

THE CITY AS A UNIVERSITY

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Judging by the increasing frequency with which articles are appearing concerning the relationships between the university and government, the subject is of more than passing interest. The following excerpts express this concern:

From an article by Robert M. Weinberg:¹ "The structure of the discipline-oriented University and the structure of the mission-oriented society tend to be incongruent. Moreover, as the disciplines making up the university become more complex and elaborate in response to their own internal logic, the discrepancy between the university and society grows. The university becomes more remote; its connection with society weakens; ultimately it could become irrelevant. The growth of this discrepancy appears to me to be a central problem in the relation between university and society. It poses major difficulties for the university professor, who views his responsibilities as a citizen broadly."

From an editorial in *Science* by John W. Gardner:² "Every great university must balance its responsibilities to the worlds of reflection and action . . . A society that aspires to creativity has urgent need of its detached scholars and critics, as well as those who will become deeply involved in the world of action . . . The life of reflection is not superior to the life of action, or vice versa. Both are essential to a vital society."

From President Grayson Kirk's article in the Columbia University

Forum:³ “The university of today is large, extremely diverse in its activities, extraordinarily expensive and vitally important. In short, for the first time in history the university finds itself at the very center and heart of society . . . Because the university today is the agency whereby virtually all our leaders are trained—or at least profoundly influenced in their attitudes—society has a mounting concern over what goes on in the university. Efforts to express that concern inevitably affect the life of the university.”

Perkins⁴ suggests that the university is concerned with:

1. Advancing knowledge through scholarship and research.
2. Transmitting knowledge from one generation to the next.
3. Applying knowledge to the problems of modern society.

With regard to this last concern he points out that “much nonsense has been written about the difference between the proof of knowledge and the utility of knowledge . . . Proof without concern for the application of proof leads to the barren discussions of medieval scholasticism, while proof based on utility alone makes generalization impossible and thus leads to the destruction of knowledge itself. The two ideas of proof and utility are different but dependent, and their interaction lies at the very center of the enlightenment and progress of mankind.” “This intimate union of theory and practice aids both,” says Whitehead. “The intellect does not work well in a vacuum.”

Neither, he might have added, can practical men long function effectively in a field such as health and medical care without the intellectual framework in which to evaluate their goals and the effectiveness of their methods. Because public agencies in the health field have been sensitive to the concerns expressed by the men quoted above, a linkage has long existed between the academic world, the health professions and the health agencies.

As the Health Department of the City of New York began, several years ago, to strengthen the research and program development arm to cope more effectively with the health problems of the city, specific mechanisms were devised to strengthen the ties with the universities and, in addition, to make use of the setting and environment of the

functioning health agency to contribute to the education of health workers.

Some of these mechanisms will be described here. They take three general forms.

1. Those which are primarily directed to the university students.
2. Those which are primarily concerned with faculty members and professional public health personnel.
3. Those which foster closer ties between university and government through mutual involvement in a common problem.

STUDENT PROGRAMS

The several student programs are conducted on the principle that for the student to have a good experience he must have a real problem to work on, preferably one growing out of the on-going activities of the health department or of one of the health institutions of the city. Also, the work must be carried out under the guidance of a preceptor who is not only professionally qualified, but also interested in the student and in the problem.

Medical Students

The program for medical students has been in existence for a number of years. Indeed, many health departments have at one time or another had such programs. However, most of these efforts have been sporadic and unorganized, particularly as a learning experience. In 1961, with the aid of a grant from the Health Research Council, the New York City Health Department's program was reorganized. A full-time physician was employed whose responsibility is to locate appropriate problems through his knowledge of activities going on in the health field in New York City, to see that the project design meets scientific standards and that a qualified preceptor maintains liaison with the medical schools so that the deans and the students are aware of the program and so that their reactions to the program can be ascertained, and to follow up "graduates" to assess the impact of the program.

