THE SOCIAL SURVEY

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The Spread of the Survey Idea[1]

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IN most of our social movements, we are under the necessity of starting something going. We must stir up interest as the first step. The survey movement, if we can call it that, does not seem to be handicapped in this way. There is more spontaneous outcropping of the survey idea the country round than as yet we have any sufficient organization or body of trained workers to deal with. Close on the heels of Pittsburgh came Buffalo. The pioneer work in the steel district was instigated by Charities Publication Committee and was carried out in co-operation with militant Pittsburghers, under grants from the Russell Sage Foundation. The study of the Polish section of Buffalo was the first undertaking of the sort instigated and financed by the city surveyed. Then we had that interesting state-wide tour of Kentucky by Mrs. Caroline Bartlett Crane, which was a quick sizing up of conditions in a group of smaller cities under the State Board of Health and the State Federation of Women's Clubs. We know of the series of community studies carried out by Mr. Aronovici in Rhode Island, and by Mr. St. John and Mr. Stelzle in Newark, Sag Harbor and elsewhere; the studies of the Huntington Presbytery in seven counties in central Pennsylvania; the work of the Presbyterian Board in its rural surveys in Illinois, Missouri and Pennsylvania; and the scores of neighborhoods, mill and mining towns which the Federal Immigration Commission caught up in their schedules. Last summer the Associated Charities of Syracuse, the Chamber of Commerce, the Central Trades Assembly and the Ministerial Association joined forces in the stock-taking of a single city which is described (p. 18) by Mr. Harrison; while the findings of the Lowell survey are just out in book form. Booth's *London*, Rowntree's *York*, the *Hull-House Books and*

[1]Read at the meeting of the Academy of Political Science, April 18, 1912

Papers, the *South End House Studies,* Mr. Kirk's *Providence,* Dr. Roberts' *Anthracite Coal Communities,* the Washington number of *Charities and The Commons* are instances, all of them, of social investigations which have embodied many of the elements we find in the survey idea, but which are not identified with the more or less crystallized movement which to-day engages our attention. For I have before me four closely typewritten sheets, thoroughly covered with the names of cities and organizations which are either embarked on surveys or are considering surveys, or would like to know more about them. The names of Minnesota, Missouri, Texas and Kansas towns show the spread of the idea no less than those of the four chief cities of the British Northwest. One inquiry comes from India.

Just at this juncture, the more immediate aspect of the movement presents itself in the fact that in nearly every city in which the Men and Religion Forward teams have set forth a social program, one of the planks in that program has been to recommend a social survey. So we are faced with the question: What is a survey, and how shall the residents of the average city go about one, with some prospect that they will be doing a craftsman's job of it? We know in a general way that a survey is something different from the ordinary operations of a municipal league or a charitable society or a settlement—different even from their campaigns for special reforms. We know also that it is different from newspaper work, or a civic exhibit, or an official report or scientific research as such; although we may have an inkling that it partakes of all of these things, in one way or another. What then? What elements distinguish the survey? The papers by Mr. Harrison, Miss Goldmark and Dr. Palmer give concrete answers and give them with a precision and taking quality which can scarcely be bettered by any generalizations. They tell, however, of three fairly well-defined types of survey; and it will help in arriving at a working conception of the survey idea, to run over some of the elements common to all.

And first, for purposes of comparison, let me set down the elements, five in number, which we felt at the close of the

Pittsburgh Survey made that a distinctive enterprise. These methods were:

1. To bring a group of experts together to co-operate with local leaders in gauging the social needs of one city.

2. To study these needs in relation to each other, to the whole area of the city, and to the civic responsibilities of democracy.

3. To consider at the same time both civic and industrial conditions, and to consider them for the most part in their bearings upon the wage-earning population.

4. To reduce conditions to terms of household experience and human life.

5. To devise graphic methods for making these findings challenging, clear and unmistakable.

If I were recasting this formula to-day, I do not know that I should want to change it materially. But it will perhaps give a better approach to the survey movement to consider not what sets it off from other undertakings, but what it draws upon them for.

First of all, the survey takes its unit of work from the surveyor. It has to do with a subject matter, to be sure, but that subject matter is subordinated to the idea of a definite geographical area. It is quite possible to carry on a study of tuberculosis, for example, as a piece of physiological research, or as a piece of sociological research, wholly apart from where it occurs. But just as a geological survey is not geology in general, but the geology of a given mountain range or watershed, so, even when a special subject matter is under study, the sociological survey adds an element of locality, of neighborhood or city, state or region, to what would otherwise pass under the general term of an investigation.

And when the subject matter is not specialized, but concerns the more intangible "needs" of a community, the survey becomes necessarily different things in different localities. It cannot be thought out at a far-away desk. It is responsive to local conditions; in a worn-out country district, suffering from what Professor Ross calls "folk-depletion," its content has

little in common with that of a survey in a textile center, tense with human activity, and dominated by its terms of work.

In the second place, the survey takes from the physician his art of applying to the problems at hand standards and experience worked out elsewhere. To illustrate, if your pure scientist were studying the housing situation in a given town, he would start out perhaps without any hypotheses, tabulate every salient fact as to every house, cast up long columns of figures, and make careful deductions, which might and might not be worth the paper they were written on. Your housing reformer and your surveyor ought to know at the start what good ventilation is, and what cellar dwellings are. These things have been studied elsewhere, just as the medical profession has been studying hearts and lungs until they know the signals which tell whether a man's organs are working right or not, and what to look for in making a diagnosis.

In the third place, the survey takes from the engineer his working conception of the structural relation of things. There is a building element in surveys. When we look at a house, we know that carpenters have had a good deal to do with it, and it is possible to investigate just what the carpenters have done; also the bricklayers, the steam-fitters and the rest of the building trades. But your engineer, like your general contractor and architect, has to do with the work of each of these crafts in its relation to the work of every other. So it is with a survey, whether it deals with the major elements entering into a given community which has structural parts or a given master problem such as Dr. Palmer describes in his survey of the sanitary conditions in Springfield. Only recently I received a letter from a man engaged in making a general social survey of a manufacturing town—a so-called survey. He did not think that it was truly a survey, nor did I, because out of the scope of that investigation had been left all of the labor conditions in the mills. The local committee had been fearful of raising opposition in forceful quarters. Yet these labor conditions were basic in the town's life; on them, for better or worse, hung much of the community welfare; and by ignoring them, the committee could deal with partial solutions only. It was as if a diagnostician in making his exam-

ination had left a patient's stomach out of consideration because the patient was a dyspeptic and irritable. They had violated the structural integrity of their survey.

In the fourth place, the survey takes from the charity-organization movement its case-work method of bringing problems down to human terms. Death rates exemplify human units in their barest essentials; but I have in mind a more developed unit. Let me illustrate from the Pittsburgh Survey in the painstaking figures we gathered of the household cost of sickness—lost wages, doctor's bills, medicines, ice, hospitals, funerals, the aftermath of an epidemic in lowered vitality and lowered earnings, household by household—not in sweeping generalizations but in what Mr. Woods called "piled-up actualities." If I were to set one touchstone, more than another, to differentiate the true survey from social prospecting, it would be this case-work method. In employing it the surveyor, because of lack of means and time, must often deal with samples rather than with the whole population coming within the scope of his study. These samples may be groups of school children; or the people who die in a certain year; or those who live in a certain ward. The method is one, of course, which is scientifically justifiable only so long as those who employ it can defend their choice of the sample chosen, and show where it does and does not represent the entire group.

Under this head it is to be noted that the survey is in a field friendly to what we have come to call municipal research. The latter is indebted for its methods of unit-costs and efficiency to the accountants. These methods may be applied to city budgets and city departments as an integral part of a social survey, the distinction between the two movements in practise being perhaps that the one is focused primarily on governmental operations; the other on phenomena imbedded in the common life of the people.

In the fifth place, the survey takes from the journalist the idea of graphic portrayal, which begins with such familiar tools of the surveyor as maps and charts and diagrams, and reaches far through a scale in which photographs and enlargements, drawings, casts and three-dimension exhibits exploit

all that the psychologists have to tell us of the advantages which the eye holds over the ear as a means for communication. With these the survey links a sturdy effort to make its findings have less in common with the boredom of official reports than with the more engaging qualities of newspaper "copy"—especially that simplicity of structure, tangible framework, and readability which American magazine men have developed as their technique in writing for a democracy. This is not a counsel, bear in mind, of flimsy sensationalism; although those who have matters to conceal seek to confuse the two. A startling article patched up from a few glints of fact is a very different proposition from a crystal set in a matrix of tested information.

Underlying this factor of graphic portrayal is the factor of truth; truth plus publicity. It is often possible to work out large and definite reforms internally, by getting a group of forceful men around a table and convincing them that so and so is the right thing to do. This is, I take it, a legitimate method of philanthropic work and of social reform. But it is not the method of a survey. The survey's method is one of publicity; it is another and separate implement for social advance, and its usefulness should not be negatived by a failure to hold to its distinctive function. The philosophy of the survey is to set forth before the community all the facts that bear on a problem, and to rely upon the common understanding, the common forethought, the common purpose of all the people as the first great resource to be drawn upon in working that problem out. Thus conceived, the survey becomes a distinctive and powerful implement of democracy.

