps because they are the copyright of *one* newspaper whereas in U.S.A. more than *ninety* newspapers publish three times a week the results of surveys of public opinion on questions of interest showing how they are influenced by events.

Public opinion is a rather nebulous entity. Viewed from a distance it has a well-defined form. At close range it is seen to be in continual process of change depending on its religious, social, economic, and political environment which in itself may depend on a variety of factors derived from historical, racial and geographical origins. It has all the vitality of a living thing and is just as difficult to map, classify and measure. Anthropometric measurements may serve the anatomist to classify races, but will not enable an artist to paint a portrait. This analogy is sufficiently close to warn us against claiming too much for polls of the Gallup type, but we may expect to find amongst the material already accumulated in Great Britain the emergence of British characteristics.

The British acquiescence in the accomplished fact is shown in the response to the conscription issue before conscription was announced :

39 per cent. in favour  
53 per cent. against  
8 per cent. doubtful.



The week after conscription had been introduced the poll was :

58 per cent. in favour

38 per cent. against

4 per cent. doubtful.

Observers also note the wide divisions that so frequently exist between the published opinion of Press and the currents of public opinion. It was the wide separation thus prevailing towards the close of the reign of Edward VIII that led to the formation of the organisation of Mass-Observation by two energetic young men, Charles Madge, a reporter in the *Daily Mirror*, and Tom Harrisson, then working as a navvy in a cotton mill. They wished to record what people were saying on public issues. A group of observers kept a note of conversations and interviews on matters of public moment, such as has been done recently for rationing and air-raid shelters. They found it necessary to extend their investigations into what people were reading, murmuring and, in so far as it was possible, thinking. Much of the work has been done in a typical industrial town in Lancashire, a London suburb and a Welsh border village. The method of Mass-Observation certainly gets down to the people. It is acutely conscious of that vast group which have had no more than a primary education.

It gives a somewhat terrifying picture: thirty million adults who have left school before they were fifteen, threequarters with incomes under £4 a week, a quarter who do not vote, more than a quarter who do not read any morning newspaper. The two papers most read are the *News of the World* and *Everybody's* (6), (7), (8).

Mass-Observation places the emphasis so much on what is said in public that Harrisson defines: "Public opinion is what you will say out loud to anyone." This is a clear limitation on the value of the data. The observers are not unaware of the obvious criticism that answers to inquiries may be influenced by the prestige position of the questioner. They have, therefore, made observations on behaviour: noting, for example, in the privacy of the darkened cinema, that applause for Mr. Chamberlain, when he appeared on news reels, fell steadily from September onward; whereas the Chamberlain poll of the British Institute of Public Opinion showed that his popularity increased from around 60 to nearly 70 per cent. Mass-Observation takes this as a typical case of private opinion which is suppressed for lack of social sanction, but when released causes violent uprushes of feeling, surprising those who think they direct public opinion.

Having begun, therefore, as social dermatologists, mass-observers have now found that they must penetrate below the superficial level of public talk and reach the deeper currents of opinion which flow more silently, but when they come to the surface exert tremendous force. They seek an answer to the question "What is Private Opinion?"

The method of interview is not new in sociology. It was used by Charles Booth to furnish the data for his monumental work, *Life and Labour of the People in London*, and by Seeböhm Rowntree in his studies; *Poverty and Unemployment*. Similar methods have been

applied under Government auspices to obtain the cost-of-living index. The object of these investigations was to discover answers to economic questions such as: "How does the labourer live?" The daring, to some even dangerous, to others insolent, novelty was to use this method to find what people were saying, what they were doing, and even what they were thinking on political and social questions (9).

To its critics Mass-Observation was a harmless hobby of young enthusiasts, but when the War-Time Social Survey was discovered to be using similar methods some months after its establishment by the Ministry of Information, the storm broke. The Press ran a campaign for over ten days, with all the arts of Press propaganda, cartoons, front-page headlines, and editorial comment, leading to a debate in the House of Commons. The following comment embodies a pent-up emotion of a social weekly on the subject (6).

"Thousands of amateur inquisitors were let loose on the land armed with notebook and pencil to swarm from house to house 'to find out what people are thinking'. This is called a Gallup survey and is probably one of the stupidest notions in existence. It suits America admirably but it does not suit this country."

Actually, of course, the War-Time Social Survey had no connection with Dr. Gallup. The preliminary work of organising it for the Ministry of Information was carried out by the National Institute of Economic and Social Research. The sixty investigators who were employed under the direction of Professor Plant, of the University of London, found the overwhelming majority of those interviewed welcomed the opportunity of expressing their views. Only 2 per cent. refused to see them, another 10 per cent. refused information (10).

The supporters of the War-Time Social Survey had no difficulty in showing that it was simply employing methods in use by commercial firms and newspapers for many years past. In spite of the storm of publicity, it is stated that the War-Time Social Survey continues to function fully and has not been closed down by the Ministry of Information. It is now independent of the National Institute of Economic and Social Research.

These new instruments of social research are quantitative as well as qualitative. They can be easily incorporated in the more formal social surveys carried out under academic auspices such as the surveys at Bristol and at Liverpool. The National Institute of Economic and Social Research have, for instance, organised studies of war-time saving and spending in Islington, Coventry, Blackburn, and Bristol (11) by a team of five directed by Charles Madge, who started Mass-Observation jointly with Tom Harrison. The new extension of social inquiry is illustrated in the question: "To help to pay for the war would you rather (a) have everything rationed; (b) have higher prices; (c) have part of your wages saved for you till after the war?" Only half the sample had a clear-cut opinion of those who had, there was a majority in favour of extended rationing with its obvious equalitarian appeal.

All these various methods of sampling public opinion in Great Britain are really complementary instruments for social research into a complex phenomenon. At this time, when it is necessary for the Government of Great Britain to direct its people to many unusual

courses of action, in air-raid shelters, anti-aircraft protection, adaptation to the rationing of many foods and the shortage of some, precautions against epidemics, it is evident that these inquiries have an important function in enlightening administrators on the actual and probable reactions of the populace to the several and necessary instructions.

It is a principle of scientific research that fundamental research always pays at any rate in the long run and the most important fundamental research is research into all the properties of the raw material of the industry. Without going so far as to say that the people are the raw material for the machinery of government, we can, at any rate, assert that the people are the agents through whom alone the plans of the administration can be achieved. These new methods give the administrator more direct knowledge of the reactions of the public than can reach them either through members of Parliament or the Press. Both of these channels have their uses, but they are far from efficient and in recent years have been shown to be in many instances untrustworthy.

