THE series of papers on relief statistics, of which this is the first, is published by the

JOINT COMMITTEE ON RELIEF STATISTICS OF
THE AMERICAN PUBLIC WELFARE ASSOCIATION
AND THE AMERICAN STATISTICAL ASSOCIATION

under the editorship of Ralph G. Hurlin of the Russell Sage Foundation. Additional copies of this paper may be obtained, postpaid, from the American Public Welfare Association, 850 East 58th Street, Chicago, or the American Statistical Association, 722 Woodward Building, Washington, D.C., at a price of 10 cents each.

Printed in the United States of America

JANUARY, 1938
I HAVE considered two approaches to this topic. Should I attempt to justify the collection of social data about relief recipients or should I discuss methods for gaining more effective presentation of the data? It would be pleasant to be able to assume that there is no need to justify the preparation of these statistics, particularly to a group of statisticians. Yet my guess is that in many cases the collection of information about the social characteristics of recipients of assistance in the Social Security categories has been permitted only because it has been required by the Social Security Board and not because of an appreciation of the values to be derived. Many of us have met with active resistance—or, worse yet, utter indifference. Fortunate, indeed, is the statistician who has received active co-operation. But my experience has been that the resistance or indifference has decreased in direct ratio to my ability to make effective use of the data. I have found that facts concerning the age, sex, race or color, marital status, living arrangements, and other conditions of recipients of public assistance can be of great value in understanding the relief program and in interpreting it to the public.

Instances of Effective Use

I am able to cite several instances in which these data have been of value in my state. A speaker at the last National Conference of Social Work speculated on the extent to which compliance with the Social Security Act had broadened the

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1 Statistician, Indiana Department of Public Welfare. The paper was presented at The American Public Welfare Association Conference, Washington, D. C., December 11, 1937.
provisions for dependent children in Indiana. We were aware that the new Indiana Welfare Act provided for assistance to children previously ineligible, but we would not have known the number of such cases except for the social data reports. The information was taken from the table in which the children aided are classified both by the whereabouts of the child and by the whereabouts and marital status of the parents.

More recently, a leading newspaper in Indianapolis attacked the public assistance program in a series of articles extending through twenty-five days. One charge was that Indiana had a relatively large number of blind recipients as compared with other states. We were able to advance several theories in defense, but the only factual explanation we could give was based on the age distribution of the blind recipients. About one-half of the blind recipients in Indiana were over 65 years of age as compared with one-third for the country as a whole. In several states a larger proportion of the blind-aid recipients was over 65 years, but most of the other states had a relatively insignificant number of aged persons receiving blind aid. Thus, the age distribution, while not providing a complete explanation of the relatively large number of blind recipients in Indiana, was of value in giving us our most important clue.

To cite another instance, the State Farm Bureau charged that families in rural districts were discriminated against and were not receiving their share of the grants. We were able to show that in proportion to population a larger number of recipients of old age assistance resided in rural areas than in urban. On the other hand, a relatively larger number of dependent child cases were located in urban areas, some of the problems resulting in need for this aid, such as divorce and desertion, apparently being more acute in urban areas.

There have been at least two instances in which the social data reports have been helpful in defending requests for funds for the prosecution of the program. One of the charges most persistently made by County Commissioners was that aid to dependent children was a new program creating a category of relief recipients which had not previously been dependent on public support. We were able to show that more than 85 per
cent of the families receiving this aid had previously received public or private assistance.

There was also resistance to appropriation of funds for administrative purposes, particularly because of the cost of investigating applicants. The analysis of reasons for withdrawing aid showed that a large proportion of the cases transferred from the former old age pension program had been closed because more adequate investigation disclosed that they had been ineligible for the original grant.

These illustrations of uses of the social data represent mainly defenses against attacks. There are other more far-reaching, if less dramatic, values to be derived by creating public understanding of the program through their use. Our task as statisticians is to demonstrate these values by making effective presentation of the data. So I would like to give some attention to the methods of presentation.

Of the many problems to be solved in order to achieve effective presentation, I have been concerned particularly with those discussed briefly in the following paragraphs. I have intentionally phrased these problems in the form of questions, because the points I make in each case reflect merely my own experience.

*To Whom Should the Data be Presented?*

I think there is value in making a conscious selection of persons and interest groups to whom information should be offered. I would place first among the several groups which should be on our mailing lists, the members of the state and county boards of public welfare. Board members can make administrative use of the material, but of even greater importance is the fact that it is possible to bring about through them public understanding of the program. They are usually active in many social groups and their interpretation of the program, although gaining less wide circulation than newspaper articles, is likely to be much more convincing. This is particularly true if they are non-salaried board members, because the public which they reach then feels that they are free to express their true sentiments. For almost the same reasons,
I would place on the mailing list the state and county staff members. The list should also include all state and county public and private agencies administering related activities. Inclusion of other important state and county public officials should also be considered.