With these five working principles in mind, how can the survey idea be applied to the average community, how and on what scale should its working scheme be launched? Here there is already some experience upon which to draw. At one extreme we have a superficial skimming of facts—what we call in the Middle West a lick-and-a-promise. Perhaps it is limited to passing round and filling out schedules devised to fit any city—such as were used in many places in advance of the Men and Religion campaign week. These were not without value in throwing some facts of community life into relief

and in showing where released energies might at once be applied; but the team leaders very properly did not call them surveys, making them rather a basis for recommending the larger work. They bear about the same relation to a survey that the blanks which a mail-order tailoring establishment sends out for self-measurement bear to a thorough-going physical examination.

At the other end of the scale we have the sort of a survey which the Pittsburgh Survey, if we regard it as an experiment, demonstrated can with staff and resources some day be made in one of our first-class cities. The Pittsburgh Survey made a quick diagnosis of perhaps twenty phases of life and labor in the steel district on the basis of standards worked out elsewhere; it brought these diagnoses together and studied something of the structural relation of the problems set forth; but it sank shafts of definite, consistent, active investigation in but five or six fields and even there rigorous limitations had to be set to the scope of the work. For example, we studied, case by case, 500 families to see how they actually made shift when the bread-winner was killed at his day's work. The super-survey would not only gauge the chief factors entering into a community; gauge also their fabrication into its general working scheme; but would study the human bearings of every factor as searchingly as we studied the economic reaction of these industrial accidents.

Not a few of the elements in such a survey will ultimately be carried out as part of the routine work of our governmental, institutional and industrial organizations. This was illustrated in the recommendation made by a stockholders' committee at the recent meeting of the United States Steel Corporation. The work which the Pittsburgh Survey put into gathering elementary facts as to hours, wages and other labor conditions in the Pittsburgh district exhausted a very considerable share of our funds and energy. This stockholders' committee held that in the same way that their corporation had taken the lead in publishing extensive reports on its financial operations and output, it should be its policy in the future to lay before stockholders and public the general facts as to labor conditions in their mills. That, it seemed to me, was well-nigh revolution-

ary. Similarly many of our city and state departments—health, labor, finance and education—are putting out more and more as part of their legitimate routine the salient facts upon which public opinion can formulate working judgments.

If this were done generally, the survey, to my mind, would still be an opportune instrument for social advance;—on its civic side, in enabling us to see whether or not there are great gaps in the frontage with which a community faces the future, and on its scientific side, in measuring the human reaction of various institutions, agencies and measures, which are carried forward in the name of progress and which should be tested and checked up from time to time.

But what we can discuss most profitably here is the sort of undertaking which as things stand to-day a community, ranging anywhere from ten thousand to half a million, can take up,—neither a skimping survey that does not get beneath the surface, nor the comprehensive interlocking survey just outlined which must needs require a large staff and resources. What are we to recommend when a group of progressive people in such a community come forward and say they want to start a survey—a group with only general notions as to the things most seriously in need of inquiry in their locality, and with slender funds which may grow only as the undertaking shows its usefulness? Two lines of action seem most promising.

The first of these is to recommend that they secure a man of all-around experience in social work to come to their community for a quick sizing up of things—a report which will enable them to see where the land lies—and either base a general social survey upon this report, or follow up intensively one or more of the principal "leads" disclosed.

The second possible line of action is to start out with some unit less than the general social problem of their city, with the idea that work less spread-out and more exact will in the long run lead farther. There are several ways in which this can be done. One method is to take a given neighborhood, in the way that the Buffalo survey took its Polish district. This method has the advantage of focusing attention on a manageable area, where definite results (like the Buffalo playgrounds

and evening schools for immigrants) can be reached while the survey is in process. It has the disadvantage that it may tend to confirm the impressions of squalor already held by polite residents of a city as to some particular neighborhood, without forcing in upon them the fact that a community is like a human being and none of its members can be sick without being a drag on the whole; without rousing the whole city to action, or even, as in Buffalo, leading up to a general city survey. A modification of this method was discussed in New Haven—the suggestion being to take a belt running through the town, so as to be representative of good and bad conditions alike, the well-to-do, the middling-to-do, and the poor. This plan has imaginative values, a practical obstacle perhaps being the difficulty in fitting existing sources of statistics to such a philanthropic gerrymander. Another method is to take a block and study its people intensively in the matter of their social needs and the resources of the city with respect to them, in much the same way as (from the standpoint of racial composition and social mind) Dr. Jones and Prof. Woolston have studied given New York city blocks. Such a method would unquestionably supply an exceptional group of citizens with rare insight as to the actual operations and values of much of our social work. With this insight they could reach judgments and execute reforms, but the plan would scarcely usher in that self-consciousness which comes when a whole community sees itself in the large, and which, to my mind, gives the community survey its exceptional dynamic force.

In contrast to these methods, which consider fairly small areas in their relation to a wide range of social needs, another partial method is to take some one social problem and study it in its bearings on the entire community—such a problem as recreation. This would cover not only a study of playgrounds and play opportunities, but an examination of the city play bill (nickleodeons, skating rinks, cheap shows, dance halls) as was made by the Kansas City Board of Public Welfare, to see how much fun was costing the people, how they could spend less and get more, and how far commercialized amusements should be supervised. It would cover the larger uses of school houses, substitutes for saloons, the utilization of outdoors,

and the natural resources of wood and valley back from a city; the extent of leisure and the social effects of its compression through over-work and Sunday labor; the money surplus for recreation in household budgets; and so on.

While local conditions, the agencies interested, the public temper and the money available are considerations which must be duly reckoned with, my feeling is that the first line of approach described is the one which will serve most cities best;—that is, the quick sizing up process to see how the land lies and to plant what the civil engineers call "bench marks" at points of vantage. For this work can be done on a scale to fit any town's pocket-book, it embodies in a rudimentary way the elements which we have seen are the essential methods of a survey, and it gives perspective. The scientific farmer who has his soils examined in taking up new land, the business man who is used to inventories as a basis of planning for the year ahead, the physician who is called on less frequently to doctor fevers and set bones than to overhaul patients who are "all run down," will not need to have the value of such a piece of preliminary stock-taking argued out with them. A town with ten thousand people can get a man with what you might call a general practitioner's equipment in social work to spend half a week there with fair prospect that his report will be something on which they can build. Superficial though it would frankly be, it should bring the more easily recognizable needs and opportunities in the town's life to the test of standards worked out elsewhere—which, as we have seen, is one of the first and easiest tasks of a survey. It could scarcely fail to show how health hangs on civic enterprise and in kindred ways make average citizens see that things which they may have regarded as unrelated are bound up in each other. It would correspondingly show these things in proportion. The sky-scraping pride with which a growing town points to an atrocious six or ten-story block on its chief corner is not energy any more misapplied than many a philanthropic enterprise, bred to suit city conditions, which the small town swallows hoofs, hide and all. Such a report would gather up, if rightly made, the progressive ideas held by local people who have seen farther ahead than their neighbors; and it would

have the force—and that counts for a good deal in a growing community—of being heralded as the judgment of a "city expert," thereby gaining a hearing for things which local prophets may have despaired of. Further, such a report, if it sets a vision of what the town might be, tugs at the imagination of the people and loosens energies in many directions. The same things hold true for a larger city—the city of twenty-five to fifty thousand which can employ such a preliminary prospector for from a fortnight to six weeks; or the still larger city which can engage for this sizing-up process a man of experience and all-around equipment with two or three assistants, for a six months commission. Its alternative would be to get experts in half a dozen of the major fields of social concern to come on the ground for say a fortnight each, relying upon a local committee to synthesize these special reports into a general scheme of procedure. The Syracuse survey illustrated these two methods somewhat in combination, for Mr. Harrison spent six weeks in his general work, and various national and local bodies were successfully appealed to to carry on the field work along special lines.

Such a preliminary report once in hand, the community small or large is in much more favorable position than at the start to make constructive decisions. It may decide to carry on any one of the inquiries which I enumerated earlier as possible lines of action, only with far larger chance of their being done intelligently and with prospect of results for the whole city. It may do what Rochester is doing—that is, what might be called a consecutive survey, organizing and calling on experts to take up first one phase of social concern and then another. This is the sort of work done by the Pittsburgh Civic Commission. It may focus its efforts on some district, and there sink its inquiries into the structure of the common life. This the Bureau of Social Research under Miss Goldmark has done on a district scale on the upper west side of New York, scrutinizing in a given neighborhood how courts and charitable agencies, the departments of health and education come in contact with the life of the people—how they may be turned from impersonal machines to intimate agencies within reach of the average family. The community may focus its

attention, on the other hand, on the co-ordination of governmental activities and by means of municipal research, budget exhibits and the like, make the public business take on new efficiency and new meaning.

But for cities of from 25,000 to 250,000 population, the simple and natural and, I believe, most promising result of the preliminary survey, would be a systematic community survey growing out of it, one with sufficient staff, sufficient time and sufficient expenditures to make a thorough-going inventory of the life and labor of the place, to seek out the wastes in its economic and vital resources, to captivate and give constructive content to its evanescent and often sorely exploited enthusiasms, and to lay a sure foundation of information on which to plan and build for ten years ahead.