### **The Practice of Sampling.**

As was stated in the introductory paragraph of this paper, the attitude of anyone towards sampling referenda will depend on one's prejudices or opinions regarding all forms of quantitative measurement. There are university graduates and even professors who make no endeavour to conceal their abhorrence of mathematics, who almost take a pride in their ignorance of algebra and who are by no means well-disposed towards arithmetic. University graduates come from all types of families and we must regard them, from some aspects at any rate, as a cross-section of the population. We must be prepared to find amongst the general population fundamental antagonisms against any use of enumeration. No one engaged in practical life, particularly in agriculture, can evade the notion and use of a sample, however unfamiliar it may be to those who are engaged on abstract studies. Cases of deficiencies in the quality of milk are of frequent occurrence in the courts. Milk-vendors, solicitors, Civic Guards and district justices accept the analysis of the sample when correctly taken as representative of the milk.

The quality of the seeds sold to our farmers is also controlled under the Weeds and Agricultural Seeds Act (1909) administered through the Seed-testing Division of the Department of Agriculture. Seeds will serve here as a useful analogy since we are dealing with enumeration of individual units of good seeds, imperfect seeds and impurities. Only small samples, mere handfuls of seed, can be tested, yet these must be representative of whole bags. [The International Rules for Seed Testing, which have been adopted by the countries participating in the International Seed Testing Association, contain precise directions for the taking of the bulk sample of seeds and for extracting from it the quite small working sample.] The Seed-testing Division has now been in operation for thirty years and a recent report shows how well it has protected the farmer and served the seed merchant. Its findings have found such general acceptance that it is a rare event to have them checked in the law courts.

All materials purchased in large quantities either by Governments or by large firms are or should be tested to ensure that their quality is at least up to the standard required. Liquids and gases offer no difficulty in sampling, but all types of solids, particularly natural products, present some troublesome problems.

Coal should be bought and sold on a basis of its calorific value in heat units. The sample which is burnt in the testing calorimeter weighs about  $1/400$  of a pound, or about one-millionth of a ton. The method of sampling is clearly of the highest importance. In England it is carried out according to the directions given in the British Engineering Standards Specification (12) and the commercial world has no difficulty in accepting the calorific value of a tiny sample made in this way as representative of the coal in bulk.

These examples may induce a critic to concede that it is possible to select a representative sample even of the heterogeneous collection of individuals making up, either the population, or the voters of a country, but may not convince him that the voting of a sample of 1,000 or 2,000 voters could duplicate the voting of a register of some million voters. A little reflection will show that the same principles continue to apply to classifications by opinions as to classifications by age, height, weight, colour of eyes, cephalic index or one of the many ways in which a population can be arranged.

It should not be too difficult to persuade the Irish people of the possibility of reliable sampling of opinion since they have had before them the repeated demonstrations of the sampling of the Irish Sweepstake in the draw for the winning tickets. Some millions of tickets, labelled with various letters, usually A, B, C, D, E, H, J, K, M, N, P, Q, R, X, Z with the usual serial numbers, are thoroughly mixed and inserted in the big drum. At intervals, separated by several revolutions of the drum, the winning tickets are drawn, usually totalling between two and five thousand. Here we have what the mathematician would describe as an ideal random sample, which avoids giving any bias to any group of tickets. Such conditions afford a practical test of the main assumption of the theory of probabilities. In games of chance it is impossible to predict any definite event, but it is possible to calculate how many ways each event can occur in a given fashion. It is an assumption which is verified in any long run of trials that those events occur most frequently, which can be calculated to occur in the greatest number of ways. In dealing hands at bridge from thoroughly mixed packs, hands in which the suits are distributed in 4, 3, 3, 3 ratio will be most common. There are hundreds of thousands of ways of arranging the pack in this fashion, but there are comparatively very few ways of arranging the pack so that each player will receive cards of one suit only. In the Draws for the Irish Sweepstakes the same phenomenon is repeated on a gigantic scale, and we find as we might expect without any mathematical assurance that the pattern of the letters shown by the tickets sold, which represent what statisticians term the "population" is almost exactly repeated by the tickets drawn, which represent the "sample". This is shown comprehensively in Table I, embodying the results of 12 draws out of the 24 world sweepstakes organised. These group of 12 have been selected as they contain about the same number of classes. This table is given as a record, but its full significance can be better

TABLE I.

COMPARISON OF PERCENTAGE DISTRIBUTION OF CLASSES (REPRESENTED BY CAPITAL LETTERS) AMONGST  
A POPULATION AND A RANDOM SAMPLE OF THE POPULATION.

Draw	A	B	C	D	E	H	J	K	L	M	N	P	Q	R	X	Z	Number in Sample
DERBY, 1933																	
Population ... ..	6	7	11	8	7	3	3	1	11	11	10	6	1	-	8	7	
Sample ... ..	6	7	12	7	7	3	3	1	11	12	9	6	1	-	8	7	2,461
CAMBRIDGESHIRE, 1933:																	
Population ... ..	9	7	9	9	7	6	5	-	11	11	9	4	1	1	9	2	
Sample ... ..	9	6	9	9	7	6	5	-	10	11	9	4	1	2	10	2	2,815
GRAND NATIONAL, 1934:																	
Population ... ..	6	7	9	10	5	5	-	-	12	11	9	4	2	-	10	10	
Sample ... ..	5	7	9	9	5	4	-	-	13	12	9	4	2	-	10	11	3,754
DERBY, 1934:																	
Population ... ..	7	9	8	9	6	4	2	1	11	13	10	6	3	-	9	2	
Sample ... ..	7	7	8	9	7	4	2	1	10	14	11	6	3	-	9	2	4,366
CAMBRIDGESHIRE 1934:																	
Population ... ..	9	9	10	10	7	3	1	1	10	12	9	7	3	1	5	3	
Sample ... ..	9	9	10	10	7	3	1	1	10	11	10	8	3	1	4	3	5,610
GRAND NATIONAL, 1935:																	
Population ... ..	9	8	7	7	6	5	3	4	9	8	9	6	4	2	8	5	
Sample ... ..	9	7	8	7	6	5	4	3	9	7	9	7	4	2	8	5	3,114
DERBY, 1935: ... ..																	
Population ... ..	10	12	7	7	5	2	1	3	10	10	10	6	7	-	8	2	
Sample ... ..	9	12	7	7	4	2	1	2	10	11	11	6	7	-	8	3	2,870
CAMBRIDGESHIRE, 1935:																	
Population ... ..	10	10	7	11	4	4	3	2	10	11	11	7	4	2	3	1	
Sample ... ..	11	10	7	10	4	4	3	2	10	10	11	7	5	2	3	1	3,832
GRAND NATIONAL, 1936:																	
Population ... ..	5	5	5	5	5	3	2	-	9	7	9	10	9	6	11	9	
Sample ... ..	5	5	6	4	5	3	2	-	9	7	9	11	8	7	10	9	2,866
CAMBRIDGESHIRE, 1936																	
Population ... ..	9	7	7	7	5	4	2	1	10	11	9	9	3	4	7	5	
Sample ... ..	10	7	7	6	5	3	2	1	10	11	9	9	4	4	7	5	3,594
DERBY, 1937:																	
Population ... ..	7	8	7	5	3	3	3	1	7	7	10	10	7	7	6	9	
Sample ... ..	6	8	8	4	3	3	3	1	8	7	10	10	8	6	6	9	4,106
CESAREWITCH, 1937:																	
Population ... ..	6	6	8	8	8	7	4	3	8	8	8	7	2	2	6	9	
Sample ... ..	6	6	9	7	8	7	3	3	8	9	8	6	2	2	7	9	4,330

