

ization in politics and administration is ingrained and is supported by the powerful vested interests in the central departments and the Parliaments. Until we can recapture the philosophy which informed Governor Gipps' policy one hundred years ago and recognize that

democratic government will have little stability unless it is disciplined by experience acquired in the responsibility for managing local affairs, we shall have little chance of altering the system of centralization which blights both politics and administration in Australia to-day.

## Regional Research-The Experience of the Tennessee Valley Authority

By LAWRENCE L. DURISCH

IN his monumental *Southern Regions*, Professor Howard Odum observed: "Since research constitutes one of the major needs of the region and is a vital element in any planning program, it is of the utmost importance that a larger coordinated plan of research should be an integral part of any program. The task is to join reality and research."<sup>1</sup> The Tennessee Valley Authority has had an unusual opportunity to assist the region in meeting the need indicated by Professor Odum. As a regional development agency with an operating program of broad scope, it has moreover been able to approach research problems in a realistic and practical manner.

TVA was created by the Congress of the United States on May 18, 1933. In form it is a government corporation, with a board of directors chosen by the President with the consent of the Senate. Its stockholders are the 135,000,000 people of the United States. TVA is a federal agency, but with a sphere of operations centered in the 40,000 square miles which make up the watershed of the Tennessee River and its tributaries. The Valley area includes parts of the southern states of Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee and Virginia.

TVA was given charge of hydro installations and nitrate plants built at Muscle

Shoals, Alabama, during World War I. These properties have served as a nucleus for a region-wide development in the national interest. TVA has constructed 16 multiple-purpose dams on the Tennessee River and its tributaries which have provided a 9-foot navigation channel more than 600 miles in length, more than 13 million acre feet of storage for flood control, and more than 2 million kilowatts of installed power capacity. At the current rate of generation, TVA ranks first among the major power systems of the United States. TVA has proceeded with the experimental production and use of fertilizers in a broad agricultural program; it has aided forestry and has conducted and encouraged research in industry and agriculture. Public health and recreation have also had a part in the program. Since TVA's concept of its job has been to aid the people in their efforts to make the most out of their resources, it has endeavored to stimulate a broad research program in the area. TVA's experience with regional research can be described only briefly in the space here available.<sup>2</sup>

TVA recognized early in its history that its program was dependent upon the cooperative action of the citizens and institutions of the area, including the state and local governments. This concept was formally expressed in the third

EDITOR'S NOTE: Lawrence L. Durisch is Chief of the Government Research Division of TVA and Lecturer in Political Science at the University of Tennessee.

1. Howard W. Odum, *Southern Regions of the United States*, Chapel Hill, University of North Carolina Press, 1936, p. 589.

2. For information on the TVA program and the philosophy behind it see, David E. Lillenthal, *TVA—Democracy on the March*, Harper and Brothers, 1944.

annual report of the corporation as follows:

The planning of the river's future is entrusted to the TVA. The planning of the Valley's future must be the democratic labor of many agencies and individuals, and final success is as much a matter of general initiative as of general consent. The TVA has no power or desire to impose from above a comprehensive plan for the social and economic life of the Valley.<sup>3</sup>

The determination to work in close cooperation with other agencies and with the people and organizations of the Valley has yielded important results in the research field. It has assured a product which takes into consideration regional differences and variations. Cooperation in research has above all resulted in programs that are regional in both scope and execution. It has stimulated the development of research agencies and research workers in the area. It has led to the development of methods of coordinating the work of many groups and institutions to the end of increasing effectiveness.

The part to be played by various agencies in research undertakings in which the TVA participates is often a matter of informal arrangement or merely of keeping others informed of programs and projects. TVA has, however, participated in a large number of agreements related to research in which memoranda of understanding or even formal contracts are drawn up. Where a formal agreement is entered into, it may cover a single project or cover a continuing relationship extending over a number of years.

In the agricultural field an organization known as the Tennessee Valley Agricultural Correlating Committee provides a systematic procedure for encouraging and coordinating agricultural research. The committee was set up after a memorandum of understanding was entered into in 1934 by the agricultural colleges of the Valley states of Alabama, Georgia,

Kentucky, Mississippi, North Carolina, Tennessee and Virginia, the United States Department of Agriculture and TVA. The committee has considered such varied subjects as farm credit, electrical appliances, improved fertilizers and crops, and new varieties of fruits and vegetables as they related to the Tennessee Valley region. Proposals for research on agricultural subjects go to the Correlating Committee for recommendation and channeling. Once the proper agency is selected, the others lend their experiences and resources so that a united effort can be made.