The scale on which such a permanent survey—and by permanent I of course do not mean a perennial enterprise, but one enduring in the foundation it lays—should be undertaken, would depend on the size and public spirit of the community. But the survey movement has reached a point where we can say with some degree of precision—as I have undertaken to do earlier in this paper—what are the essential methods which should enter into its work, and where we can say, with some degree of conviction, that such a working scheme will have practical and far-reaching results.

Right here, it may be well to interpolate two points as to the civic investment which a community puts into a survey. No town should be balked at launching one, under the impression that it is a contraption suited only to a large city, or one which only a great philanthropic foundation can afford. I have indicated how a small town can make a start at modest expense; and Dr. Palmer describes the wide range of sanitary investigations which he carried out as commissioner of public health of Springfield, Illinois, in co-operation with local people and at almost no extra cost to the city. With a superintendent of schools as far-sighted and resourceful as this health commissioner, a judge who would look at jails, police and legal processes with what the Wisconsin supreme court calls twentieth-century eyes, an engineer with ingenuity and vision, and with other volunteers and officials of like caliber, men with

social viewpoint and with some acquaintance with other cities, men giving their leisure and to some extent their working hours to the plan, you would have a local staff for a rounded community survey. They could carry it out as a piece of good citizenship on a level which would command national attention and respect, and which would set a new gauge for civic patriotism. On the other hand, consider a city with say a cigar-store keeper as health commissioner, without any health reports, and with acrid resistance on the part of the dominant political machine to any probing of its health service. The process of surveying in such a backward city is a very different matter; so also is the cost of bringing onto the ground a sanitarian of Dr. Palmer's breadth of outlook, gained from his work in the state and city public health service; and then keeping him there long enough to get a thorough grasp of the sanitary situation, and to gather data sufficient to carry the town with him.

And here we are close to the fact that while many of the more obvious social conditions can be brought to light by laymen, the reach of social surveying depends on those qualities which we associate with the expert in every profession; knowledge of the why of sanitary technique, for example, and of the how by which other cities have wrought out this reform and that. And townsmen who would think nothing of paying the county engineer a sizable fee to run a line for a fence boundary must be educated up to the point where they will see the economy of investing in trained service in social and civic upbuilding. Unscientific acquaintance with what other cities are doing may lead only to duplicating their mistakes; untraveled advice may, on the other hand, lead only to finding out slowly and at bitter cost what has elsewhere been demonstrated. Ignorance of the facts that lie concealed in an unresolved mass of local statistics is only less costly, humanly speaking, than the too ready acceptance of notions which hearty but ignorant handling can shake out of the same statistics.

My second point as to the civic investment in a survey is that it pays not only for a city to get at its underlying facts but to get those facts out into the open. There is no older subterfuge than to beat the drums of local pride and charge

that the leaders who are overhauling bad conditions are injuring the fair name of a city. This charge finds customary expression in the rumor that manufacturing enterprises will keep away if they learn that the schools are poor, the council is full of graft, or the water is infected; and that one who advertises these things by rousing the public to reform is the town traitor. Yet the city of the Southwest that, as a gala day approached, put up a high board fence so that you could not see the shacks that at one point lined its principal thoroughfare, may have fooled the distinguished visitor who was driven past, but it could not fool the manufacturer who is looking for a new site; still less—and this is equally important from the standpoint of local interests—could it fool intelligent workmen who are looking for a town in which to bring up their families. I have known of an enterprise that refused to settle in a city because it would not bribe the aldermen for a side track (perhaps the first of a long series of petty hold-ups) and of another that refused to settle where skilled mechanics could not find the sort of living conditions and recreation they were accustomed to. It could not get its men to come along. When such decisions hang in the balance I fancy one factor that counts in Worcester's favor is the fight of its manufacturers against tuberculosis, in Pittsburgh's favor is the great filtration plant with which the city has downed typhoid, in Cleveland's favor is the civic campaigns of its Chamber of Commerce. All these things stand for enterprise. They are upbuilding of the sort which means first of all getting down to bed rock; and that is the sort of investment which a city puts into a survey.

Convinced as I am, however, that a survey is "good business" in the long run from the standpoint of a city's prosperity, it has a broader appeal. It is one of the channels open to the aroused social conscience of our generation. In the governmental field we have two strong movements—one towards greater efficiency; the other toward greater democracy. The first is reflected nationally by the President's Commission on Efficiency and Economy; the second finds expression in the Western insurgent movement which through the initiative, referendum and recall, seeks to bring the legislative "say"

back to the people. If we were to personify the first movement, it would be to give it the character of the expert; the second, the character of the average citizen. And in the general trend, we have the expert and the average man coming together; and jointly challenging the frontage which existing institutions, professions and organized forces bear toward the needs of the times.

They challenge the church, the school, the city council, the court, the mill, in the name of the mighty industrial changes which have put new strains on old institutions; in the name of science, which has opened new possibilities and new hopes; and in the name of the common welfare which is striking a fairer balance between property and life.

For many existing conditions we have only ourselves to blame; but in changing them, we have to overcome the resistance of those whose scheme of service to the community has grown up with the old conditions. Dr. Palmer illustrates this in what he says of the milk supply. Let us look at the milkman as a factor in the community life—an institution if you will. In the past we may have officially asked of him a certain grade of butter-fat in his milk, but that is a dairyman's standard, worked out in the cheese and butter trade. We have demanded a collar of cream as a sign of richness—the uninformed milk-drinker's notion of protecting himself against watered milk. But we are only beginning to demand what the dietitians and physicians are showing us is more important than either of these, namely, clean milk—clean milk, rendered more difficult to obtain by the very dirt and congestion of our new urban conditions; rendered vital by the laboratory discoveries of the last twenty years in bacterial diseases; rendered possible by our advances in methods of sterilization; rendered an issue among the people at large, by the demonstrable effect of dirty milk upon the health of thousands of babies—a human test, this last, such as enables the average mother and the expert sanitarian to join forces in a campaign to clean up stables and milk routes, and to put an end to dirty cans and tuberculous cows. I need not show how through all this runs the three-fold challenge in the name of mighty industrial changes, of scientific advance and of the common welfare.

That challenge is one repeated over and over again in the fields of social concern. It does not require a very wide stretch of the imagination to apply the same analysis to the Titanic disaster. Compare the commercial demand for speed and capacity in ocean liners with the commercial demand for butter fat. Compare the blind popular demand for luxuries in cabins with the blind popular demand for a thick collar of cream. Life boats are like clean milk. Safety is a human rather than a commercial standard. Some naval experts have been preaching it for years, but their judgments have fallen on deaf ears. Now the average man at last sees; and (in high rage) he is calling for a change. Those responsible for ocean vessels are charged to make safety keep pace with the great structural changes in the shipping industry; to apply science to human well-being, as well as to speed.

In many of these deep-seated social needs, apparently some great disaster has to overtake us, and smite us, before as a people we are aroused to them, and half-blindly, often wholly unthinking of our own responsibility, demand immediate reform. This is so whether it is a dam which gives way like Austin; or a theatre which burns like the Iroquois; or a blazing schoolhouse full of children like that at Cleveland; or a loft building like the Triangle. Coupled with this very human tendency is another, equally human. For while it takes one of these great disasters to drive the lesson home, we are faced with the fact that the feeling of exasperation and purpose, the "conscience-smittenness" of the community, more often than not fritters away before it accomplishes anything. Thus a year has already elapsed since the lives of 146 working people were snuffed out in the Triangle disaster in New York, and while public indignation has vented itself in mass meetings and safety committees, in investigating commissions and fire bills, there has been no action within the intervening twelve months which would thoroughly prevent the recurrence of such a panic fire and no sure provision which would get the people out, any more than the Titanic's meager life-boat equipment was enough to float the two cabins, the crew and the steerage, when the great boat sank. Had a modern shipload of passengers in New York harbor ever gone through the

motions of getting into the life boats and away, the safety equipment of our ocean liners would have been put to a human test. That test would have borne out what the naval experts had been saying, and would have demonstrated it so thrillingly that not only the people who were left behind on deck would have seen their own helplessness, but average citizens everywhere would have been alive to what safety means in ocean travel.

To visualize needs which are not so spectacular but are no less real, is the work of the survey—to bring them to human terms, to put the operations of the government, of social institutions and of industrial establishments to the test of individual lives, to bring the knowledge and inventions of scientists and experts home to the common imagination, and to gain for their proposals the dynamic backing of a convinced democracy.

The survey cannot count upon a catastrophe to point its morals. The public interest it creates comes harder but has better staying qualities. In so far as it must lay a framework for setting forth the wide range of needs and opportunities which fall within its field, so it has inherent the prospect of a more sustained and organic accomplishment.