evaluated from the detailed study of a single draw such as that for the Cesarewitch, 1937. The numbers given below are the percentage distribution of the letter labels on the tickets sold (the population) compared with the similar distribution amongst the winning tickets ("the sample"). Total number of winning tickets 4,330.

TABLE II.

*Cesarewitch, 1937. Total winning tickets 4,330.*

*Percentage distribution of tickets in letter classes.*

	A	B	C	D	E	H	G	K	L	M	N	P	Q	R	X	Z	
Population	6	6	8	8	8	7	4	3	8	8	8	7	2	2	6	9	Tickets Sold.
Sample	6	6	9	7	8	7	3	3	8	9	8	6	2	2	7	9	Winning Tickets
Excess per cent. of Sample ..	—	—	+1	-1	—	—	-1	—	—	+1	—	-1	—	—	+1	—	

The tickets sold (population) numbered over three million.

It has of course to be recognised that the percentages are given in rounded whole numbers, so the table merely indicates where the discrepancy between the two series amounts to  $\pm 1$  per cent. It is characteristic of the whole series of these draws that this limit is rarely exceeded. In fact we find that out of a total of 24 draws, having in all 371 classes of letters, there is only one case of a difference of 4 per cent., five cases of 2 per cent., 118 cases of 1 per cent. and the remaining 247 showing no difference (to the degree of approximation adopted). This distribution has been found to be in good agreement with the statistical expectancy in so far as it can be calculated from the available data.

The close concordance between the two series is taken by the authorities of Irish Hospitals Trust as a proof of the perfection of the mixing. In statistical language, the sampling fulfils the conditions of being completely random.

We can go further and use the results of the Draw given in Table II to illustrate the conditions which should be satisfied in taking sampling referenda. The selected voters are asked to answer "yes", "no", or "undecided" to carefully framed questions such as the momentous question "Do you believe there is danger for the United States if Britain should be defeated?" in America, or "Should the Means Test be abolished?" in England. We can suppose that the purchasers of various lettered tickets represent groups of opinion, the A-class, B-class and so on. The questions usually deal with questions on which opinion is more less equally divided. We can assign, of the 16 letters listed in Table II, any seven to the "yes" group; any five to the "no" group; leaving four to the undecided group, which represents, in a total poll or plebiscite, the group whose votes for any reason

are not recorded. Select the "yes" group of seven letters in any way for illustration here, the first seven the "no" group as the next five and we get the following results:—

	" Yes "							" No "					" Undecided "			
	A	B	C	D	E	H	G	K	L	M	N	P	Q	R	X	Z
Sample	46%							34%					20%			
Population	47%							34%					19%			

It would of course be possible to obtain a result showing discrepancies of 3 per cent. For example, if the A, B, C, M, N, X, Z classes all voted "yes" the percentages of "yes" in the winning tickets (the sample) would be 54 per cent. as against 51 per cent. in the total population represented by the tickets sold. But this is a hand-picked sample. It includes the C, M, X classes and excludes the D, G, P classes. Any other type of sample will have errors of 2 per cent., 1 per cent. and zero, and if we were to make our selection of the letters by drawing the letters in groups of seven, five and four in succession from a box the cases of 1 per cent. or less would be in the greatest proportion. Indeed statisticians can show that in taking a poll with a sample of 4,000 voters from a voting population of millions there are 997 chances to 1,000 that the discrepancies shall not exceed about 2.5 per cent.

The draw for the Irish Sweepstake gives us suggestions for a recipe to obtain an ideal sample thoroughly mixed and representative of a voting population.

- (1) Write each voter's name on a ticket giving each parliamentary division or county to which he belongs.
- (2) Mix all these tickets as thoroughly as the sweep tickets.
- (3) Put the tickets into the big drum.
- (4) Draw 1,000, 2,000, 3,000, or 4,000 as may be required.
- (5) Invite each of the "winning" voters to state their opinions on the selected questions.

The fairness of the sample could be tested just as a Sweepstake Draw is tested. The representation of each parliamentary division and of each county in the sample drawn should correspond to the way in which the total number of voters are distributed. Similarly, if other information about the voters were available, such as age, sex, or valuation of residence, we should expect, judging from the experience of 24 Sweepstakes, that the sample obtained by the draw should be thoroughly representative.

As this procedure is far too troublesome and probably just as expensive as a plebiscite, some equivalent procedure must be adopted. To suit Irish conditions a statistician makes the following suggestions:—

"A thoroughly representative sample is required only when the 'controls' age, sex, occupation, rural or urban dwellers, etc., may have a bearing on the question asked. Admittedly, a representative sample will be necessary for most 'burning' questions. By far the best method for Irish conditions would be to take an absolutely random sample from the Dáil Electors' or Local Government Electors' printed

lists which are ideal for the purpose. If a sample were wanted for a single constituency, such as Cork, where on 1/7/37, the number of Dáil Electors was 53,019, and the size of the sample were fixed about 1,000, then it would suffice to take every 50th name on the register starting with any number between 1 and 50, picked at random.

“In the event of the refusal of the voters picked to take part in the poll, alternatives should be arranged beforehand. Bias may, however, be introduced in this way if there were a great many refusals and alternatives had to be found to those originally picked. Every endeavour should, therefore, be made to prevail on those selected to give their views so as to preserve as far as possible the random character of the sampling.