The system of interterritorial freight rates applied to the transportation of manufactured products was long recognized as a barrier to the development of the southeast. Attempts to obtain relief were handicapped by lack of technical research on the subject. TVA and its cooperating agencies took practical action to remedy this situation. A series of well documented studies and official reports played an important part in obtaining the adjustment of inter-regional rate structures recently ordered by the Interstate Commerce Commission.

The TVA program includes a wide range of laboratory and pilot plant industrial research, development of new machinery and new processes, economic and industrial surveys, educational and demonstration programs, and specific planning as a basis for action. Some of the research such as the development of new quick freezing processes and the reduction of clay and other aluminous raw materials in the electric furnace to produce alloys suitable for use in de-oxidation of steel and other purposes, is closely linked to the finding of new uses for vast quantities of power. Research which has developed new low-cost farm machines is directly related to changes in the region's agriculture. Low-cost threshing machines and barn hay driers are examples of newly-developed machines which were given tests and demonstrations on practical farms before being put on the market by private business.

3. Annual Report of the Tennessee Valley Authority for the fiscal year ended June 30, 1936, p. 2.

In the field of industrial development some few technical researches are carried on by TVA alone, but the cooperative approach in which TVA and other agencies in the region pool technical knowledge, talents and responsibility to achieve common ends is a distinctive characteristic. In making available the results of research and in supplying informational material concerning industrial possibilities, the facilities of a number of agencies are likewise made available.

In the field of forest resource development, studies are made of management and in the development of processes and markets for forest products. Local, state and federal agencies have combined their programs to discover the best forest practices and to secure their adoption by the owners or managers of the 14,000,000 acres of Valley woodlands, and by the operators of some 3,500 sawmills and wood-using industries.

Fish and game investigations undertaken by the TVA provide knowledge and technical data needed to develop and utilize the fish and game resources of the Tennessee Valley. The productive capacity of the reservoirs is carefully studied and information thus obtained constitutes the basis for recommendations to the states on problems of fish and game management and development.

The Tennessee Valley Authority has interested itself in the health problems of the area. Some of these problems are related to the general program, as for example the control of malaria on TVA reservoirs; others have a direct impact on the personnel of the corporation, which is recruited principally from the region itself. Continuing aid and cooperation is drawn from a number of federal agencies and from the health organizations of the state and local governments of the Valley. Cooperative studies thus lead directly to action and to a more complete solution of regional problems. In cooperation with state departments of public health and state conservation and planning commissions, studies of stream pollution, abatement and control have been initiated. One of the objectives of

these studies is to increase the enjoyment and use of the lakes which TVA dams have created and to enhance their value as a recreational resource.

The TVA reservoirs with miles of protected shoreline, impressive dams and power houses, have attracted millions of visitors. State departments of conservation have studied recreation possibilities in cooperation with TVA, and comprehensive state and regional plans for recreation development are being made. A survey of the tourist industry in Tennessee in 1941, conducted by the Tennessee Department of Conservation and the TVA cooperatively, provided a clew to what this resource may mean to the people of the region if it is properly developed. In that year in Tennessee alone, nearly eight million out-of-state visitors spent in the state an estimated \$104 million. County and municipal governments have been assisted in recreation planning, and one research agency with TVA assistance has undertaken a study of the place of recreation in the conservation of natural resources and the roles of the national, state and local governments in developing recreational facilities.

An important continuing project participated in by a number of institutions is being carried on by the Committee on Southern Regional Studies and Education established by the American Council on Education. The purpose of the study, which has the assistance of the General Education Board, is to explore ways and means for insuring the continuous flow of research on southern resources and problems into the educational process. The study, participated in by the TVA, shows great promise of making research findings a more vital factor in the thinking and action of the region.

Research and training in public administration has received a tremendous stimulus from the regional program. Some of the major universities in the area have joined in the Southern Regional Training Program in Public Administration in which the field is viewed in the light of special regional needs. A system of fellowships enables selected students to

spend an academic quarter at each of the participating universities during the first year of graduate study. Advanced fellowships designed to enable persons to complete the required work for the Ph. D. degree in public administration are also offered. TVA actively participates in this program and is represented on the committee which administers it.

The training program in public administration is accompanied by a program of research in this field. A major project now under way is a study of the administrative agencies in the area which are concerned with the conservation and utilization of natural resources. The general objective of the study, in which the cooperation of the governors and heads of state agencies in each state is being secured, is to supply useful information and suggestions for the improvement of administrative organization and practices. A report for each state is being prepared by the university directly concerned. TVA, with the assistance of the universities, will prepare a comparative report for the region. Funds are supplied by each of the cooperating agencies and by the General Education Board.