A Social Survey of a Typical American City[1]

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JUST as cities or communities differ, so will city or community surveys be different. Any set method for this kind of inventory-taking, intended for general application, must after all be largely suggestive, leaving wide latitude for shifting the emphasis according as conditions vary from city to city. Not with the thought, therefore, that the recent preliminary social survey of the city of Syracuse, New York, presents an inclusive plan for city surveying nor that it is a sample of what a full-fledged city survey ought to be; but, rather, that it may carry some suggestion for organizing and defining a city survey and be an illustrative instance of what one city did toward securing a program of "next-steps" in its civic and social development, that undertaking is recounted.

About a year ago several citizens of Syracuse, among them Rev. Murray S. Howland and Paul E. Illman, became convinced that the rapid growth of the city in the last decade, with its consequent changes in social relationships, had brought new problems calling for new diagnosis and treatment, and that the time had come for at least a preliminary stock-taking of local conditions affecting the life, health and progress of the city's 150,000 people. This purpose became specific along at least two lines: first, to gather sufficient data on points which seemed to call for immediate action so that definite constructive recommendations could be made; and second, to make a sufficient diagnosis of general conditions so as to determine whether and along what lines a later, more intensive survey should be carried on.

In order to give the enterprise strong and wide local backing, the support of the four large organizations in the city which themselves were federations of other organizations was sought and secured, namely, the Ministerial Association, which

[1]Read at the meeting of the Academy of Political Science, April 18, 1912

includes something over a hundred churches; the Chamber of Commerce, which represents employers and industrial and commercial organizations; the Central Trades Assembly, which represents all the labor unions of the city; and the Associated Charities, which represents to some extent the relief agencies. The Chamber of Commerce subscribed two-fifths of the estimated expenses of the survey, and each of the other three organizations guaranteed one-fifth. Each organization chose three representatives on a central survey committee of twelve, and gave the committee full power to go ahead with the survey. The committee included some of the most influential men in the city. Representing, as it did, forces that are not always in accord in city life, the committee developed into a very remarkable working group—so remarkable, in fact, that people outside the group were unwilling to see it broken up after it had completed the immediate work to which it was committed.

A director from outside the city was secured to carry the social inventory as far as seemed practicable in five weeks; and several sub-committees were appointed to gather general information which would be of use to the investigators—including city and county reports for a number of years back; special reports published by the chamber of commerce, the board of education, the academy of medicine and other organizations; population figures; maps; city ordinances; and so on. The director spent most of his first week in company with some member or members of the central committee, interviewing city officials, business men, labor leaders, clergymen, teachers, social workers, physicians and others familiar with social conditions. The purpose of the interviews was to become saturated with the main facts of the community, especially those which indicated, from many points of view, improvements made in the last ten or fifteen years, and improvements also from many points of view that were thought to be needed in the next few years ahead. With these facts digested the central committee picked out the main lines of inquiry to be followed. They were, in broad terms:

1. Health conservation and sanitation.
2. Housing conditions among unskilled workers.

3. The betterment agencies of the city.
4. Foreign populations.
5. Juvenile delinquency.
6. Civic improvement.
7. Labor conditions.

Certain phases of municipal accounting, public finance and local taxation, would have been included in the survey, but for the fact that one member of the central committee had already set on foot plans for handling such an investigation in another way. This investigation has since been made by experts from the New York Bureau of Municipal Research; and interest in it had undoubtedly been enhanced by the social and civic revival which citizens are free to credit as one of the results of the social survey.

All of these subjects chosen presented phases of such current importance that the committee wished them followed further; yet it was evident that each subject, to be covered adequately, would require the investigator's time for more than the remaining four weks. A request was therefore made to several state and national organizations, which sooner or later would be conducting investigations of their own in Syracuse, to send their representatives at once. They would thus co-operate with the survey, and on the other hand they would gain for their own work through the strong local backing afforded in the central survey committee. A number of organizations responded immediately, among them the New York Child Labor Committee, the North American Civic League for Immigrants, the National Housing Association, the National Consumers' League and the National Prison Labor Committee. In addition to this outside co-operation a score of Syracuse people volunteered their services as a personal contribution to the survey—among them a young physician, who made the study of the city's vital statistics; a young rabbi, who prepared a statement of playground equipment and needs; the secretary of the associated charities, who took charge of the housing investigation; an official of the city sewerage commission, who prepared a summary of the sewerage situation; the probation officers, who studied juvenile delinquency; a young lawyer, who gathered data on relief work in

the city; students in a sociology class in the university, who aided in the investigation of child labor in the street trades; and others who made maps and charts, arranged exhibits, offered prizes or acted as judges. The liberal co-operation of the newspapers was invaluable.

A work-program indicating data to be gathered on each major subject was worked out by the different investigators and the survey director; and the latter spent the remainder of his time investigating several phases of labor conditions. As already indicated, the reports were not expected to be analyses of many or all sides of the subjects inquired into; they were to take up only those matters which seemed to call for immediate action or which pointed the need for more extended study. The outlines of facts to be looked for, however, covered a range wide enough to allow the different investigators some degree of latitude in deciding, as they got deeper into the fact-gathering, what matters should be given special scrutiny. Several of the work-programs follow:

A. Health and its Conservation.

I. Vital statistics

a. General death rates for 1907-08-09-10-11; and average death rates for five-year periods running back twenty years; infant death rates, same period.

b. Distribution of deaths by wards, for 1910.

c. Population by age and sex in each ward, in 1910.

d. Deaths from the more prevalent diseases for the last ten years, especially contagious and preventable diseases such as typhoid, tuberculosis, diarrhea and enteritis (under one and under five years of age), and pneumonia.

e. Case rates of the diseases more prevalent locally for the last ten years—especially contagious and preventable diseases, such as diphtheria, typhoid, measles, scarlet fever, tuberculosis.

f. Births: reporting of; still births; birth rates compared with other cities of similar size and population make-up.

II. Health administration

a. Effect of administering health work through a subordinate bureau of the department of public safety, instead of through a department of health; adequacy or inadequacy of health appropriations.

b. Educational work for health; any special needs; opportunities for increasing educational work as shown by work done in other cities.

c. Organized work against venereal diseases; its chief needs; work done by Syracuse Society for Prevention of Social Diseases.

d. Quarantine practise in less serious contagious diseases.

e. Medical inspection of schools; how adequate? In all schools? How financed?

III. Food inspection

a. Meat, fruit, fish.

a. Screening from flies.

c. Milk supply; analysis of bacteriological count from January 1 to July 1, 1911; percentage of producers whose milk was above the maximum bacterial count; method of enforcing the milk rule; any licenses revoked; analysis of cream count; need of better publicity work on milk and cream scoring.

IV. Water supply

a. Source of general supply; water sheds; cost.

b. Surface wells; springs.

V. Sewerage system

a. Houses connected; open privy vaults not connected with sewers.

b. Location of sewer outlets.

VI. Garbage disposal

a. Cost; method.

b. Location of plants.

c. Method of collection of garbage.

B. HOUSING OF THE UNSKILLED WORKERS.

I. A close study of six typical districts where the unskilled workers live.

a. Apartment buildings: number separate apartments; material; stories; repair; halls; fire escapes; basements.

b. Family apartments in the buildings (facts relating to individual apartments rather than the whole building of which each apartment is a part): number of rooms; number of families; number of adults, children and boarders; cleanliness; light; ventilation; plumbing.

c. Water supply: location; number of persons per tap; bath; drainage.

d. Yards: area; cleanliness; live stock; alley; garbage; rubbish.

e. Toilets: inside; outside; cleanliness; number using; sewer connection.

f. Rent.

II. Similar close study of a few old tenement houses.

III. Similar study of a few new apartment and tenement houses

To see whether the new ones are conforming to accepted principles of good housing, or whether they are making the same mistakes as those made in the old tenements.

IV. Lodging houses

Number; rooms; beds; air-space per bed; charges for lodging.

V. A census of the number of open privy vaults, by wards, throughout the city.

C. FOREIGN POPULATION.

I. Statistics of foreign populations

a. Total number of foreigners; number by nationalities.

b. Number, by sex and age groups.

c. Number of families.

d. Number of immigrants by nationalities, admitted to New York state during 1909-1910.

e. Sex and ages of same.

f. Illiteracy of those 14 years old and over.

g. Number of immigrants, by nationalities, who arrived in Syracuse during 1909-1910.

h. Number, by nationalities, in hospitals.

i. Number in prison.

j. Number in almshouses; number applying for relief and charity.

II. Neighborhoods

a. Map showing foreign quarters, by nationalities.

III. Housing and lodging conditions (made in conjunction with general housing study)

a. Kind of lodging.

b. Study of a few old tenements in each neighborhood.

c. Number of persons in each house.

d. Number of lodgers and families.

e. Number of persons and beds in each room.

f. List of lodging houses and number of immigrant lodgers in each place.

IV. Industrial opportunities

a. Industries employing foreigners.

b. Number, by nationalities, in each industry.

c. Methods of obtaining work.

d. Hours of work, in general.

e. Days per week.

f. Any night work.

g. Industries continuous through year.

h. Days worked yearly and quarterly.

i. Estimated average yearly wages for both skilled and unskilled workers.