Fourth on the list I would place college and high school libraries and teachers of government and sociology. We receive requests from both teachers and students for material on particular topics. It would probably be wise to prepare collections of statistics, as well as reading lists, on topics relating to welfare administration for school and college use. Public libraries should be listed fifth and newspapers, sixth.

This, of course, does not exhaust the possibilities. The significance of such a list is that it is based on the idea of promoting word-of-mouth discussions of the program by special interest groups.

If it is desirable to make a conscious selection of readers, it is certainly desirable also to select and arrange the material so as to adapt it to their use. The most outstanding lesson I have learned in this respect is that, almost without exception, no one in Indiana is interested in the state totals. But everyone is interested in county totals. This fact has been impressed on me so forcefully that I have attempted to express it in statistical terms, to wit: the interest of staff members and average citizens varies in inverse ratio with the size of the governmental unit for which the data are presented. County comparisons are desired and state totals appear to be of interest chiefly in their relation to the data of particular counties. So an important step in adapting the material to the reader’s use is to give the county figures arranged in such a way as to facilitate county comparisons, even though this involves difficulties with respect to the size of tables and charts where the number of counties is large.

*What Are the Best Media for Presentation?*

Aside from newspaper releases, special articles for magazines, and special reports for the staff, the usual media are likely to be periodicals, a short monthly magazine and a longer an-
nual report or year book. The monthly periodical has the advantage of being of more immediate interest. Because of the factor of timeliness, the monthly periodical has been our most effective vehicle for presentation. The annual report is more likely to be of value in providing a permanent record which can be referred to in later years and is often used for presentation to the legislature.

The fact that the social data about recipients are compiled for the year does not necessarily preclude timeliness in their use. A summary of salient points should probably be made at the end of the fiscal year. However, it is not possible to anticipate all of the uses of the data and the yearly tabulations should serve as a reservoir to be tapped whenever the information can be used for a special purpose.

I can suggest several ways of attempting to achieve timeliness. First, the statistician should keep abreast of administrative developments in his department. He should know in advance of changes in policies and procedures. This is an absolute requirement if the statistician is to make the most effective use of his data, both administratively and for public interpretation. Second, it is well to prepare in advance for sessions of legislatures and for periods of budgeting, and tax levying and review. Third, he can keep his ear to the ground for newspaper campaigns and for important conferences likely to adopt resolutions relating to the program. A fourth way to achieve timeliness is to be prompt in making the material available, to avoid letting the facts become cold, by speeding up the mechanical process of getting the facts ready for presentation. I wish the statistician from West Virginia could tell us how he manages to get his periodical on my desk by the 15th of the month. We have never been able to do better than the 25th with our mimeographed tables and a month and 10 days with our planographed bulletin.

One other suggestion on this point concerns the use of imperfect figures in emergencies. For a long time I took the stand that I would not provide any figures unless they were perfect. For example, you all know the difficulties in providing figures on administrative costs, particularly figures comparable
with other states. In every such instance I found that figures would be obtained from some other and much less reliable source. So now, although I try to be prepared in advance with accurate figures for almost every need, I find it is sometimes desirable to make estimates based on imperfect figures.

What Can be Done to Make the Presentation Readable?

We are all, perhaps, agreed on the importance of simplicity. Yet statistical simplicity, like that of great art, is achieved by a complexity of process. It is not enough merely to use short words and avoid technical language, important as this is. Proper arrangement of text is a valuable aid. It is probably wise to follow the newspaper axiom of giving the Who, What, When, Where, Why and How in the first paragraph. This method of giving a summary at the beginning of the article will probably do more to hold the reader's interest than to give conclusions at the end of the article. Another valuable aid to readability is to avoid too much conciseness. You may not agree on this point, but I have found that we usually have a great deal more material than can be used. So we simmer it down to bare statements of fact, no one of which is adequately explained. It is probably better to select a few of the most important facts, and then to give an adequate explanation of each of them.

The presentation can also be made more readable and understandable by the proper use of charts and tables. The best charts are those which convey a single idea. It is well to avoid complexity. Because of the extreme worth of charts in helping the reader to understand the data, we should, I think, avoid mimeographed periodicals. Any photographic process lends itself better to the reproduction of charts. An adequate printed periodical can be put out for less than the salary of one clerk and an excellent periodical for far less than the salaries of two clerks.

