THE SURVEY IDEA IN COUNTRY LIFE WORK.
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It is commonly understood that there is a positive national problem lying in the present condition of country life. Rural affairs are not sufficiently represented in the voice of the people. The domination of national policies lies with the cities or with the types of associate and corporate interests that center chiefly in the cities, and which tend to exploit or at least to overlook the open country.

Many processes are suggested for the general regeneration of rural affairs. Each of these processes has its strong advocates. The tendency is to project many separate processes or methods which, although they may all be excellent in themselves, tend to separate into divergent and unrelated lines of effort. We are not to hold that any one way of attacking the rural problem is fundamental and that others are unimportant. Perhaps every method that has been suggested is essential. But whatever the means and movements, the scientific method must prevail. The scientific method is first to determine the exact facts, and then to found the line of action
on these facts. This is the way in which all problems must be attacked if real and permanent solutions are to be found. The scientific method in engineering and mechanics and biology and the rest has been responsible for the high development of civilization within the past century. Similar methods must be applied in rural work. We must finally found all our progress in rural life on a close study of the facts and the real elements in the situation, in order that we may know exactly what we are talking about.

A movement to collect such facts is now just beginning to appear. It is generally spoken of as "agricultural surveys." While there have been geological surveys, soil surveys, and studies of particular phases of the rural situation for many years, nevertheless the consciousness that the entire situation must be studied in all its relations has only recently begun to take possession of the public mind.

**The Cornell Contribution**

In this address I am not to give an historical review of these surveys or to estimate the many contributions that have been made to the idea. I plan only to answer the question, so often put to me, as to what Cornell has done and also what is my own conception of the agricultural survey problem.

At Cornell, the survey-idea began to take shape
more than twenty years ago. It was really begun with a piece of work in 1890 that culminated in the publication of Bulletin 19, "Report upon the Condition of Fruit-growing in Western New York." On the passage of the Experiment Station Extension Bill, or "Nixon Bill," in 1894, a definite program of exploration of the horticultural industries of the State was begun, and several bulletins were the result, such as "Impressions of the Peach Industry in Western New York," "The Cultivation of Orchards," "The Geological History of the Chautauqua Grape Belt," and others.

In the first report on this "extension work in horticulture," for 1895, the writer made the following statement: "Another type of research work which we have undertaken under the auspices of this bill [the "Nixon Bill," applying to the fifth judicial department of the State] is the investigation of the conditions of certain horticultural interests in Western New York. In the interest of these particular inquiries, we traveled no less than 25,000 miles in Western New York and have visited and examined many hundreds, if not thousands, of plantations. We have attempted in these investigations to learn the actual state of the industries and to suggest means for their improvement. They are really the beginning of a horticultural survey which can be much ex-
tended with great profit.” In the second report, for the year 1896, it was said: “The animus of the entire enterprise has been an attempt to inquire into the agricultural status, to discover the causes of the rural depression, and to suggest means for improving the farmer’s position. This attempt has been specifically directed to a single great branch of rural industry, horticulture, in pursuance of the provisions of the law; but what is true of the horticultural communities is essentially true of other agricultural regions, and, moreover, these two types of agricultural industry cannot be separated by any arbitrary lines. The work, therefore, has practically resulted in a broad study of rural economics. We conceive that it is impossible really to extend the Experiment Station and University impulse to the people in such manner that it shall come to them as a living and quickening force, without first studying the fundamental difficulties of the farmers’ social and political environment.”

The efforts in these early days, however, were necessarily confined mostly to work with crops and with schools; but the ultimate purpose—to determine the real basis of rural life—was clearly in mind in the direction of the work.

The work in communities gradually took on larger meanings. It was desired to “round up” an entire subject in a region, and to get its full signifi-
cance. The horticultural survey work finally culminated in the excellent apple-orchard surveys of Wayne and Orleans Counties, by G. F. Warren, under the direction of Professor Craig (Bulletins 226 and 229, 1905). I think it not too much to say that these surveys marked a departure in this kind of work, substituting the statistical method for previous means. Orchard after orchard was studied in person by Warren, and the financial and farm-management phases of the situation were reported with care; and in the Wayne survey the horticultural condition was articulated as far as possible with the geological horizon.