“The sex, age, broad occupational class, place of residence (urban or rural, etc.) of the sampled voters should be stated, and the answers to the questions in the form ‘yes’, ‘no’ or ‘undecided’ should be compiled according to these classes. This can of course be readily done by the usual mechanical sorting equipment used at the Census of Population.

“The sample as chosen at random should faithfully reflect the ‘grain’ of the constituency or of the whole country, as the case may be, in all the classes; just as the winning tickets of the sweep showed the same percentage distribution amongst the index letters as the tickets sold.

“Even if it did not, it can be made to do so. Suppose, for instance, the males over 21 were 55 per cent. of the constituency and the females 45 per cent., but the sample showed 60 per cent. males and 40 per cent. females. Then in any question in which women had a distinctive opinion, the sample would be biased. This defect can be corrected by taking the response of the men and women separately and finding the percentage of each answering ‘yes’, say, 35 per cent. for the women and for the men 20 per cent. Then in an ideal sample we may estimate that the percentage of ‘yes’ responses in the whole would be:—

$$1/100 (55 \times 20 + 45 \times 35) = 26.75$$

instead of the observed result

$$1/100 (60 \times 20 + 40 \times 35) = 26$$

“Similarly other deviations could be weighted so as to obtain the equivalent of ideal sampling conditions.”

About the same size of sample is sufficient for a poll of the whole country which in 1937 had 1,788,888 Local Government Electors. The tables published by the American Institute of Public Opinion, show that a sample of 1,800 would suffice for an expectancy of an accuracy of at least 3.5 per cent. in 997 cases out of 1,000. It is easy to see that problems of random sampling by hand-picking become difficult. We require but 20 voters from Carlow, 47 from Cavan, 55 from Clare, 168 from Cork County, 87 from Donegal and so on, but it may be surmised that statisticians can prescribe a routine method here also which will ensure that the sampling will be representative over the whole country even though the sample from a county may not contain, for example, the proper proportion of men and women for that county.

In the United States the selection is apparently entrusted to field reporters, nearly all college graduates, who work part-time on



Institute Surveys for a fee based on an hourly rate. These field reporters number 700-1,100, strategically situated in cities and in rural areas. They obtain answers to the survey questions by interviewing voters in the home, on the street, in offices and on farms. The set of voters interviewed must have, as far as possible, the same pattern distribution as the population structure of their area in the various control classes already listed. Difficult as this criterion may be, the American Institute of Public Opinion take elaborate precautions to satisfy it. We can only judge of its efficiency by the successful emergence of these sample polls from the stringent test of the Presidential election.

The methods of the British Institute of Public Opinion follow a similar plan. There is a printed questionnaire of 11 questions sent to the Institute's interviewers, who are "for the most part graduates, under-graduates studying economics or sociology and other professional persons, such as retired civil servants and colonial officers, who by their training might be expected to collect unbiased data".

Each interviewer is given a list showing the number in each class he has to interview: men and women; young, middle-aged and old people; unemployed, poor, middle class, and wealthy. In other words, each interviewer is responsible for a small section of the total cross-section.

"The method of approach is left entirely to the interviewers; each is given a definite area to work, such as a parliamentary constituency. . . . A day's work will mean interviewing about 28 people. . . . The names and addresses of those interviewed are never taken; interviewers are instructed never to interview the same person again."

The work of selection of the proper type of voter is simple in the beginning of a day's work, but becomes increasingly difficult as the list becomes filled. A complete record of the work of each interviewer is kept. Statistical methods can be applied to scrutinise the returns. It is believed that it is not possible for work improperly done to escape notice.

In Great Britain the samples used for a national poll vary from 2,000 to 15,000 out of a voting population of 29,534,630. So far the system has not had an opportunity of being tested against a national plebiscite such as a general election.

In conclusion, it should be mentioned that for a sample containing a given number of voters, the reliability of the poll will depend slightly on the way in which opinion divides. The margin of error for a poll of 1,000 will be about 4 per cent. for a division in the ratio of 80 to 20, but the margin rises to about 5 per cent. when opinion splits in the ratio of 50 to 50. In strict mathematical terms the expectancy is that 997 times out of 1,000 these limits of error will not be exceeded. This result is calculated on the basis that the total electorate or population from which the sample is taken is infinitely large compared to the size of the sample. The margins of error are not altered substantially for samples of 1,000 out of an electorate of 20,000, such as occur in a small Irish county. The mathematical calculations are well known, and a table, showing the probable error over a comprehensive range of samples, has been compiled by Professor Brown of Harvard University (1).

To sum up: the sampling referendum has the rough accuracy of a yardstick, not the precision of a scientific micrometer (Gallup).

**Public Opinion and Democracy in Ireland.**

Before approaching the question whether sampling referenda could be of any service to the administration of popular government in Ireland, it is desirable to make an attempt to survey not only the characteristics and working of public opinion here but also the manner in which democratic feeling has found expression in the Constitution.

According to Harrison public opinion is what will be said to a stranger. An Irishman will readily talk to a stranger, but he is usually reticent on those public affairs which are of the greatest moment to him, and those fundamental opinions which determine his vote at an election will rarely be revealed to any brief acquaintance. In spite of this personal reticence visitors to this country are struck by our political consciousness as shown by our readiness to discuss public affairs in an interested but impersonal way. An intimate and careful study of the social pattern of the Irish countryside has been given by Arensberg, the Harvard sociologist, in *The Irish Countryman*. He describes in detail, perhaps over-elaborate for our Irish reticence, yet with some of the art of a fine etching, the active formulation of public opinion in an Irish countryside.

“The community reaches agreement upon its internal affairs, too, through the old men’s discussions. It is in just this type of activity that one can at last put one’s finger upon that nebulous force among men: public opinion. That force is not implemented; it is merely the power of gossip and of censure, only in critical days, can it rise to action as a last resort and win itself an international name: the boycott. But it is none the less powerful.”

“But in rural Ireland the group through which this power flows serves another function which cannot be dissociated from its rôle as the seat of public opinion. The members of the old men’s *cuaird*, as they call their meeting, are the living repositories of traditions. . . . For the pattern of local life retains its continuity and preserves what it can of its conformity to tradition with the past through them.”

“In one North Clare community, the old men’s meeting was known as the ‘Dáil’. Before the Free State, it had been known as the ‘parliament’. The name is a jocular one, of course, but as we shall see, it is expressive of the participants’ evaluation of themselves, none the less.”