V. Economic conditions

a. Amount of money transmitted to different countries

during 1909-1910 by post-office money orders; drafts on foreign banks; express orders.

b. Number of local foreign bankers.

c. Number of steamship ticket agents.

d. Any need for postal savings banks?

e. Number of immigrants that own houses.

VI. Educational opportunities

a. Number and location of public schools; of evening classes; of private schools.

b. Number of adults and children, by nationalities, attending evening schools.

VII. Naturalization

a. Number of applicants for first papers, by nationalities, for the last five years.

b. Applicants for final papers, by nationalities, for the last five years.

c. Number of final papers issued.

d. Final papers denied.

e. Final papers still pending.

f. Number of naturalized citizens who voted at last few elections.

VIII. Courts

a. Number of arrests and convictions, by ages and nationalities.

b. Juvenile delinquency.

c. Interpreters in court.

d. Shyster lawyers.

e. Any legal aid societies.

f. Action in accident cases.

g. Ambulance chasers.

IX. Social agencies for betterment, protection and relief.

a. Foreign societies.

b. Labor unions among foreigners.

c. Civic clubs among foreigners.

d. Settlements.

e. Playgrounds accessible to immigrants.

f. Public baths.

g. Consuls or consular agents.

h. Handicap of foreign women.

i. Notaries public, midwives and doctors, among foreigners.

D. Juvenile Delinquency.

I. An analysis of cases of juvenile delinquency, by wards and blocks, throughout the city.

Its relation to the congestion of population and the lack of open spaces where children may play.

II. Nature of offenses

a. Proportion that are offenses against the person; proportion offenses against property.

b. Locality in which offenses against property predominate over offenses against person, and *vice versa*.

c. Similarly, by nationalities.

d. Proportion that are first offenders; proportion repeaters.

III. Individual conditions

a. Age of largest proportion of offenders of both sexes.

b. Physical condition—stature and weight; diseased?

c. Mental condition: proportions bright, dull, defective, fearless, venturesome.

IV. Social environment

a. Parental condition: proportion with both parents living; proportion fatherless, motherless, orphans, illegitimates.

b. Condition of home: regular employment; kind of employment.

V. Conclusions

Remedial agencies needed; playgrounds, boys' club, library extension?

E. Labor Conditions, General.

I. Wages of men and women in industry

a. Weekly earnings; skilled or unskilled, by trades.

b. Annual earnings.

c. Day labor or piece work, by industries.

d. Increases in pay in last 15 years.

e. Extra pay for overtime work.

f. Recent changes in hours per day affecting wages.

g. "Speeding" tendencies, if any.

II. Hours of labor

a. Hours per day; Saturday hours.

b. Days per week—any seven-day labor?

c. Extra time work.

d. Day work or night work.

e. Industry continuous through year. Days worked in year.

f. How long in the industry.

III. Conditions of labor

a. Sanitary conditions of plant—ventilation.

b. Occupational diseases.

c. Industrial accidents: safety devices; settlements for injury or death.

IV. Organization of labor and capital.

a. Trade unions.

b. Union of employers.

c. Protective agencies: insurance; hospitals; societies; legal aid.

d. Avenues of expression regarding work conditions.

V. Individual and home conditions

a. Married; any children; keep boarders; other members of family work; own home?

b. Support self.

c. Save any money?

d. Leisure for reading or recreation.

e. Sanitary conditions of home surroundings.

VI. Any recent serious labor troubles; strikes, lockouts.

F. Child Labor.

I. Thoroughness of inspection

a. Number of children granted work certificates, by nationalities.

b. Number found by inspectors.

c. Number not found.

d. Number of inspectors.

II. Newsboys

a. Age classification.

b. Violators of the law.

c. Earnings.

d. Character of school work done by newsboys.

e. Newsboys in juvenile court.

f. Newsboys and truant school.

III. Issuance and regulation of working papers

IV. Summer child workers

a. Number missing more than one week of school.

b. Average time missed.

c. Effect on scholarship.

V. Night messenger law

VI. Hours, pay, regulation, among child workers

a. Bootblacks.

b. Pin boys in bowling alleys.

c. Morning paper carriers.

d. Child workers in home industry.

The outline on betterment agencies laid special emphasis upon the investment in equipment, the cost of relief work, and the social responsibility felt by church, school, university, hospital, Christian associations and settlements; and the out-

line on civic improvement covered the need of a city plan, directions of the city's growth, recreation needs, park and playground facilities, the elimination of grade crossings and the improvement of water fronts.

As the investigations progressed the mass of data collected began to show cleavages along certain clear-cut lines; and by autumn after the several reports were drafted the central committee was able to put its finger upon what it had reason to believe to be the weak spots in local civic and social conditions.

In order to give the findings of the survey wide local publicity the central committee determined to have a Know-Your-City-Week last November. The week started off with forty ministers preaching sermons, on Sunday morning, on the civic responsibilities of citizenship. On Monday exercises were held in the public schools, the main feature being the reading of prize essays written by the children of the schools on "How to Make Syracuse a Better City." Over 1000 essays were written and the dominant note struck in the essays indicated that the children had caught the point that a better city involves not only greater business prosperity but the betterment of living and work conditions; in other words, that emphasis upon human welfare, whether through better sanitation and public health regulations, better houses to live in, safer places to work in, or greater opportunities for self-improvement, is of prime importance in city advance. The survey committee regarded the essay contest as one of the best achievements of the whole enterprise. On the other afternoons throughout the week, conferences on concrete local problems were held in one of the chambers of the county court house. In the main, the subjects were closely related to those discussed at the respective evening meetings; and the discussions were led and participated in by representative citizens, upon the shoulders of many of whom the work of carrying out reform measures advocated by the committee would undoubtedly fall.

At the evening mass meetings, which were attended by an average of 500 persons per night, the survey reports were read from the platform; and speakers from out of the city pointed the moral of local findings from the vantage point of a national perspective. One of these meetings, the one which probably

involved the greatest outlay of both time and money, was completely taken charge of by the physicians of the local Academy of Medicine. The larger audience reached, of course, was through the medium of the newspapers, which co-operated thoroughly. Several of the reports were reproduced in full by the press. Further publicity for the facts was gained through the exhibit of maps, charts, and diagrams showing graphically the kernel of each report. The exhibit occupied sixty feet of window space of a retail store on one of the most prominent street corners in the city.

With reports in hand the central committee formulated seven resolutions as a preliminary working program for the city, which would not be partisan, sectarian or sectional, but would aim at healthy industrial and social growth. In an eighth resolution the committee sent back to the bodies which created it, and which it jointly represented, a recommendation that they take action to see that the program is entered upon. The resolutions are as follows:

First, that the mayor and common council be urged to establish a city-planning and housing commission to secure a plan for the city's growth and development, and draw up a housing code such as would meet the needs of the city for some time to come.

Second, that the board of education be petitioned to consider and adopt a far-reaching plan for the education of the foreign population of the city by a larger provision of night schools, by the introduction of civics and industrial courses in night schools and by the extension of vocational training to the grades.

Third, that the police and school departments be petitioned to enforce the child-labor laws relative to the street trades.

Fourth, that the board of health be petitioned to provide:

(a) For the inspection of mercantile establishments and for the enforcement of those provisions relating to child labor, hours of work of women, and sanitary conditions under which such people work.

(b) For the publishing monthly of the milk score of all milk producers whose milk is sold in the city.

(c) For more rigid inspection of tenements.

(d) For the engagement by the city of the services of some sanitarian of national standing to study and report on the needs of the public health of Syracuse, as a basis for planning future health work.

Fifth, that the employers engaged in such industries as require the plant to be in continuous operation be urged to make such adjustments as to assure every laborer one day of rest in seven.

Sixth, that there should be among the betterment agencies of the city a closer co-operation expressed in some system, such as a united charities, a social-service league or an associated charities organized on broader lines than those in existence at present.

Seventh, that the city at large have some organization to study the needs and development of the city and to crystallize the findings of such studies in some yearly program such as this Know-Your-City-Week.

Eighth, that to accomplish this end the central survey committee recommend to the respective bodies represented in the committee the formation of a comprehensive and democratic body to study the problems and promote the adoption of the reforms suggested by the survey.

In the few months since the resolutions were adopted, the central committee has succeeded in getting local organizations of one kind and another to back up nearly all of the resolutions and to carry on a definite campaign for the changes advocated in them. Several of these campaigns have already succeeded and the success of others is believed by the committee to be sure. A few of the results may be enumerated:

The mayor has publicly promised to appoint a city-planning and housing commission. In the meantime a volunteer city-plan commission is at work. A committee of the board of education and a volunteer committee are at work gathering information from all over the country as to effective school work for foreigners. The police are thoroughly enforcing laws regulating the work of newsboys. The bureau of health has of its own accord invited a trained sanitarian to the city to go

over its work and to make suggestions, and those who have been watching the milk scores state that they have shown marked improvement this winter over a year ago. A federation of all betterment agencies in the city is being formed with enthusiastic general co-operation. A further survey, by experts from the New York Bureau of Municipal Research, as already noted, has been made, and it is planned that other investigations shall be carried on by the new federation. One more or less intangible but nevertheless very real and important result is the awakened interest of citizens in civic and social affairs of the city.