During the summer, in addition to a full-time director of the program, additional assistance is provided for the students. The services of a member of the Department of Epidemiology of the Columbia School of Public Health have been available during the past several years. During this coming year, however, her services are needed by the school on another project—also related, incidentally, to city activities. A replacement is being actively sought.

The response to the program has been excellent. The number of applicants is consistently higher than the 40 available places. Indeed, more than 100 applications have been received for the summer of 1967, but since quality is better than quantity, the capacity has not been increased. Hopefully, other health agencies will pick up the program, particularly now that federal funds are available.

The geographic distribution of the medical schools in which the students are enrolled and the range of problems on which they have worked is shown in the attached listing for the 1966 program. Only one example of a problem will be given here. A 1966 medical student studied the efficiency of hospital referral from the Bedford Health Center Pediatric Clinic utilizing a recent installed computer network developed by several Brooklyn hospitals. He was able to show that more children were admitted more quickly through the use of the computer than had been the case prior to its installation. The findings have implications for the plans of the Health Services Administration relative to the use of computers in the municipal hospitals and for the planning of pediatric services. The preceptor on this project was the district health officer.

Several summer projects yielded data of value in the formulation of grant applications. Others have resulted in published papers. In fact, from 1962 through 1965, medical students in the program have been recipients of the Annual Essay Award of the New York State Academy of Preventive Medicine.

Evidence shows that medical students today may even be ahead of the faculty in their awareness of community problems. Society must find ways of encouraging this awareness. The mechanism just described is one way in which it can be done.

Undergraduate Students

The program for undergraduate students was born as a result of experience as a member of the Public Health Service Advisory Committee on Epidemiology and Biometry several years ago. As a result of the work of this committee and the Public Health Service program a student may obtain support for graduate study in biostatistics without difficulty provided he can meet the entrance requirements of the school of his choice. Nevertheless, the shortage of well-trained biostatisticians continues and the enactment of such social programs as Medicare and Medicaid, the Heart, Cancer and Stroke program and the Comprehensive Health Services Planning law underscore the talent gap.

Providing funds for graduate training of young people in these fields is not enough. Such funds will be relatively ineffective if they are not also accompanied by efforts to broaden the base from which new faces are recruited to the field of public health. In epidemiological terms, the problem is one of increasing the exposure to risk in the hope that the infection will occur without setting up an immune reaction.

With this objective in mind, the Health Department of the City of New York, in the summer of 1961, began a program for junior and senior college students. This program has never been advertised, but word has gotten around and now many more applications are received than can be handled. About 15 students are accepted each summer, from many different colleges and with a variety of majors. To date 66 students have participated in the program, of whom 12 have gone on to graduate work in biostatistics and two in a field directly related to public health.

One of the problems in bringing public health to the attention of students as an area in which to pursue a career is that student advisors are themselves unaware of the potentials of the field. The summer students themselves have gone back and educated their advisors. In addition, several advisors have visited to observe the weekly seminars.

During the first half of the summer, students present their prob-

lems at the weekly seminars. In the second half, visitors from schools of public health or other institutions, persons in charge of research programs in governmental and private agencies, and others are invited to tell the students how they got into the field, what their job satisfactions are and what the chances are for the student.

As in the medical student program, assistance is needed in the summer. For several summers, a member of the staff of the Brooklyn College Economics Department assisted with the program. This individual had had experience with medical problems at Downstate Medical School. Last summer, however, two graduates of the program were employed as assistants. Their suggestions for the program based on their own experiences with it were most helpful.

Graduate Students

An extensive medical economics program has been developed in the Office of Program Planning, Research and Evaluation, which serves as a training ground for a number of graduate students in economics. The director of this program known as the Urban Medical Economics Research Project is also Adjunct Associate Professor of Economics at Hunter College and on the staff of its Urban Research Center. Not only have a number of students done their master's theses on material provided in the program, but they have also contributed considerably to the progress of the medical economics research program.

In similar fashion, the social science research unit has taken on its share of graduate students.