These are no casual traveller’s comments but the observation of a trained student, who visited Clare with trustworthy introductions, who during months of simple living there won the intimacy of the people and who had the privilege of being an auditor to the discussions at the “Dáil” during the winter months. I am told that this community was a stronghold of forty-shilling freeholders, who carried O’Connell to victory at his Clare election. It is a region which is the nearest approach to an open air antiquarian museum in Ireland, with its host of cromlechs and stone forts. Notable ecclesiastical ruins and castles are near at hand. Not far away in a rock crevice was found the finest gold collar of the Museum collection. Around the area still remain traces of the land war. Public opinion in such an environment is powerfully influenced by tradition. The community thinks according to definite political principles which possibly never reach conscious formulation, except at times of crises, but which are the embodiment of the political education that began with O’Connell, reached its

highest intensity with Parnell, Davitt and the Land War; and has in the twentieth century culminated after many stormy years in the comparative calm of constitutional self-government.

These influences of political heritage and historical traditions are perhaps more clearly evident in this part of Clare than in other parts of rural Ireland, but in some degree all these influences are in every district combining to give a structure to public opinion in rural Ireland and to make it tough and resistant. In a less degree these influences extend also to the cities where the greater part of the population is not more than one generation off the land. Public opinion, therefore, differs radically in this country from that public opinion in Great Britain studied by Mass-Observation, which is mainly that of an industrial community. Indeed, it is doubtful whether any analogue for it can be found elsewhere. Perhaps in the New England States there may exist a similar intense association of political history with a tradition of manners and customs.

The many links of an Irish rural community with its kindred abroad in the New World produce an awareness and give it an intuitional grasp of other systems of government. The feeling for popular government in Ireland must receive some of its strength and form from the democratic ideals of the United States. Possibly this is why we have accepted so readily the managerial system for city government and find no obstacle in principle in applying it to county government; not as a literal example of popular government but as a corrective to its weaknesses.

We must look to the Constitution for the formal expression of our political ideals. In it the term democratic occurs but once: "Ireland is a sovereign, independent, democratic state" (Article 5). The implications of this Article were given by Mr. de Valera during the Second Reading of the Constitution (11th May, 1937).

"Now once you determine upon a democratic form of government, representative government, government responsible to the elected representatives of the people, the main lines of your Constitution are set."

.....

"If there is one thing more than another that is clear and, shining clear, throughout this Constitution, it is the fact that the people are the masters. They are the masters at the time of an election, and their mastery is maintained during the period from election to election, through the President, who has been chosen definitely to safeguard their interests; to see that nothing that they have not in a general way given approval of, is passed by a small majority: which used to be threatened here as a danger to the country as a whole." The provisions in the Constitution for adult suffrage, proportional representation by single transferable vote, and, above all, the Referendum for amendments of the Constitution and on special occasions for Bills carry out the spirit of this declaration. All of these provisions received what may be described as unanimous acceptance. Though now and again proportional representation has been attacked, as when a critic wrote: "I have never had any use at all for proportional representation. I regard it as one of the most repulsive products of the Rotary Club mind. It is at best a mathematical extravaganza as remote from real life as mathematical complexities usually are." Some years later it is dismissed summarily in the sweeping sentence: "We

have even been offered that last infirmity of parliamentarism in its dotage, proportional representation, as a balm for all our political ills."

Such rhetorical and emotive phrases decorate, without advancing, political discussion. To minds with a like qualitative bias, sampling referenda may be relied on to evoke an equally picturesque but quite as fantastic a condemnation as proportional representation. Yet, even this critic, in search of recommendations on the problems of Irish government, lays down: "The principle of personal responsibility, carrying with it both adequate rewards for good work and ultimate subjection to the decrees of public opinion, is the only healthy principle for governing Ireland."

Democratic feeling is certainly fully expressed in the phrase: "ultimate subjection to the decrees of public opinion". But how are the decrees of public opinion to be obtained? This is the problem to which Dr. Gallup has offered a solution in the form of sampling referenda. It is a solution which has a title to consideration in a country which has expressed its adherence to the principle of the referendum. Both equally recognise that "the people are the masters." In the constitutional referendum their decision is *mandatory* and *final*, but in a sampling referendum the public opinion expressed is at best *tentative* and *advisory*.

Our attitude to this method of ascertaining public opinion is entwined with our democratic outlook. Do we hold with Chesterton (13) that the things common to all men are more important than the things peculiar to any men? Or, as he says arrestingly: "The sense of the miracle of humanity itself should be always more vivid to us than any marvels of power, intellect, art, or civilisation". We are up against the age-old crux posed by Plato of the common man against the expert. A. D. Lindsay (14), the distinguished Platonist, has given us a solution in simple terms: "Government and legislation need skill and wisdom, they need experts, but the skilled legislators and able administrators cannot tell whether their laws and arrangements really cure the grievances they are meant to cure. They do not ordinarily know the grievances exist unless they are told of them. They are probably more able than others to say what laws and administrative arrangements will cure these grievances, but it is the people themselves who are the best judges whether the grievances are remedied or not." In Platonic fashion he goes on to say: "For just as expert shoemakers don't like being told that their shoes don't fit and tend to think it's the customers fault for having such funny-shaped toes, so expert governments and skilful administrators don't like being told that the plans they so skilfully make happen not to please. Hence, democracy demands that government, skilled and expert as its task may be, shall be sensitive and responsive to public opinion. To make the sensitiveness and response real, it is not enough that the government shall be elected by popular vote. It is essential that people should be allowed to criticise and discuss what government does."

Solitary individuals cannot criticise a government. Party organisations and party congresses can play their part. Groups and associations can be formed, but these only speak for that active section of the people for whom special ideas and policies are important. They become usually pressure groups, endeavouring to get their will imposed on their unorganised fellow-citizens. The sampling referendum provides a people with a simple method by which they can criticise and discuss what governments do. Just like other democratic devices, it

requires for its successful operation, the full co-operation of the people. Provided this can be secured, most of the technical difficulties vanish. If the Irish people adopted it, they would have a continuous means of expression on government policies and administration from election to election. It is even possible that the luck of the sample may grip the imagination of the sporting as well as the democratic instincts of the Irish people, and the voter who received an invitation to vote at a sample referendum would value the privilege and would respond with honourable and honest zest on behalf of his fellow-citizens for whom he, for the time being, happened to be the representative.

We have here one form of democratic machinery which does not (as so much of it must necessarily do) classify us in hordes of similar units, but which appeals to and enhances the personal status of the voter as a citizen (15), (16).