Other surveys of this general character have been made, and one of them has been published, 1910, as an "Apple Orchard Survey of Niagara County," under the direction of Professor Craig; and a correspondence survey, under direction of Professor Warren, was published in 1909 as "The Income of 178 New York Farms."

The results of the statistical work in Wayne and Orleans Counties were so striking that it was now proposed to apply the method to farming in general rather than to a single crop or product. In 1906, under Professor Hunt's immediate direction, a survey was planned of Tompkins County, the seat of the New York State College of Agriculture. It was found at
the close of the first season's work that it is impossible, in practice, to cover all or even a large part of the rural situation in any region by going over it once; and the Tompkins County work was narrowed to a farm-management survey,—that is, "to find the profits for the year on each farm, and to find what conditions and types of farming result in the largest profit or labor income; in other words, to find why certain farms pay better than others." The results of this survey, published in 1911 as Bulletin 295, under the leadership of Professor Warren, make a distinct contribution to the country-life movement; and so far as we know, they represent the most complete census-taking of its kind that has yet been undertaken. The bulletin is a document of nearly 200 pages, replete with carefully secured and well digested statistics and observations on the profits and losses of Tompkins County farms, with many interesting and applicable deductions. It will become a source-book not only for its region, but for general study of the problems involved in the business management of farms.

**Personal Statements of the Survey-Idea**

As I am asked, on this occasion, for a personal opinion of the work and reasons involved in agricultural surveys, I may be allowed to quote statements
that I already have made on the subject. In “The State and the Farmer,” 1908, I made an appeal for the collecting of complete local fact, as follows:

A thorough-going study of the exact agricultural status of every State should now be made, and it should be made by the State itself, working through an agricultural college. Such an inquiry made carefully and without haste by men who are thoroughly well prepared, and continuing over a series of years, would give us the data for all future work with local problems. We must have the geographical facts. We are now lacking them. We talk largely at random. We must discover the factors that determine the production of crops and animals in the localities, and the conditions that underlie and control the farm life. Consideration of these conditions involves study of local climate; knowledge of the kinds, classification and distribution of the soils and the relation of place and altitude to production of crops and livestock; determination of the best drainage practices on various soil types; consideration of the cultural experience and manurial needs as adapted to the types; inquiry into the practice with all leading crops and products of the localities; study of the possibilities for farm water-power; collation of community experience. Such a study of a State should be broad and general enough to consider the status of all the agricultural industries in the State, and it should also take full cognizance of educational and social conditions.

This constitutes the greatest need of practical farming at the present day. The agricultural institutions are working out the principles, but they may not be able to apply these principles to individual farms because they do not know the exact local conditions. The farmer himself may not know the principles, nor even the local facts. The result is a lack of articulation between the teaching and the practice.
Farming is founded on the facts of the locality: no business can hope for the best success until it has exact knowledge of its underlying conditions.

These kinds of inquiries are now well under way in the form of "surveys" of many kinds, proceeding from the colleges of agriculture and the United States Department of Agriculture. The studies of larger range, that purpose to compare general agricultural conditions in the whole national domain and to standardize our knowledge of them, may well be undertaken directly by the national government; but the commonwealth itself should give itself the advantage of making inquiries into its own agricultural conditions. The survey work of the institutions will be greatly perfected in the next few years, and we may expect to see great public funds devoted to it. The survey parties will comprise strong, all-round men. No small part of the value of such surveys will be the discovery of great numbers of earnest, competent men and women on the farms who may be made local leaders, and the recognition that it will give to good agricultural practice everywhere. Every thorough survey should be the forerunner of new ideals for the communities, and of new points of crystallization of local effort. It should make new paths.