These several programs combine the academic experience of the student with an exposure to the operations of government in the field of his interest. These are not casual programs; they are thoughtfully and specifically structured and carefully preceptored. Other governmental agencies, in cooperation with academic institutions, could and should make a similar contribution to the recruitment, education and training of public servants of excellence, at both the junior and senior levels, especially in the new areas of public responsibility such as health planning, urban development and housing, human resources and so forth.

INVOLVEMENT OF FACULTY MEMBERS AND PROFESSIONAL PUBLIC HEALTH PERSONNEL

The research, demonstration and evaluation activities of the health department are extensive and varied. They cover such diverse activities as the evaluation of the prenatal satellite clinic programs, the delineation of the magnitude and characteristics of the narcotic addiction problem through the development of a case register, the determination of the amount of money spent by New Yorkers for health services and the relative contribution of the federal, state and local governments to this sum, the conduct of a city-wide household survey similar to the National Health survey, and the evaluation of special classes for cerebral palsied children.

These activities are carried out with the assistance of a staff of varied talents and background including physicians, nurses, statisticians, economists, psychologists, sociologists, social workers and rehabilitation workers. Communication among the members of this diverse group is good and an atmosphere of intellectual dynamism prevails.

This kind of setting logically seemed to lend itself well to the training of personnel in health agencies or of the faculties of schools of public health and medicine in the development and conduct of research, program planning and evaluation of community health programs. Indeed, during the past several years a number of persons have spent time in the health department to obtain an understanding of the relationship of research and development activities to the ongoing services of the health department. These individuals are exposed to the various activities of the Office of Program Planning, Research and Evaluation. They sit in on regularly scheduled meetings with project directors and with the various health department staff responsible for programs. They attend staff meetings. These meetings give the trainee an insight not only into the conduct of a particular project, but also into the administration of the research program as a whole, and the relationship of research to the program planning and service activities of the department. These meetings are held not less than once a month and, in some instances, as often as every two weeks, depend-

ing upon the competence and experience of the project director and on the particular stage of development of the project. Often at these meetings persons from outside the health department with whom projects are being developed, such as heads of particular hospital services or departments of a medical school, will be present to join in the discussion. The manner in which these cooperative arrangements are worked out is also part of the experience of the trainees.

After the trainee has a thorough grasp of the total program, he is asked whether he would like to work on any of the current projects or whether he has a problem of his own he would like to undertake. The chief medical statistician from Yugoslavia, for example, worked on the design of a medical care reporting system for that country, which he has since put into effect. A Public Health Service nurse, on the other hand, chose to work with the medical economics staff to determine the total nursing resources available to the population of the Gouverneur area of the city.

The need for this type of exposure to community health research is underscored by the current discussion concerning the problem of finding more effective ways of translating research findings into action programs for the benefit of the people and by the related concern with performance budgeting and program evaluation. An application has been made to the Public Health Service for funds to bring into the program persons such as the following: 1. individuals who have or will have responsibility for the development of a program area such as maternal and child health or chronic disease in an official or voluntary health agency. Such individuals would be more or less at the decision-making levels of the agency; 2. faculty members of schools of public health or of departments of preventive medicine or other university departments with an interest in health matters. Few of the faculty or graduates of such institutions have had any extended experience in official health agencies. The faculty responsible for training health workers must be more systematically brought together with the personnel of health departments so that each may benefit from the other and recruitment to the field as a whole be enhanced;

3. Public Health Service staff who are being groomed for positions of responsibility and for whom exposure to the problems of an agency directly responsible for the delivery of service to the people would be valuable; 4. individuals in health work in foreign countries. Many visitors from this group have expressed a wish to be able to observe and participate in the program at greater length than one or two days. Indeed, if they can spend several months they can more easily be fit into the normal pattern of activities.

MUTUAL INVOLVEMENT IN A COMMON PROBLEM

The activities just described are specifically oriented to training as such. They maintain and foster the dialogue between university and government through the trainees, be they undergraduate, graduate or faculty. Another way in which this dialogue may be continued is through direct involvement of the protagonists in some activity of mutual interest. The household survey previously mentioned affords an example of this approach.