### **An Irish Inquiry Schedule.**

Let us test these general considerations by devising an inquiry schedule on some definite questions of public interest in Ireland. The type of question, which we select, will define to some extent the area in which the sampling referendum might operate. *It has no function inside the arena of the discussion of differences or the region of general agreement between the two parties. Public opinion on topics which lie in either area finds ample expression.* There remain a great range of questions, which cut across party divisions and may be the subject of discussions at party meetings, but rarely reach the stage of a free vote in the Dáil. Another group are those subjects which never arouse any political activity nor excite the interest of any pressure group, yet are of economic or national importance.

A simple issue in the first group is the question of Summer Time in the summer months in normal conditions. At the moment its active opponents have succeeded in getting it referred to a Commission. But a Commission on such a subject is likely to get more evidence from organised vocal opponents than from the large group of unorganised silent citizens who may appreciate Summer Time. The Commission can analyse and report on the arguments, but it will find it difficult to assess the weight of opinion on either side. Here a sampling referendum on the simple question, "Do you think that Summer Time for the summer months should be continued?" might be taken, with records of the age, sex and residence (rural, urban or metropolitan), of the voter. Such a poll would furnish a useful sounding of opinion for the government. Since a referendum is to be regarded as merely advisory and tentative, the result only indicates to the government a direction of action; taking into consideration also all the other aspects which it is the duty of the administration to consider. It is unlikely that any action to reverse the *status quo* would be taken except on a strong adverse vote, such as 70 per cent. On the other hand, an equally strong favourable vote would close the discussion. Between these limits the verdict of the poll might be classed as the Scottish one of "not proven".

A difficult issue also in the first group is the question of the methods of teaching Irish in the primary and secondary schools. Strong differences of opinion have been expressed as to the success or failure of these methods in advancing the national aim for the preservation of the Irish language and the extension of its use as a spoken tongue.

Can suitable questions on this subject be devised which any citizen voter can answer from his own observation or experience? The questions submitted here are designed to fulfil this requirement. They are not exhaustive or conclusive. They form a first stage of the inquiry and aim at discovering the attitude to Irish in the home.

“ Can you say from your own experience or observation whether as regards the use of Irish by children at home most English-speaking parents

encourage it, do not encourage it or discourage it?

Can you state whether from your own experience or observation the children attending primary schools generally

attempt	}	to use Irish at home or at play?
do not try		
object		

Can you state whether from your own experience or observation the boys and girls attending secondary schools generally

attempt	}	to use Irish at home or at play?
do not try		
object		

Can you state whether from your own experience or observation the boys and girls attending vocational schools generally

attempt	}	to use Irish at home or at play?
do not try		
object		

The answers to these questions would, of course, be classed also according to the age, sex, residence of the voter and whether English or Irish speaking or both.

This is an excellent example of the case discussed by Lindsay. The voter may not be able to make a shoe, or to say what methods ought to be pursued to extend the use of the Irish language; but he is in a position to state where the shoe pinches, and equally to say whether in fact the methods pursued produce a favourable reaction to the language and extend its use.

It is quite evident that as material defence requires the whole will and co-operation of a people, so also does this immaterial defence of the national consciousness involved in the preservation of the Irish language call for the full force of the national will behind it. A succession of sampling referenda should be able to show if the present methods be inefficient or involve teaching labour that is fruitless and so lead to changes which will secure that almost unanimous goodwill and approval of the people, which is essential for success in this extremely difficult task.

Some other questions are proposed below on which public opinion is lethargic and on which action will not be readily taken without some knowledge of the volume of public opinion in favour of or antagonistic to action.

Would you approve of a decimal coinage for Ireland?

———yes ——no ——undecided.

Do you think steps might be taken towards changing to a decimal system of weights and measures?

———yes ——no ——undecided.

Do you consider that drivers of motor cars should pass a driving test before receiving a licence?

———yes ——no ——undecided.

The following question has no reference to the legislature and has often been a subject of public debate :

Do you consider that the ban on foreign games by the Gaelic Athletic Association is advantageous to Irish athletics?

———yes ——no ——undecided.

It is not advanced that all these questions are necessarily suitable for a referendum either in form or in subject. They illustrate the difficulties of framing a questionnaire so as to elicit opinion in a simple way by direct answers of "yes", "no", or "undecided".

If an organisation be ever established in Ireland to adapt the technique of the sampling referendum to Irish conditions—an organisation which we may describe as an Irish Institute of Public Opinion, using for brevity the standard term—it would have to be extremely careful, from the outset, to show the same clear impartial attitude, announced as the policy of its American counterpart, if it is to secure the confidence of the Irish people. It would have to avoid the evident possibility of tendentious queries, and in all its policies act as a docile instrument in the service of the Irish people to give public opinion a direct voice for the expression of its decrees.

The author desires to acknowledge the courteous promptitude with which the following organisations gave on request essential information in reference to the subject of the paper :—the American Institute of Public Opinion ; the British Institute of Public Opinion ; the National Institute of Economic and Social Research ; and the Ministry of Information, London. He is under a special obligation to Dr R. C. Geary, who obtained important information for him and who contributed valued assistance to the discussion on sampling. The author wishes, in particular, to acknowledge the courtesy of the Hospitals Trust, Ltd, in supplying comprehensive data on the distribution of the winning tickets in the Irish Hospitals Sweepstakes

#### REFERENCES :

- Bryce. *The American Commonwealth*.  
 Bryce. *Modern Democracies*  
 Arensberg. *The Irish Countryman*  
 (1). "The New Science of Public Opinion Measurement" The American Institute of Public Opinion.  
 (2) *Time* Nov 18, 1940  
 (3) *Who's Who in America*  
 (4) Gallup : "Public Opinion in a Democracy." Stafford Little Lectures, Princeton.  
 (5). "What Britain Thinks The Technique of Public Opinion Measurement." The British Institute of Public Opinion  
 (6). Harrison : "What is Public Opinion?" *The Political Quarterly*, Oct.-Nov. 1940.  
 (7). *Mass-Observation : First Year's Work (1937-38)* Lindsay Drummond  
 (8). *War Begins at Home*. Chatto and Windus.  
 (9). *The Study of Society* Kegan Paul  
 (10). *Hansard* Aug 1, 1940.  
 (11). Madge. *The Economic Journal*, 1940.  
 (12). Himus. *Fuel Testing*. London.  
 (13). Chesterton. *Orthodoxy*  
 (14). A. D. Lindsay. *I Believe in Democracy*.  
 (15). Maritain. *Scholasticism and Politics*.  
 (16). A. D. Lindsay. *Dublin Review*, Oct, 1940.