Our tables, also, will be more readable if we avoid the intrusion of too many ideas in a single table. Four or five columns are usually the best maximum. The use of 23 columns in a table in one of the recent state periodicals probably overrates
the interest and comprehension of the reader. A very important point is the wording of the column headings of the table. In trying to shorten the wording, the greatest care must be taken to avoid ambiguity. It is a good practice to test the table out on someone who has not previously seen it in order to determine whether the meaning is clear. Another practice which has helped us is the use of what we call "parenthetical" tables. These are small summary tables, giving only 5 to 20 figures, which are inserted in the text at points where the figures are discussed.

So by a complexity of process not necessarily apparent to the reader, the presentation is made more readable and understandable by the use of simple language, by proper arrangement of text, and by the proper use of charts and tables.

What Space Should be Given to Methods of Collection?

In a scientific study it is customary to describe the method of collection of data and to point out known factors which may detract from the validity of the results. On the other hand, the majority of the people who read our periodicals depend on us, as statisticians, to use the proper methods for collecting figures. For the most part, they have very little comprehension of the technical problems.

This has been an especially difficult problem in presenting this year's tabulations of the social data on recipients of the special categories of assistance, since they relate only to cases opened or closed within the year. It is natural for the reader to assume that they represent the total caseload. In fact, in some respects our sample is unrepresentative. For example, in the case of recipients of old age assistance, ages of cases opened will average lower than ages of the total caseload at any given time. By limiting these tabulations to data about the condition of recipients at the time cases are opened, we are overlooking changes which occur after opening, in age, marital status, living arrangements, and so on. But by doing this, we greatly simplify the process of collecting the data and it is likely that, in the case of most of the items, except age, cases opened are fairly representative of the open case-
load. Tests should be made to check the accuracy of this assumption. In the meantime, we must decide how far to go in intruding qualifications into the presentation of these data.

**What Space Should be Given to Methods of Analysis?**

As a general rule, it is probably better not to explain why one particular statistical tool was selected in preference to another. Yet the statistician must give careful attention to methods of analysis. In the case of averages, he must decide whether to use the arithmetic mean, the mode, or the median and quartiles. In the case of tables showing grouped data, he must set the limits of the class intervals so as to most truly represent the distribution of the original data. In the case of charts, a decision must be made between line, bar, and figure charts. But rarely will the reasons for the choice need to be presented.

**What Can be Done to Maintain Interest in a Periodical?**

This involves the problem of repetition versus variety. The virtue of repetition is that the reader can refer to the periodical at any time and find certain basic figures in which he is interested and which are comparable with previously published figures. I do not wish to minimize the value of repetition. Yet a periodical based on repetition alone becomes stereotyped and monotonous. The arrangement of the text can become so fixed that nothing is needed except to strike out last month's figures and insert this month’s. The same thing can happen to tables and charts. Trend charts are sometimes made up with extra space for four to six months so that the chart can be added to each month. But for the purpose of maintaining interest, variety in arrangement and in content is desirable. An effective periodical will probably combine repetition and variety. We try to accomplish this by presenting feature articles at the front with repetitive material at the back. Even in the section for repetitive material we get some variety by changing the arrangement of the text, by changing some of the content, by reserving one or two columns in each table for different analyses.
each month, by changing the arrangement of the tables occasionally, and by attempting variety in charts. Another suggestion is to change the front cover occasionally.

I have already indicated that our readers are interested in county comparisons. Mention should also be made of comparisons between states and of comparisons related to population figures. In both instances we can take our cue from the public assistance bulletins of the Social Security Board. The bar charts showing the proportion of the aged population receiving assistance and the proportion of the population under 16 years receiving aid to dependent children in each state are indicative of further comparisons which can be made with the social data. Items which should certainly be compared are age, sex, race and residence. I have given an illustration of the value of comparing with other states the age distribution of blind recipients. We also compared for our state the age distribution of dependent children with that of children in the general population and found relatively more of the dependent children in the upper age brackets. Race distributions are not significant unless related to race distribution of the general population. Similarly, the residence data need to be related to total urban and rural population.

In making state comparisons, I have wondered to what extent the sex data for old age assistance recipients are affected by the differences in the state laws, since in some states both husband and spouse are included in one grant, while in others they are regarded as separate cases. I have wondered also what effect this may have in comparing average payments in different states. It is, of course, the task of the statistician to assure himself on problems of this kind concerning the comparability of his figures before they are offered for consumption by the public.