I later made another brief statement as follows in "The Country-Life Movement," 1911:

The taking stock of the exact condition and materials of country life is immensely important, for we cannot apply remedies before we make a diagnosis, and an accurate diagnosis must rest on a multitude of facts that we do not now possess. This is the scientific rather than the doctrinaire, politics, and oracular method of approaching the subject. It is of the first importance that we do not set out on this new work with only general opinions and superficial and fragmentary knowledge. Every rural community
needs to have a program of its own carefully worked out, and this program should rest on a physical valuation. It may be some time yet before the importance and magnitude of this undertaking will impress the minds of the people, but it is essential to the best permanent progress.

Statement of the Commission on Country Life

The Commission on Country Life, 1909, after having considered great numbers of suggestions from persons in all parts of the country, mentioned as the first item in its category of the most prominent deficiencies in country life in the United States, "a lack of knowledge on the part of farmers of the exact agricultural conditions and possibilities of their regions." It also stated that this lack of knowledge constitutes one of the great "underlying problems of country life." Its main statement in regard to the need of agricultural or country life surveys is as follows:

The time has now come when we should know in detail what our agricultural resources are. We have long been engaged in making geological surveys, largely with a view to locating our mineral wealth. The country has been explored and mapped. The main native resources have been located in a general way. We must now know what are the capabilities of every agricultural locality, for agriculture is the basis of our prosperity and farming is always a local business. We cannot make the best and most permanent progress in the developing a good country life until we have completed a very careful inventory of the entire country.
This inventory or census should take into account the detailed topography and soil conditions of the localities, the local climate, the whole character of streams and forests, the agricultural products, the cropping systems now in practice, the conditions of highways, markets, facilities in the way of transportation and communication, the institutions and organizations, the adaptability of the neighborhood to the establishment of handicrafts and local industries, the general economic and social status of the people and the character of the people themselves, natural attractions and disadvantages, historical data, and a collation of community experience. This would result in the collection of local fact, on which we could proceed to build a scientifically and economically sound country life.

Beginnings have been made in several states in the collection of these geographical facts, mostly in connection with the land-grant colleges. The United States Department of Agriculture is beginning by means of soil surveys, study of farm management and other investigations; and its demonstration work in the Southern states is in part of this character. These agencies are beginning the study of conditions in the localities themselves. It is a kind of extension work. All these agencies are doing good work; but we have not yet as a people come to an appreciation of the fact that we must take account of stock in detail as well as in the large. We are working mostly around the edges of the problem, and feeling of it. The larger part of the responsibility of this work must lie with the different states, for they should develop their internal resources. The whole work should be coordinated, however, by federal agencies acting with the states, and some of the larger relations will need to be studied directly by the federal government itself. We must come to a thoroughly nationalized movement to understand what property we have and what
uses may best be made of it. This in time will call for large appropriations by state and nation.

To secure these results, the Commission’s first recommendation is that “there should now be organized, under government leadership, a comprehensive plan for an exhaustive study or survey of all the conditions that surround the business of farming and the people who live in the country, in order to take stock of our resources and to supply the farmer with local knowledge. Federal and state governments, agricultural colleges and other educational agencies, organizations of various types, and individual students of the problem should be brought into cooperation for this great work of investigating with minute care all agricultural and country life conditions.”

The Scope and Character of Survey-work

Surveys may be of many kinds and for many purposes. Some of them may be for temporary uses only, in the nature of explorations or to set forth a particular line of ideas. The real rural survey should be an agency of record; and it is this type of effort that I am now discussing.

We must distinguish sharply between such a survey, made slowly and studiously, and an inspection, a canvass, or a campaign. These lighter efforts may be very necessary, but they usually do not con-
stitute investigation, and they belong to a different order of inquiry.

If a survey of any region or phase is to be a record of fact, then it must be *strictly scientific in spirit*, as I already have indicated. It must discover and set down every fact of significance, wholly apart from any prejudice or bias in the mind of the observer: the fact is its own justification. The work cannot be as precise as that in the mathematical and physical sciences; but in its purpose it must be as scientific as any work in any subject.