A stimulus to archeological research provided by the TVA program can be mentioned in order to show the variety of research projects which are engendered. Since prehistoric times Indians have lived along the Tennessee River and used it as a source of food and as a travelway. Evidences of their existence are found in extensive shell mounds and in the numerous burial mounds that formed their final resting places. It was realized that many of these important records of prehistoric culture in America would be lost when the reservoirs flooded lowlands along the river. TVA entered into agreements with the universities of the Valley states in which these reservoirs lay, as a result of which competent archeologists were secured to survey the shell piles and burial mounds and to excavate the most promising of them.

These archeological explorations, which have shed new light on prehistoric migrations of man on this continent, are of

inestimable scientific value. A series of reports on TVA reservoir areas has been published by the Bureau of American Ethnology of the Smithsonian Institution. Other scientific studies are in process of preparation and publication. The artifacts which were recovered, have been placed on display in the states in which they were found. These states have provided museum space and several have plans for post-war construction of museums to house their remarkable collections. In one case, a participating university established a new department of archeology and anthropology headed by the archeologist who conducted the investigations.

TVA has devoted a great deal of study to its relationship to the state and local governments in the area. Wherever possible, TVA program activities have been administered so as to strengthen rather than detract from the responsibilities of state and local governments.<sup>4</sup> Recently a research report on payments in lieu of taxes was filed with the Congress which contained an analysis of the effect of the program of TVA on local governmental institutions. This report, which was provided for by the TVA Act, represents the first time Congress had called for a report on the effect of a national program on state and local governments. This aspect of federalism is receiving continued research attention.

It is necessary for a regional agency constantly to study the region in which it works and the resources with which it is concerned. As part of its preparation for the post-war period the TVA several years ago, with the assistance of state agencies and institutions of the region, prepared in the form of working papers a forecast of the condition of the physical resources of the Valley as of the end of 1945. The year 1945 was selected, not in prediction of the end of hostilities at that time, but as a period at which it would be desirable to have an inventory of the physical resources of the Valley.

4. See Lawrence L. Durisch, "Local Government and the TVA Program," *Public Administration Review*, 1: 326-334, Summer 1941.

A second step in the study was the identification of the most promising resource development opportunities and needs. A third step, which is now under way, is the selection of the most urgent projects and the preparation of plans and procedures so that action may be had at the appropriate time. Most of the projects will require the active collaboration of public and private agencies, each in its appropriate place. The projects thus represent regional rather than TVA projects narrowly construed.

In addition to its participation in research of a regional character, the TVA has conducted numerous studies more narrowly related to its own direct activities. In hydraulics, in construction methods, in building power loads through rate reductions, in various phases of public administration and labor-manage-

ment relations, in employee housing, and in a score of other subject fields, TVA has attached great importance to research. A regional agency, no less than a university, draws strength of purpose and inspiration from the studies it conducts. The usefulness of the TVA, its effectiveness as an operating agency, its position and part in the long-range development of the region are in no small measure dependent upon its research activities. This was recognized by Chairman David E. Lilienthal, in a recent statement:

The interest in the TVA the world over is largely based on a growing understanding and respect for research as the foundation for an improved standard of living and more democratic forms of administration, for TVA is built upon research.<sup>5</sup>

5. *Christian Century*, July 4, 1945, p. 786.

## Research for Full Employment

By W. F. RYAN

**T**HERE is now general agreement that a primary goal of government in the future will be the maintenance of full employment. It is also accepted that the achievement of this goal will involve a wide measure of economic planning. This does not, of course, mean that Canada is committed to a "planned economy;" there is a wide difference between an economy in which all major economic decisions are made by a central authority, and one in which general planning is conducted within the broad framework of the private enterprise system.

However, while the idea of planning has received substantial approval, it may be doubted whether there has been a commensurate appreciation of what is involved in terms of assembling adequate data on the basis of which to formulate policy. Realistic planning presupposes that all the relevant facts on which deci-

sions must be based are available to the planning agencies. Since planning for full employment involves framing policy in relation to every important segment of the national economy, it is clear that it will be necessary to collect and interpret a vast quantity of factual material covering all aspects of our economic life. A constant flow of precise and up-to-date statistics will have to be maintained concerning employment and unemployment, savings, capital expenditure, production, foreign trade, etc. It would also seem obvious that a central economic staff will have to be established to measure and analyze trends revealed by these data. Such an agency was recommended for Britain in their White Paper on Employment Policy.

This article is not, however, concerned with research and planning in this very broad sense. Its purpose is much more modest. It is only concerned with that part of the total picture which has to do with the manpower position or, for want of a better term, the "labour market."

EDITOR'S NOTE: W. F. Ryan is a graduate of the University of New Brunswick and is at present a research associate with the Institute of Public Affairs, Dalhousie University.