For a number of specific reasons the health department began a city-wide survey of a representative sample of households in 1964. These may be summarized by paraphrasing the old saw about controlling the purse strings. In public health it is almost a truism that he who has the facts on the population, although he may not control the purse strings, is certainly in a position to suggest how the money should be spent. The value of the household survey is attested to almost daily by one or another call for the data provided by the survey.

When the survey was initiated it was carried out entirely as a health department project. It was discovered very soon, however, that the administrative machinery of the New York City government was too rigid to operate this type of activity easily. So a contract was signed with the City University of New York to help carry on the survey.

The approach to the university was dictated by immediate needs, but a mechanism was created which has very great potential.

As a first step, a policy committee was formed consisting of the

chairman of the Department of Sociology at City College, the chairman of Statistics and Head of the Computation Center at the Baruch School, the Director of the Hunter College of Social Work, a member of the Sociology Department of Brooklyn College, the then Counsel to the Mayor and present Chairman of the City Planning Commission, the Professor of Administrative Medicine at the Columbia School of Public Health, and two members of the health department staff in addition to the author—the Director of the Urban Medical Economics Project and the Director of the Office of Health Intelligence.

The composition of the policy committee has been detailed because it illustrates how a specific activity such as the household survey may act as a cohesive force to channel the creative power of different disciplines in the community interest. Among the subjects to be considered by the policy committee are such things as the content of future surveys and whether they should be city-wide or neighborhood centered, whether to do one survey or a series of related surveys, how best to make the data available to potential users both in the university and in government, and so on. Clearly the survey can, in addition to providing data, serve as a basis for research, for training, and as a catalyst to awaken faculty and students' interest in the problems of government.

SUMMARY

Specific mechanisms have been described by which the New York City Health Services have sought to mobilize the total resources of government and university to contribute to the education and supply of health workers. But the problem is certainly not confined to the health field. It is the general problem of how to improve the quality of urban life. The character of local competence and the vigor of localities in getting on with the task will depend upon their ability to draw on local reservoirs of talent to design, initiate and provide continuous management for the programs that are inaugurated. Specifically, the ability of localities to recruit and to hold qualified, competent public servants is of enor-

mous importance in this new era of city life improvement. This is not a task for either the government or the universities alone. It is a responsibility of both. If New York discharges it, then the city will be “a place in which the intellect may safely range and speculate, sure to find its equal in some antagonist activity, and its judge in the tribunal of truth.”⁵

REFERENCES

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³ Kirk, Grayson W., A Sanctuary of Concern: The University in Contemporary Society, Columbia University Forum, Summer, 1965.

⁴ Perkins, James A., THE UNIVERSITY IN TRANSITION, Princeton, New Jersey, Princeton University Press, 1966.

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APPENDIX

NEW YORK CITY DEPARTMENT OF HEALTH, HEALTH RESEARCH TRAINING PROGRAM

Statistical Student Projects—1966

<i>Name</i>	<i>School</i>	<i>Last Year Completed</i>	<i>Major</i>	<i>Project</i>	<i>Preceptor and Location</i>
W. A.	Columbia	Junior	Mathematics	A critical analysis of the mathematical theory of metabolism of a two-component system will be performed with regard to two major articles in the literature.	Bernard Carol Flower & Fifth Avenue Hospital Computer Center
G. MacC.	Cornell	Senior	Mathematical Statistics	A critical analysis of material on tonometer as a means of detection of glaucoma. Evaluation will be performed with regard to mathematical, physical and statistical criteria. An attempt will be made to obtain an optimal design for a tonometer.	Bernard Carol Flower & Fifth Avenue Hospital Computer Center
L. C.	Oberlin	Sophomore	Biology	Demographic characteristics of solvent abusers (glue sniffers) reported to various agencies in New York City will be investigated. A follow up will be instituted, primarily to study the correlates of incidence of narcotics addiction among solvent abusers.	F. Kavalier Bureau of Addictive Diseases
M. J. C.	St. Joseph's	Senior	Mathematics	Analysis of the Premature Transport Service will be performed. The effectiveness of the service will be measured with respect to such variables as race, birth weight, etc., based upon data from 1963 and 1964.	Mrs. Frieda Nelson Bureau of Records and Statistics
B. F.	Vassar	Sophomore	Psychology	What are the characteristics of a group of Transit Authority employees who missed being interviewed during the Prevalence Survey? How does this group compare with the men who were included in the Prevalence Survey?	Mrs. Ellen Jones Medical & Health Research Association