If the work is scientific, then it will not be undertaken for the purpose of exploiting a movement, recruiting an organization, spreading a propaganda, advertising a region, or promoting the personal ambition of any man. There is indication that survey-work will soon become popular; there is danger that it will be taken up by institutions that desire to keep themselves before the public and by localities and states that desire to display their advantages. It will be easy to marshal statements and arrange figures, and particularly to omit facts, in such a way as to make a most attractive showing. Even some honest investigators will be likely to arrange the material in such a way as to prove a point rather than to state the facts, unless they are very much on their
guard. If country-life surveys have possibilities of great good, they also have equal possibilities of great damage.

The goal of survey-work in agriculture is to make a record of the entire situation and to tell the whole truth. Fragmentary surveys and piece-work, however good they may be in themselves, do not represent the best effort in surveys. Practically all our surveys have thus far been fragmentary or unrelated, but this is the work of a beginning epoch. We shall almost necessarily be obliged to do still further fractional and detached work; but it is time that we begin to train the imagination on completer and sounder programs. The whole basis and condition of the rural community must be known and recorded. The community must know where it stands. It must understand its assets and its liabilities.

Survey-work is legitimate wholly aside from its application. I have no patience with the doctrine of "pure science,"—that science is science only as it is uncontaminated by application in the arts of life; and I also have no patience with the spirit that considers a piece of work to be legitimate only as it has direct bearing on the arts and affairs of men. We must discover all things that are discoverable and attack those that are not discoverable and make record of it
all: the application will take care of itself. The application of science lies not alone in its employment in particularities here and there, but quite as much in the type of mind and the philosophy of life that result from it. If we knew our exact rural status—in materials, accomplishments and deficiencies,—we should by that very fact have a different outlook on the rural problem and a surer process of attacking it. We should do little guessing. We should correct many vagaries and many a foolish notion to which we now are all, no doubt, very much given. We should not be obliged to follow blind or self-wise leaders. A substantial body of accumulated fact would set bounds to the agitator.

The result of survey-work in agriculture should be to tie the community together. Such work would provide a basis for real judgment on the part of every intelligent resident of the neighborhood. One interest would be tied up with another. Apple-growing would not be distinct from wheat-growing, or church work from school work, or soil-types from the creamery business, or politics from home life. The vicinage would be presented to the citizen as a whole. Nothing, in my opinion, would do so much to develop pride of neighborhood, local patriotism, and community common sense as a full and complete knowl-
edge of what the community is in its resources, its history, its folk, its industries, its institutions, and its tendencies.

I am often told that we can gather all the information that is useful by surveying representative communities here and there rather than by surveying all communities,—that if we take stock of all communities we shall be endlessly duplicating. But I think that I have now said enough to put it into the mind of my hearer that the community needs a survey for itself. We are to build the life of every community on the fact of that community. It may not be necessary to make the same studies or even equally extensive studies in all communities; but no community should be overlooked, in the end, if we desire a correlated evolution of rural society.

When the survey-idea is once understood and begun, every locality will desire to be represented. Certain regions will develop full surveys, and the reports will be standard; the surveys of intermediate localities may not need to be so elaborate or minute.

When we finally understand our problem, we shall make our best surveys in consecutive order. We may classify all phases of survey-work freely under three groups,—physical, economic, social; and
the order of the surveys should preferably follow this sequence. We should first know what the region is, —geography, physiography, climate, resources, soils; then what it does,—the farming, the industries, the markets, the business, the profits-and-loss; then how it lives,—its people, its homes, its health, its institutions, its modes of expression, its outlook.

I very much doubt the lasting value of surveys of church or school or particular crops or special products that are not founded on a good knowledge of the physical and economic conditions of the region.

_How are we to go about it?_

I presume that we have no models for these country-life surveys. My own philosophy of the situation has not been derived from the current social surveys of cities, and I do not know whether their methods will apply to the rural work.