## DISCUSSION ON DR. F. E. HACKETT'S PAPER.

In proposing the vote of thanks to Dr. Hackett, PROFESSOR T. DILLON expressed pleasure at having the opportunity of saying a few words on the general aspects of the subject. The paper, he said, had dealt with the Gallup poll from almost every view-point. Dr. Hackett had succeeded especially in showing the objectivity of Dr. Gallup's Method. Such a poll must avoid prejudice at all costs, and the Gallup poll recognised the danger of taking sides. There were, however, many pit-falls besetting the statistical method and Dr. Hackett had outlined methods for avoiding most of them. Still there were difficulties. Intelligent people would, he thought, throw the polling papers into the waste-paper basket unless they were of a statistical frame of mind. And he had no friends of such a mind. Then again, many people would display indifference to the voting, while others would regard the questions as traps. Many of the questions were of the simple type that would appeal mainly to the unintelligent section of voters, while there was always the danger that the questions might be misunderstood.

There were certain more fundamental difficulties concerning such polls that Dr. Hackett did not discuss. What is the referendum about? In the United States the Gallup poll professes to be a poll connected with certain measures. There are grounds, however, for suspecting that the results of these polls are influenced not so much by the measures voted upon as by the men supporting them. The voter regards himself as voting for or against men, not for or against a measure. This would certainly be the case in Ireland; the people would vote for a man, for they know that they have no opinions of value themselves. In certain circumstances they would vote for a man of action even against their own will. Could the Irish people, for instance, express their views on the Irish language without discarding their leaders?

Referring to the two tables illustrating the discussion on sampling in Dr. Hackett's paper, Professor Dillon said that if he got them from a laboratory technician he would be very suspicious. The figures seemed too good. It was the first time his faith in the Sweepstakes was shaken. For him the most unsatisfactory aspect of those polls was: how far were the groups chosen representative? Theoretically, perhaps, the statistical method had possibilities, but not in practice.

In seconding the vote of thanks, MR. T. JOHNSON said that in his opinion the method of sampling referenda may provide a useful test of how a particular propaganda was progressing, but he could not see how the method could be applied to democratic government. He could think of few things less democratic than that a community should be satisfied to express their views through sample voters selected indiscriminately.

There was always a considerable proportion of doubtful voters in polls of this class; these were generally placed under some such heading as "undecided." For electoral purposes these doubtful voters were very important.

The method of taking these sample polls has its weaknesses. Expert interrogators are sent to interview a number of voters chosen at random; they come quite casually upon these voters and ask them to answer "yes" or "no" to certain questions even if the voters possess no views at all on the subject. Furthermore, allowances ought certainly be made for a large number of informed voters who will deliberately give mis-



leading replies. The average voter will not answer formal questions asked by irresponsible people with sincerity and honesty.

In comparison with old methods used by political parties for forecasting election results, the Gallup poll did not display much greater success. Its 4 per cent. margin or error is considerable, judged by any standards. The men behind the scenes in the ordinary process of electioneering can make a forecast from information intelligently gathered and give results to within a 5 per cent. margin of error. The seconder of the vote of thanks concluded by expressing his interest in Dr. Hackett's paper, although he was sceptical as to the value of sample polls as part of the machinery of democratic government.

REV. PROFESSOR D. O'KEEFFE (a visitor) said he enjoyed the manner of exposition adopted by Dr. Hackett as well as his excellent account of the theory underlying the statistical method. Speaking for himself, Professor O'Keeffe emphasised that he approached the subject not from the mathematical view, but from that of the political theorist. In doing so he wanted to ask four questions. These were :

- (i) What is the rightful place of public opinion in a democracy ?
- (ii) Can a referendum be regarded as a genuine cross-section of public opinion ?
- (iii) If it can, of what use is it in the machinery of government ?
- (iv) Is it of any use when dealing with social problems ?

Dr. Hackett had laid much weight on Bryce, but Bryce is misleading. His views on the subject of the present discussion are applicable to the United States rather than to England. If by some means or other public opinion could be made immediately effective democracy could not survive. This fact was recognised by the wise men who drew up the Constitution of the United States. In setting it up their main intention was to prevent public opinion from being immediately effective. And they did not even stop there in constructing barriers to delay public opinion from exerting its pressure—they set up two Houses of Government, the House of Representatives and the Senate.

Public opinion in itself is a concept both unreliable and nebulous. It ceases to exist as soon as it is measured. It can change overnight, and it is often difficult to know what precisely one is measuring. In a democracy, if stability is to be maintained, public opinion should prevail ultimately, and only ultimately. On the Continent the referendum, except amongst a unique and adequately educated people like the Swiss, has proved a danger to democracy. It must not be forgotten that Hitler came into power under a democracy. But then, the political education of German public opinion is not on a par with that of the Swiss.

Professor O'Keeffe, continuing, said he found it hard to know what public opinion really expressed. He was inclined to agree with Professor Dillon that it often concerned itself with men rather than matters. The results of the Gallup poll for the American elections tended to exaggerate the value of this statistical method, for in this case they dealt with a simple cleavage of public opinion. Most important questions of government, however, are complex and cannot be resolved in simple form. Furthermore, there are very many questions on which the average man is incompetent to form an opinion. It is stupid to ask the ordinary American : will Britain win the war ?

British political theorists have generally opposed the idea of a referendum. This aspect of British democracy is expressed by Edmund Burke in his "Letter to the Sheriffs of Bristol." The English M.P. goes to

Parliament to express his own opinion, not public opinion. It is only when people begin to distrust democracy that they introduce referenda. They are a symptom of the pathology of democracy not of its health. The Swiss are unique in making a success of the referendum, and even they are using it less. Generally speaking it cannot be used as part of the machinery of government, but it may have its uses in dealing with social problems. It can hardly be expected that the Irishman would make a better use of the referendum than the American. He is apt to give unsatisfactory answers to all questions except to those that for him are of an unemotional nature. In fact the only questions of this kind which an Irishman will answer effectively are those that are not worth answering.

DR. HENRY KENNEDY said that the paper bristled with question marks. To begin with : in his suggestion that the statistical method could be applied to democratic government, Dr. Hackett failed to define " democracy." Or what type of machinery of government did he envisage ? Are the people to select representatives who are to be their dictators for the duration of the parliament, or is an unstable public opinion to select puppets ? The latter could be extremely dangerous. In the sample polls of which Dr. Hackett spoke, the samplers not only had power to count the votes, but they also asked the questions. Such sample polls might serve as an appraisal of how propaganda was going. As a piece of governmental machinery they might work amongst a saintly people. But even when the task of counting and setting the questions is entrusted to a saintly group, one can never be sure of the results, taking human nature as it is.