This has been accomplished at a total money outlay amounting to only a little above $1100—the investigations costing about $500 and the publicity work about $600.

A Sanitary and Health Survey[1]

GEORGE THOMAS PALMER, M. D.
Springfield, Illinois.

ON account of the gratifying results in public health work during the past few years, and on account of the popular interest born of the realization of our ability actually to reduce morbidity and increase the span of life, it is easier to bring about public health reform in an American municipality than to secure any other kind of civic improvement.

Jealous as they are of personal liberty, the people have come to recognize that they must submit to a certain amount of inconvenience and even to scrutiny and investigation of their lives and personal affairs in the interest of the health of the community. The business man who is not in sympathy with many social reforms appreciates the practical utility of sanitary and public health supervision.

We have ceased to question the right of health authorities to extend their operations even far beyond the letter of the law, while opposition to private agencies working for sanitary betterment, even when accompanied by wide publicity of unenviable civic conditions, is usually inconsiderable. The intelligent portion of the community is fully capable of appreciating the benefits to be derived from such activities.

Hence, the sanitary survey may often be employed as an entering wedge in general civic betterment, leading naturally to increased interest in those other agencies for improvement which extend more intimately into the moral and social lives of the people, but all of which are more or less associated with public health work.

It is on this account, in my opinion, that the sanitary survey is the most important phase of general survey work just at this time, when municipalities are but beginning to recoginze the value of systematic study of their underlying conditions.

[1]Read at the meeting of the Academy of Political Science, April 18, 1912

Further, I am impressed by the fact that an enormous field is opening up in the study of the sanitary and other civic conditions in the smaller cities of the nation. The municipalities ranging from 10,000 to 100,000 in population represent an enormous number of people and present civic problems quite as definite, if not so extensive, as those to be found in any of the larger cities. And yet the civic student may find in almost any of the hundreds of smaller American cities an absolutely virgin field which so far has been shamefully neglected.

I feel that I should have no claim upon your attention this afternoon, that I should not be here to present a plan of survey, except on account of an experience which, it seems to me, should have been looked upon as commonplace enough, but which appears to have been regarded as somewhat unusual.

This experience was the study of the sanitary conditions of a city of from 50,000 to 60,000 population and the attainment of fairly satisfactory results without the expenditure of money. Before offering to you a definite plan of sanitary survey, I feel that it may be worth while to describe that simple investigation, the methods employed and the results attained.

I certainly have no intention here and in the presence of those who have done such brilliant things along those lines, of discussing anything of the theory or principles of survey work. I would suggest, however, that perhaps the very brilliancy of your accomplishment has prevented many municipalities from entering upon such undertakings.

With the Pittsburgh survey as the best known if not the only generally known specimen of its class, many persons have come to look upon the survey as a gigantic, technical and complicated institution, demanding a large amount of expert skill and considerable financial outlay for its accomplishment.

Wherever I have found intelligent city officials and citizens interested in civic betterment, I have found an earnest desire for more thorough knowledge and understanding of existing civic conditions; but a conviction that the survey is entirely beyond the reach of the average municipality.

In fact, at the time we undertook the sanitary study of Springfield, if someone had suggested such a thing as a "sanitary survey," I should have replied that we were not in a position financially or otherwise for such an ambitious undertaking.

As it was, we simply started out in Springfield to ascertain certain definite facts, and we had not the faintest idea how far or where our studies would carry us. We knew that the city had a higher typhoid-fever mortality than other cities of like size and similarly situated. We knew that we had houses and tenements which served as centers of infection of tuberculosis and other diseases. We realized that our infant mortality was too high. We started out simply with the purpose of ascertaining the causes of our undue morbidity and mortality that we might be enabled to take intelligent steps to decrease sickness and lower our death rate.

It was not until our work was completed that we realized we had done anything which could be dignified by the term "sanitary survey." I cite this fact because I feel that there ought to be something done to change the general conception of the term "survey" and because I am convinced that we must reach a clearer definition of the term before many cities will undertake it.

I am also impressed with the belief that when a city sets out to learn definite things about itself and for a definite purpose, the results will be more satisfactory than when an attempt is made merely to apply a plan of study for no better reason than that other cities have done the same thing. That is, the desire for knowledge without the plan will come nearer landing us somewhere than the plan, however perfect, without the underlying intelligent desire for knowledge.

In the vaults of the city hall we recently unearthed several massive volumes, the results of a sanitary survey carried out in 1885 on a plan suggested by Dr. John H. Rauch, then secretary of the Illinois state board of health. The city council appropriated $1,000 for the purpose and the work was carried out with most minute detail. The net result of this painstaking application of a survey plan consists of these big, clumsy volumes, dusty, moth-eaten and stowed away in a vault. In

fact, when our work was done in 1910, no one recalled that a sanitary survey of the city had ever been carried out. This is merely an example of the city going through the motions and carrying out a plan suggested by others, but without a desire for specific results.

In 1910 we awoke to the fact that Springfield had a typhoid-fever mortality of something over 40 per 100,000 population. This mortality had been as high as 85 per 100,000 and the last year recorded showed a mortality of 52. That was twice as high as it should have been. Half of our deaths from this disease were apparently unnecessary.

Four million dollars had been expended by the city for water works and sewer system, and the mains extended to all sections of the town. We made repeated analyses of the city water, extending over a long period of time, and found that the public supply was always safe for domestic use. We had to go further to locate the cause of our excessive typhoid-fever mortality. Analyses were made of 150 samples from supposedly good wells. All but three were found to be dangerously polluted. Then the question arose as to the extent to which wells were used in the city and the cause of well pollution. On these points, as is true in practically every other city in the United States where wells are used, reliable information was entirely unobtainable.

There was but one thing left to do and that was to have the four underpaid, untrained but enthusiastic inspectors of the health department visit each of the 9,000 homes spread out over the 1,600 blocks of the city to locate every well and vault and ascertain the general sanitary conditions of all premises. It required two months to cover the city, the work being done in addition to the rather exacting routine duties of the department. The results plainly told the story of our typhoid fever.

The 9,000 homes of the city had 6,000 shallow wells, the pollution of which was guaranteed by 7,000 privy vaults. There were 6,000 polluted wells in the city, and the water mains and sewers were convenient to 5,000 of the premises that maintained them. That is, the use of 5,000 of the 6,000 polluted wells in the city was entirely unnecessary. From a sanitary

standpoint the city's expenditure of $4,000,000 was wasted.

I should make this statement about my home town with reluctance were it not that Mr. Hiram Messenger has advised me, after studying the typhoid conditions of over thirty cities of from 40,000 to 100,000 people, that Springfield is now the only one in which he could obtain accurate data as to wells and well pollution.

The results of our investigation were not bound in red morocco and filed away to decay, nor were they hopelessly buried in dreary and unread reports. We prepared a large map of the city, large enough to show each house by number and the gross sanitary conditions of all premises. Each unsanitary lot was shown in red and every well, vault, sewer, water main, vacant lot, business property and public building was indicated by symbol or color.

We knew the facts; but we had to demonstrate them to get results. The map was shown at a luncheon to three hundred members of the Chamber of Commerce, with a talk on "The Truth About Springfield." The business men endorsed our work and the newspapers gave the facts wide publicity. Next the map was hung in the council chamber and the members of the city council were shown why we should have ordinances compelling property holders to connect their property with sewers and water mains. The ordinances were passed in three weeks, although we had vainly sought to secure such ordinances for over two years.

Then another interesting thing developed. Protest on the part of the business men gave way to serious consideration. The work had gone too far to be stopped and it became the part of wisdom to fall in line with it. Real-estate men advertised their property on its sanitary merits and money became harder to borrow on unsanitary property. For the first time in the community, sanitation took on a commercial value.

But the Springfield sanitary survey—if you choose to dignify it by that name—went a little further than a mere census of wells and vaults. During the house-to-house canvass the inspectors made notes of all unsanitary conditions and all nuisances and these were ordered remedied and abated.

They also noted all tenements and bad housing conditions and the data furnished by them along this line afforded the basis for the housing investigations we have since carried on. We have studied, charted out and photographed the worst conditions in the city and we are now ready to do our part in convincing the Illinois General Assembly that there are slums in the smaller cities and that there is a crying need for good state housing laws.

In this housing investigation we took a tuberculosis census of the worst tenements and fumigated and disinfected as far as possible. We succeeded in improving the conditions of the worst tenements; but lack of state laws made satisfactory action impossible.

As I have stated, we were making this investigation entirely without a plan or system. Each undertaking when completed had pointed out something else that required attention, and at this juncture we found a new force urging us on. That was an aroused public interest. The better element of the people were watching to see what we would do next and the four daily newspapers of the city backed up our work and featured everything that was undertaken. This aroused interest was sufficient to hush all opposition.

We were now ready to consider our infant mortality. Our first effort was in the direction of an honest milk, containing a reasonable butter fat and total solids and free from preservatives. We recognized, however, that this was a commercial rather than a public health proposition.