These new surveys must be serious studies on the spot rather than note-takings or correspondence. The different parts of the survey in any region must be made by different persons or parties, in a cumulative way. Of course, as I have said, I should not estop any competent person or agency from making a partial and wholly independent study, but its deficiencies should be recognized.
As to detailed methods of making surveys, little need be said in an address of this kind. The success of the work will turn on the personality and training of the man who undertakes it. It must be done in person: that is, the information must be secured by personal visits and investigation. The questions should be few and significant. The particular survey should cover a definite subject, and every effort should be made to keep it from scattering. The tendency is to cover too much ground. It requires time, patience and the studious temper to make a good survey. At least one experienced person should be actually in the field: it should not be left to novices and mere explorers. The person should be a real student of the subject that he proposes to survey.

To ensure the best results, the region should have good topographical and geological maps. The next step is a soil survey. The soil surveys now issue from the federal government (United States Department of Agriculture; and in New York they are properly cooperative with the State College of Agriculture. The general soil survey is rightly a national undertaking, for there should be a uniform charting of the national domain as to soil types as well as to geological types; and classifications do not follow state lines. The states, however, may well follow with more detailed soil surveys, based on the gen-
eral charts, and relate the work directly to local practice. Undoubtedly we need to develop more uniform and comparable methods for this work; and this could be brought about by conferences or committees of those persons specially interested in the soil survey program.

A study of the local climate ought to be a part of these preliminary surveys. We are neglecting the climate factor. Climate is distinctly local. With soil, it determines the farming condition. The best agriculture is a careful adjustment to the climate of the district; but the collecting of meteorological data is so much a governmental function that we forget the detail climates of small localities.

It is not so clear what the next step should be in the stock-taking of a region. Sooner or later, all the natural resources of the area should be carefully known. Perhaps these resources of minerals and metals and timber and streams and the like, will be clearly determined in the geological and soil and farm surveys themselves; but they should all be found and recorded. There should also be a natural-history survey of the entire wild life of the region, culminating in the publication of good local floras and faunas; but perhaps this may wait for later development. It is probable that a thorough farm-management survey would best follow immediately on the soil survey,
taking inventory of the farm values, the methods of farming, the crop schemes, the incomes, the investments, the labor cost, the profit-and-loss. We should know how the conditions and materials of the farms are utilized.

A farm-management survey considers farms as business units. This would probably best be followed by a careful study of the general business situation in the region, as respects markets, railroads, taxation, credit, land-tenure, labor-market, and the like. This is the field of rural economics, considering the farmer not in reference to the production of crops on his own farm, but in his business relations to his community and surroundings.

These foundation registers having been made, the various crops or products of the region may be chosen for detailed study, as the fruit crops, truck crops, flower crops, home gardens, wood-lots, pastures, grain crops, new crops, milk and butter production, poultry, sheep, cattle, swine, horses, and the like. All such supplementary studies should take full account of every preceding study and endeavor to determine how far the particular industry is colored or shaped by the underlying physical and economic conditions. Every survey should articulate as far as possible with every collateral survey.

On this basis many special and interesting
studies may be projected from year to year,—studies of the industries, the homes and domestic welfare, the sanitation, education, business cooperation, the possibilities of engineering development, the religious reactions, re-creation, child-study, special vital statistics, ethnological and historical studies, public relations, and the general social welfare.

These surveys will be made by many agencies. The strictly agricultural parts will naturally be accomplished by colleges and schools and departments of agriculture and by experiment stations. Societies, churches, individuals, and all agencies representing welfare will contribute and cooperate.

Every State must soon face the problem of projecting a regular program of stock-taking of its agricultural resources. If the work is effective, it must be wholly free of political methods.

**Forecast**

I have now sketched a rough outline of my hope in the country-life survey. Looked at from the start, it may seem to be an ambitious program; but it will come only year by year and piece by piece, and nobody will be startled in the process. It will be fortunate if we have a clear conception at the outset of the results that are to be desired, and if our work proceeds in an orderly way. We must conceive a prog-
ressing enterprise. What we are aiming at is the record of community experience, as a guide to further action. The parts of the work eventually will aggregate themselves into a Book of the Community, which will represent all that the community has done and what it hopes to do.