In Ireland, public opinion may differ from that of the three political parties. Fr. O'Keeffe was correct about the unsuitability of referenda for dealing with complex questions. Dr. Gallup says that the onus of proof is on the opposition to show that there is no " band wagon movement " amongst voters who wish to be on the winning side. This is very innocent on the part of Dr. Gallup.

The task of setting suitable questions can be very difficult and the results often misleading as the following two questions show : (i) Is it right to give a farm labourer 30s. a week ? (ii) Is it right to give a farm labourer 30s. a week while his employer can earn only 20s. ?

MISS BEERE said she believed that the difficulties confronting a poll of this sort in Ireland would be psychological rather than statistical. How would the Irish farmer react to a group of University graduates or undergraduates as his interrogators ? Large countries, she thought, seemed more suited for this type of poll than Ireland.

In the sample poll mentioned in the paper some of the questions appeared foolish or with no particular point. The average American who says one day that he thinks Britain will win the war may change his mind overnight after the sinking of a few ships. To answer any question intelligently one must be at least moderately well informed on the subject. How then can the ordinary man express worth-while opinions on the war when all his information comes from a partisan or censored Press ? The sample poll, however, might have its uses in connection with social inquiries, such as the desirability of retaining or extending Summer Time, or for advertising purposes, but it is difficult to believe that it will ever be a sufficiently reliable guide to be used in the service of Government.

DR. GEARY said that the discussion on Dr. Hackett's paper had provided an excellent example of democracy in practice, but he had some doubt that from the conflict of opinions truth would emerge. Some of his critics had been unfair to Dr. Hackett. For himself, he did think that the sampling referendum could work well only on an educated public opinion. It was probably true to say that in Ireland men rather than ideas are followed. The so-called democracies were not yet educated to the level of the sample referendum.

Many of the questions quoted by Dr. Hackett's critics as example of foolishness were rather unfair to the method. Complicated questions can often be resolved into a series of simple ones to each of which the answer might be "yes" or "no." This is frequently what happens in the court of law. The framing of the questions and the analysis of the replies would require highly expert attention.

Professor Dillon had thought some of the figures in Table I too good to be true. It should be explained that these figures are rounded off. This gives an appearance of similarity which the figures have not in fact got. When the percentages appear identical, the actual difference may lie anywhere in the range  $\pm \frac{1}{2}$  per cent. Actually the correspondence between the deviations and what would be expected on theoretical grounds is remarkably good: in ranges  $\pm s$  ( $s$ =standard deviation) sample showed 66.6 per cent. of observation quite close to the theoretical 68.2 per cent.

MISS EITHNE DONNELLY, a visitor, said that she approached the subject of sample polls from the view of the psychologist. When the London School of Economics carried out experiments on industrial questionnaires, its main difficulty was to train samplers not to suggest answers to the questions. It would be even more difficult to get trained interrogators suitable for Irish conditions. The results of mass observation were largely fictitious on account of the methods of the samplers.

MR. R. HAYES questioned the impartiality of Dr. Gallup. There was evidence that Dr. Gallup had expected Mr. Landon to beat Mr. Roosevelt in the 1936 election. Many of Dr. Gallup's questions were framed ambiguously. If those sample polls were to continue a feature of American democracy there was a great danger of individuality being lost in that country.

The Chairman, THE HON. MR. JUSTICE MEREDITH, Vice-President of the Society, said that everyone knew that the sample poll methods have been tested—often with extraordinarily accurate results. The main difference of opinion rested on: to what subjects and matters can sampling best be devoted? One must disagree with Mr. Harrison's definition of public opinion. Public opinion in fact must be distinguished from "what you would say out loud to anyone." There is a very great difference between the psychology of a crowd and that of the aggregate of individuals. Public opinion is that opinion which results from the masses and in so far as it is effective in expressing itself.

What use have the sample polls? Either they reflect public opinion or they do not. If they do not, they are useless; if they do, they are going to falsify their own results by the time the actual election occurs. Thus it is doubtful if they can contribute anything to the machinery of government. It would be best, perhaps, to divide sample polls into two kinds—those that are static and those that are dynamic. Dr. Gallup's first polls were in advertising spheres; these were dynamic. In such cases a static return is useless.

In replying to the discussion, DR. HACKETT said that the reactions to it had been much as he anticipated.

Professor Dillon had led the attack on the statistical basis of the method of sampling referenda by adopting a sceptical attitude in regard to the figures given in Table II. Dr. Geary had cleared away any possibility of misunderstanding by pointing out that the percentages were given as rounded whole numbers. This is also stated in the sentence immediately following Table II. Most of the criticisms made in the discussion had already received attention in the paper as the arguments on the other side at least indicated. It is true that many questions in American referenda have at times dealt with trivial subjects or have been framed in a manner which might seem ridiculous to Irish wit. Attacks on the form and matter of the questions can be easily made. Indeed it has been emphasised throughout the paper that the principal difficulty in applying a sampling referendum lies in the framing of questions in a simple and impartial way. Generally, the speakers betrayed in their remarks a fundamental distrust of the statistical theory involved in getting a representative sample which was astonishing to find amongst members of a Statistical Society.

### EXPERIMENTAL POLL

*During the meeting Dr. Hackett conducted an experimental Poll amongst persons present, with the results shown (in brackets). It should be noted that the number of questionnaires used in the computation of the percentages was only 37.*

1. Do you think that Summer Time for the summer months should be continued ?

(84%) yes ; (8%) no ; (8%) undecided.

2. Do you consider that drivers of motor cars should pass a driving test before receiving a licence ?

(86%) yes ; (11%) no ; (3%) undecided.

3. Do you consider that the ban on foreign games by the Gaelic Athletic Association is advantageous to Irish athletics ?

(3%) yes ; (94%) no ; (3%) undecided.

The Irish people desire the preservation of the national language. There has been much discussion as to whether the methods in use are as efficient as they might be. You can take part in this discussion by marking with an X the word or words which most nearly represents the result of your own observation or experience :

4. According to my experience or observation most English-speaking parents

(8%) encourage, (76%) do not encourage, (8%) discourage, children speaking Irish at home or at play, [(8%) no answers.]

5. According to my experience or observation the children attending primary schools generally

(8%) attempt, (73%) do not try, (11%) object, to use Irish at home or at play, [(8%) no answer.]

6. According to my experience or observation the boys and girls attending secondary schools generally

(11%) attempt, (70%) do not try, (11%) object, to use Irish at home or at play, [(8%) no answer.]