F. G.	Wellesley	Junior	Biological Sciences	What is the relationship between the absenteeism history of men in the follow-up study population of Transit Authority employees and their specific spiogram test measurement?	Mrs. Ellen Jones Medical & Health Research Association
J. K.	City College of New York	Junior	Mathematics	Is the water-sampling procedure used to measure pollution in New York City's harbor and beach areas adequate? What is the influence of rainfall, tides and other factors on degree of pollution as measured by estimated coliform count?	Mrs. Florence Treibis Bureau of Records and Statistics
J. K.	Mount Holyoke	Junior	Sociology	A "stop-smoking" clinic with many new ideas has been administered to people in the city. This project will try to evaluate the clinic's results and establish a plan for future clinics of a similar nature.	D. Fredrickson Bureau of Addictive Diseases
R. M.	Cornell	Junior	Mathematics	1. The prevalence of specific and non-specific T.B. reactions to two different antigens will be measured in a population of middle-income high-school girls and compared with the same results for low-income boys. 2. Characteristics of unlocatable people in the Selective Service records will be compared with characteristics of those successfully located to find if the missing data are biasing the results.	M. Svigir Bureau of Records and Statistics
J. O'R.	St. Francis	Graduate	Economics	Analysis of the service and cost statistics of four child health stations located in the Gouverneur Medical Service Area will be performed. The feasibility of patient data retrieval will also be examined to find the most pragmatic approach.	Mrs. Doris Ullman School Records Study
W. T.	Brooklyn	Senior	Economics	This project will analyze the Dental Program carried out by the Department of Health in dental clinics located in four elementary schools in the Gouverneur Medical Service Area. Also, unmet dental expenses of low income children in this area will be estimated.	E. Snyder Mrs. E. Bigus Economic Studies Gouverneur Area

APPENDIX (CONTINUED)

<i>Name</i>	<i>School</i>	<i>Last Year Completed</i>	<i>Major</i>	<i>Project</i>	<i>Preceptor and Location</i>
L. W.	Skidmore	Junior	Psychology	An attempt will be made to evaluate family planning clinics. Of interest will be estimating the number and characteristics of those participating as well as the characteristics of those who drop out. A standardized system for reporting information will be developed and implemented.	J. Speidel Maternal & Infant Care
S. Z.	Queens	Junior	Psychology	School Health Records will be sampled to find the efficiency of statistical estimates. If these estimates are reasonably efficient, a system for sampling these records could be established to replace the present census and save much time and money.	J. Kirshenbaum Bureau of Records and Statistics
P. H.	North Carolina	Graduate	Biostatistics	A general analysis of, and assistance with, the organization and preparation of the statistical tabulations and charts derived from the data obtained by the survey.	Mrs. Anne Cugliani Office of Population Health Survey
S. R.	North Carolina	Graduate	Biostatistics	What is the best way to deal with non-response within clusters? Random assignment and other methods will be examined. Also, can a generalized method be established for computing a single variance for several rates?	Irving Sivin Office of Population Health Survey
A. Z.	St. Joseph's	Senior	Biology	Age-standardized rates will be computed for several diseases for the newly organized poverty areas. Comparisons and analysis will then help describe the health status of these areas.	Mrs. F. Nelson Bureau of Records and Statistics