We realized that "the amount of manure a milk contains is more important than the amount of butter fat" and we determined to visit and inspect all of the dairies supplying milk to the city. In this tour of inspection we attempted to teach the dairymen and farmers the prerequisites of pure and clean milk; but we warned all of them that inspections would be made from time to time and that the conditions of all dairies would be made a matter of public record open to milk consumers.

This investigation of dairies was followed by inspection of restaurants and bakeries, the details of which cannot in-

terest you here. The results, however, were gratifying to us.

We are now engaged upon an investigation of garbage collection and disposal, studying our own conditions and the methods of other cities. We are trying to solve what I am inclined to regard as the livest public health problem of American municipalities—a problem, incidentally, which is not yet solved ideally by even the largest of cities.

The Springfield sanitary survey is not complete, nor will it be for several years to come. We are studying the town part by part and we are preserving all of our data in the hope that we may be able some day to show a complete sanitary survey of a smaller city. But every step is being taken with a definite plan in view. We have to produce results, and results that we can show the people.

The people, as a rule, will give active co-operation to work of this kind. They will be tolerant of criticism of local conditions. But after a while they will meet you with the essentially practical and entirely proper demand, "Now that you have given us all this undesirable publicity, what have you accomplished?" Incidentally, they are not to be satisfied with a story of "interesting data." The only way you can safely use a town as clinical material is to cure its sores.

For twelve years the average mortality from typhoid fever in Springfield had been something over 40 per 100,000 population. In 1910, the year our investigation was undertaken, it was 52. In 1911, the year after our agitation of polluted wells and the passage of sanitary ordinances, our typhoid mortality was in the twenties. The record of one year is not conclusive. Such a result immediately following sanitary agitation, however, is suggestive and encouraging.

In 1909, sixty-eight infants died from summer diarrhea; in 1910, even after we had a good commercial milk supply, there were sixty-four deaths. In 1911, after our dairy inspections, there were forty-one deaths. This may be coincidence, but it is suggestive.

My only excuse for burdening you with the details of our work in a small mid-western town is to make you realize that the small town has real sanitary and public health problems

unappreciated by the people, to demonstrate that reasonably good results may be attained without an elaborate plan and without any considerable expenditure of money. The same excuse will justify this additional detail.

The collection of data in our work was entrusted to four inspectors, already overworked, and receiving $60 per month —men entirely without sanitary training and three of them with little more than ward-school education. They have served as sanitary inspectors, dairy inspectors, housing inspectors, as conditions required, their only instruction being such as we could give them; but each man being fully informed as to what we were trying to do and why.

In addition to the salaries of these inspectors, which had been paid from time immemorial, the total cost of the survey and the sanitary map to the city of Springfield was less than $100.

There is but one other thought in connection with our sanitary study. We were after a direct result, the reduction of morbidity and mortality. We are encouraged to believe that we have accomplished at least enough to justify the effort. But we now feel that we see other results more gratifying and far-reaching than we had anticipated.

Our work had been accompanied by unrestrained publicity. We accentuated the civic needs of the city in every possible way and we feel that we perhaps stimulated others to activity in their individual lines. We had demonstrated, perhaps, that civic improvement was not so difficult to bring about as had been generally believed and we had possibly stimulated a general spirit of investigation.

At any rate, whether our sanitary investigations had anything to do with it or not, a great many things have come about during the past two years. A detention home has removed children from the jail and has simplified the work of an excellent trained probation officer. A tuberculosis association of 1,000 members operates a dispensary and employs visiting nurses. Medical inspection of school children is established. The almshouse of Sangamon County is being thoroughly studied from a medical and sociological standpoint and provision is being made for county care of indigent consump-

tives. The dispensing of county charity has been placed in better hands. But most important, the people are awakened to the necessity of a thorough knowledge of local conditions, and a broad and sweeping survey of the city—a real survey this time—is being considered and is practically assured.

The experience in Springfield, the gratifying results attained without the employment of expert skill, has made me believe that similar results may be attained by other cities either through the agency of their health departments or through the activities of private agencies. The survey in Springfield was carried out without a definite plan of action, and the following scheme of study was the result rather than the foundation of the work.

Unquestionably a well defined plan will serve to simplify the survey, will render it more systematic and will prevent ineffective labor in various directions. The one submitted here is little more than a skeleton in the elaboration of which we are now engaged. It may serve in its present form, however, to suggest a rather simple and consecutive line of action which will prove helpful to those about to engage in work of the kind.

Scheme of a Sanitary Survey.

I. Study of Morbidity and Mortality From Communicable Diseases.

No intelligent work to reduce morbidity and mortality can be undertaken until we know the present morbidity and mortality and the averages for several years past.

In most instances morbidity from communicable diseases may be ascertained from the records of the local health department. Such records, however, are frequently faulty and incomplete. Under such circumstances, the present morbidity may generally be estimated after interviewing all members of the local medical profession. Morbidity records for the past will be unattainable.

Mortuary records for many years past should be obtained from the local health department. If the municipality has no registration of deaths, the desired data can usually be obtained

from the state registrar of vital statistics or from the state board of health.

After securing the present and past average mortality from preventable diseases, these should be compared with similar figures from other municipalities as near the size and existing under as nearly the same conditions as possible. Much valuable information for purposes of comparison may be obtained from the last reports of the United States Census Office dealing with mortality statistics. It is only by such comparison of figures that we can determine whether the local mortality is higher than it should be.

1. *Diseases to be Studied*—(a) Typhoid fever; (b) tuberculosis; (c) malaria; (d) yellow fever; (e) small-pox; (f) chicken-pox; (g) diphtheria; (h) scarlet fever; (i) measles; (j) whooping cough; (k) industrial diseases peculiar to the community; (l) summer diarrhea of infants; (m) accidental deaths.
2. *Sources of Information*—Local health department; state health department; local physicians; report of United States Census Bureau.

NOTES—Seek out the cause for every decided deviation from the normal or average mortality. Such deviations are at times due to outside influences bearing in no way upon local sanitary conditions.

Ascertain total mortuary figures. Do not accept death estimates in percentages. One death in the community may affect the rate 100 per cent.

II. WATER SUPPLY AND SEWAGE DISPOSAL.

(Special relation to typhoid fever.)

1. *Source of Municipal Water Supply*

(a) Results of last analyses.

A single analysis should not be accepted as final. Conditions in an unprotected supply often change from season to season.

(b) Possible pollution of the public supply at source.

Information should be obtained from the mu-

nicipal water company, the local water department or the local health department. It would be well to inspect personally the source of supply.

NOTE—If analyses have not been made, samples should be secured and sent to laboratories for analysis. In several states, the state water survey, the state university or other state departments will make analyses of local water supplies without charge. Reliance should not be placed on the so-called "simple water tests."

2. *Private Wells*
   (a) Extent to which they are used. (If used at all, it will be impossible to ascertain the extent without a house-to-house canvass. The same is true with privy vaults. See below.)
   (b) Analysis of water from presumably good wells. It is never worth while to make analyses of water from wells which are obviously polluted.

3. *Privy Vaults* (Important on account of pollution of wells)
   (a) Extent to which used
   (b) Enforcement of ordinances or regulations as to the distance of vaults from wells or cisterns.
   (c) General construction of vaults to prevent soil pollution.

4. *Sewer System*
   (a) Extent throughout the city. Location of those sections not reached by sewer.
   (b) Location of outlets of sewers.
      (i) Danger to people of this community.
      (ii) Danger to other municipalities.
   (c) Extent to which sewers are used by those to whom they are available.

NOTE—Information as to the sewer system and the sewer outlets may be obtained from the city engineer or the department of public works. The extent to which sewers are used by those to whom they are available can often be determined only by house-to-house canvass.

5. *Methods of Sewage Disposal*
   (a) Is sewage "treated" before discharge or is it discharged in its raw state? If treated, what is the method of treatment?
   (b) Present and future dangers of the system employed.
6. *Pollution of Soil*
   (a) By privy vaults.
   (b) By polluted ponds or streams receiving sewage.
   (c) By sewers with loose joints.
   (d) By tile or surface drains. Private sewers.

III. Alleys.

(Special relation to fly-borne diseases; nuisances from decomposition of organic waste matter; dust and mosquitoes.)

Remember that, as a general principle, the alley belongs to the muncipality and that it is unlawful to place ashes, manure, garbage or any other material therein.

1. *Ashes*
   (a) Extent to which they are placed in alleys. Loose or in containers.
   (b) Disposal of ashes.
2. *Manure* (breeding place for flies)
   (a) Extent to which it is placed in alleys.
   (b) Loose or in tight, screened boxes.
   (c) Frequency with which it is removed.
   To guarantee against the breeding of flies, manure should be removed at least once a week from alleys and premises.
   (c) Disposal of manure.
   (i) Dumps (sources of danger.)
   (ii) Burned.
   (iii) Distribution to farmers for fertilizer.
   In some cities this is carried out systematically and satisfactorily.
3. *Garbage* (nuisance and flies)
   Presence in alleys (see Section IV)

4. *Alley Grade*

Drainage into yards.

Low places breeding-ground of mosquito.

Permitting the use of alleys for even the temporary disposal of ashes often results in raising the grade of the alley above that of surrounding property, causing the water to drain into nearby yards.

NOTE—In the house-to-house canvass proposed in this plan, all bad alley conditions should be noted and reported to the health department or to the department of streets and alleys.

IV. GARBAGE DISPOSAL.

("The livest public health problem of American municipalities.")

(Special relation to fly-borne diseases, soil pollution. Dumps bear a close relation to contagious diseases.)

1. *Handling Garbage at Home*
   - (a) Are special cans or retainers required?
   - (b) Destroying garbage at home.
     - (i) To what extent practised?
     - (ii) Method employed.
   - (c) Separation of refuse into garbage, ashes and rubbish.
   - (d) Wrapping garbage in paper (dry garbage).
2. *Collection of Garbage*
   - (a) Public or private collection.
     - (i) Cost to householder.
     - (ii) Frequency of collection.
     - (iii) Specially constructed garbage wagons.
     - (iv) Regulations concerning collection.
3. *Disposal of Garbage*
   - (a) Dumps.
     - (i) Location of dumps.
     - (ii) Character of waste taken to dumps.
     - (iii) Policing dumps.

NOTES—The municipality has no more right to permit the dumping of decomposable waste near to the home of a citizen than it has to empty its sewers near to the home of a citizen.

The recovery of articles from the dumps, as is often done by the poor, is a common means of carrying contagious diseases into those homes in which such diseases are most difficult to locate and control. Much of the most usable salvage in a city's waste has been discarded on account of contagious and infectious disease in the home.

(b) Feeding garbage.
  (i) Distributing garbage to farmers.
  (ii) Municipal hog-feeding.
    Not a sanitary or practicable plan in the ordinary climate.

(c) Incineration.
  (i) Incineration of garbage alone.
  (ii) Incineration of all waste.
  (iii) Incineration with artificial fuel.
  (iv) Burning garbage and other waste with its own combustible material.

NOTES—The ideal method of refuse disposal is incineration of all kinds of waste—garbage, manure, ashes and rubbish. In this way we avoid the necessity of dumps of any kind in the community.

Ideal incineration implies the utilization of the fuel content of the refuse itself. In this way sufficient heat may be obtained to produce steam for power in municipal plants.

(d) Reduction of garbage.
  (i) By public or private company.
  (ii) Materials regained from garbage.
  (iii) Revenues to the city from reduction.
  (iv) Cost to the city.

V. STAGNANT POOLS AND OPEN CISTERNS.

(Special relation to the mosquito and to malaria and yellow fever. More important in southern cities.)

(a) Location of stagnant ponds and pools.

(b) Best means of draining same.

(c) Screening cisterns.

VI. Housing.

(Special relation to tuberculosis, contagious diseases, immorality, physical inefficiency, deficient education, crime and children.)

1. *General Survey of Housing*

   In the house-to-house survey, all bad housing conditions should be located and noted for future investigation.

2. *Intensive Study of Housing*

   The study of individual houses and blocks indicated in the general housing study as being undesirable.

3. *Yard space*

   (a) Percentage of lot unoccupied by buildings.

   (i) Grass and trees.
   (ii) Paved.
   (iii) Drainage and sanitary conditions.
   (iv) Uses of yard space.

4. *Light* (A study of each room in undesirable buildings used for dwelling purposes)

   (a) Outside rooms.

   (b) Light wells.

   (c) Sky lights.

   (d) Dark rooms and uses of dark rooms.

5. *Ventilation* (Studied according to above outlined scheme for light)

6. *Business Houses*

   Relationship of dwellings or tenements to saloons, immoral resorts, business houses and industries. Dwellings over stables.

7. *Home Industries*

8. *Congestion*

   (a) Number of inmates.

(b) Room congestion.

(c) Roomers, boarders, homes and light housekeeping.

9. *Water Supply*

(a) Source.

(b) Convenience to living quarters.

10. *Sewage*

11. *Condition of Plumbing*

This study should include observation of plumbing conditions and facilities for ordinary cleanliness.

12. *Disposal of Garbage and Waste*

13. *Nationality and National Traits*

14. *Children*

Number of children in each dwelling, with note as to the manner in which they live, association with immorality, sanitary conditions, *etc.*

15. *General Sanitation*

16. *Transient or Permanent Residents*

NOTES—In collecting housing data the name of the landlord and agent of each piece of property should be obtained. Each dwelling, building or block studied should be mapped or platted out.

Photographs should be obtained of the worst conditions.

VII. RESTAURANTS, BAKERIES, BUTCHER SHOPS.

1. *Sanitary Conditions*

(a) Cleanliness.

(b) Plumbing.

(i) Condition.

(ii) Location in relation to foodstuffs.

(c) Living quarters near to place of food handling.

(d) Protection from flies.

(e) Health of workers in foods.

(f) Spitting.

(g) Care and protection of food supplies.

VIII. Milk Supply.

(Special relation to infant mortality, tuberculosis and contagious diseases.)

1. *Chemical Content* (Butter fats and total solids)
   - (a) How often tested by local authorities.
   - (b) Collection from homes of consumers or on open market and testing privately.
   - (c) Freedom from preservatives.

   A milk containing the legal amount of fats and solids and free from preservatives is merely a good commercial milk. The greatest importance attaches to the amount of filth the milk contains.

2. *Dairy Inspection*
   - (a) Health and condition of cows.
     - (i) General health.
     - (ii) Tuberculin testing.
     - (iii) Cleanliness.
     - (iv) Feed.
   - (b) Condition and construction of barns.
   - (c) Condition and cleanliness of milk houses.
   - (d) Conditions and method of shipping.
     - (i) Cleansing cans.
     - (ii) Rapid reduction of temperature.
     - (iii) Pasteurization.
   - (e) Water supply.

3. *Bottling*
   - (a) Sterilization of bottles.
   - (b) Hand or machine bottling.
   - (c) Place of bottling.
     - (i) At the farm (good).
     - (ii) At the milk depot (unsatisfactory).
     - (iii) In the milk wagon (intolerable).

4. *Health of Employes*

   Contagious diseases are often transmitted by the milk sup-

ply. Scarlet fever and diphtheria have been traced back to this disease among milk handlers or their families.

5. *Milk Depots*

Methods of handling milk and general sanitary conditions.

6. *Infant Mortality*

Ascertain the source of milk supply in all cases where there has been infant mortality in the family.

IX. Methods of Study.

1. *House-to-House Canvass*

This is the foundation of every satisfactory sanitary survey. Study each house and yard and note all wells, privy vaults and the general sanitary conditions. Information is also gathered during this house-to-house canvass upon which to base the future investigation of water supply and sewage; alleys; garbage disposal; stagnant pools and cisterns; housing; restaurants and bakeries.

2. *Sanitary Map*

A large map of the city should be prepared with each lot large enough to show house number, wells, vaults and all gross sanitary conditions. This map should also show the paved streets, sewer system and water mains.

The making of the map teaches a great deal about the city as a whole and brings together the accumulated data in a form which can be shown to the people or to the city officials.

3. *Study Water Supply, Sewers, Topography, etc.*

Study of the data in the office of the city engineer and department of public works.

4. *Intensive Study of the Various Subdivisions of Work*

(a) Visit all dumps and garbage-disposal plants.

(b) Study all housing conditions and plat out all blocks, houses or rooms investigated.

(c) Inspect all dairies supplying milk to the community, using the government score card as a guide.

(d) Visit and inspect all restaurant, bakeries, *etc.*

X. Study of Existing Laws and Ordinances.

Study the state laws under which the municipality is given its right of public health control.

Study the city ordinances to see what improvements can be brought about by merely enforcing existing laws.

XI. New Ordinances.

Ascertain what faulty conditions will require new ordinances to bring about their improvement.

Study ordinances of other cities which are bringing about satisfactory results in these lines.

XII. Study of Existing Health Department.

(See the standards of public health efficiency in an article by the writer, "The Inefficiency of Municipal Health Dements," published in *The American City*, August, 1911).

1. *Duties of the Health Department under the Ordinances*

2. *What Ordinances are not Enforced?* (Ascertain why).

3. *Study of Special Functions of the Department*
   - (a) Water analysis.
   - (b) Milk inspection.
   - (c) Quarantine.
   - (d) Reports of communicable diseases.
   - (e) Isolation hospital.
   - (f) Abatement of nuisances.
   - (g) Registration of vital statistics.
   - (h) Constructive work.

4. *Provisions for Efficient Service*
   - (a) Qualifications of health officer.
   - (b) Salary and assistants.
   - (c) Reasonable appropriations.
   - (d) Freedom from politics. Civil service.

XIII. Methods of Publicity.

(a) The sanitary map.
(b) Newspapers.
(c) Expositions and exhibits.
(d) Bulletins and circulars.
(e) Public meetings.
(f) Churches.

XIV. Dealing With City Officials.

Co-operation if possible.

Meet opposition by a showing of fact and overcome opposition by publicity.

XV. The Survey Staff.

(a) A competent physician, preferably with some public health training.
(b) A public-spirited and competent lawyer.
(c) Staff of paid or volunteer inspectors to collect data.
(d) A practical plumber, or better, a sanitary engineer.
(e) Clerical help and draftsman.

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