

MEMORANDUM TO MEMBERS OF THE MEDICAL FACULTY

Somewhat by chance, a few days ago, I came upon the written statement of a senior member of this Faculty to the effect that the research work of The Kettering Laboratory is of negligible significance, and that the Laboratory makes no contribution to the function and prestige of the University and Medical College except through its activities in graduate education. Some doubt emerged, from the consideration of the views of other members of the Faculty, as to the appropriateness of the existence of the Laboratory within the University. The author of the statement referred to above was not, in my opinion, malicious in any sense, nor did he believe that he was expressing an opinion that was not shared by others in the Medical Faculty. Apparently he did not even consider that this statement was, of necessity, a reflection upon the professional integrity and the academic ideals of those responsible for the work and policies of the Laboratory, including myself. Such an attitude of mind is, perhaps, somewhat unexplainable, but this it seems to have been.

Accordingly, it appears that the purposes, functions and performance of The Kettering Laboratory are not known or understood within the Faculty, and, without reckoning with the reasons for this misunderstanding, the desirability of correcting it is apparent. So vital is this, in principle, to this University, as well as to my personal ease of mind, that I have gone to the somewhat unusual length of preparing this memorandum on the subject. This is in no sense a defensive statement. On the contrary, the contents of this memorandum have had to be revised more than once in

order to eliminate the flavor of indignation which pervaded their initial expression. This arose, no doubt, from my general belief that my attitudes toward medical research and education should be fairly well known in this institution, and from my strong personal feeling that the character and the intellectual perspicacity of individuals, in a very strict sense, are inseparable from their acts, unless they are the victims of mental aberration or deterioration.

The Objectives of The Kettering Laboratory

From the very first, but with increasing clarity of policy and performance, as experience was gained, it has been the persistent purpose of this Laboratory to develop means by which industrial technology with its threats to human life and health, could be understood in physiological and medical terms and surrounded by suitable measures of control. A similar attitude has developed in industry, as the result of certain hard lessons in adversity, and in response to changes in the social and economic climate of America as represented in legislation (workmen's compensation, liability, etc.), in collective bargaining, and in the growth of social sensitivity within industrial management. Our first experience in this field involved the opportunity to investigate fully a new and serious occupational hazard, which also extended into the field of public health. The work could have been done privately, but it seemed to me that there was both justification and necessity to bring it within the public purview, by locating the work within the University. Appropriate safeguards for the good name of the University were established, and the work was undertaken in full recognition of the responsibilities of the Laboratory in both academic and professional

fields.

The Laboratory began its work at a time when the need for such work was clearly evident, but only the most meager facilities were available for it in the United States. Consequently, a modest degree of success in dealing with the initial problem brought other similarly troubled industrial organizations and their problems to our door. The opportunity was presented, therefore, to expand our facilities gradually, according to the scope of the problems which we accepted for study, and to choose, to some extent, those problems and those relationships with industry which seemed in advance to be appropriate to the interests and purposes of a university group of investigators.

In due time, the demands of the situation in industry, with respect to the obvious dearth of competent practitioners of the medical techniques and arts of industrial hygiene, led us, in all good conscience, to include graduate professional training in the activities of the Laboratory. As does any other regimen of training for specialized medical practice, this calls for some broadening and deepening of the knowledge and skill of the physician, along with a degree of narrowing and intensification of his efforts. The basic ingredients, however, consist in opportunities for technical and sociological learning and for the application of such learning in the development of skill, under the supervision of competent preceptors. The latter calls for medical practice and tutelage in industry, since occupational medicine cannot be practiced or taught in a hospital, except in a very restricted manner. Thus the focal point of training in occupational medicine, in the practical sense, has been moved into a new relationship which has had to be initiated and cultivated so as to fulfill functions that relate

to industry and to the University in a manner appropriate to both. These relationships, which are not likely to be fully understood, are responsible for some of the misinterpretations of the substance and purposes of our work.

Professional and Academic Relationships of Staff

It has been believed that the relationships of members of the staff of the Laboratory to industry are ill-defined, incompatible with the traditional motivation of university people, and complicated by financial irregularities. The facts in these matters are fully known to our academic and administrative superiors in the University, and they are in full accord with the policies of the University and the ethical principles which apply to physicians. The members of the staff of the Laboratory bear the same relationship to it and to the University that are borne by the members of other Departments in the Medical College. Their compensation for their services to the University is dealt with as is that of others in the Medical College, and their obligation to the University, with respect to the extent and duration of their services, is in no wise different. The professional work, in consultation or otherwise, performed by them, outside of their duties in the University, is subject to the same considerations of good faith in the performance of their duties in the University as is that of any other member of the Faculty. This situation, admittedly, is not wholly satisfactory, and has been under examination in various medical schools for years, as well as in other colleges of this and other universities. The objections to it, however, are of practical rather than of ethical significance, and their worst effect is that exerted upon the financial policies of the University in the matter

of salaries for full-time academic and professional personnel.

Financial Policies and Practices

The physical facilities of The Kettering Laboratory (building and equipment) have been provided from funds contributed to the University, in an unconditional manner, by industrial organizations. Some of the equipment has been provided in connection with specific items of experimental work which called for the use of such equipment. (Some items have been procured under the terms of governmental grants, but these in the aggregate represent a very small proportion of the entire armanentarium.) It is anticipated that an additional wing, the construction of which is to begin shortly, will be financed similarly. This is feasible only because industrial organizations that have sponsored the experimental work of the Laboratory in various fields, and at various times, believe in the desirability of helping to create and to maintain facilities for the investigation of hygienic problems in a publicly and professionally responsible institution. Many of these problems impinge upon the public interest, and most of them present aspects that require freedom from bias in their investigation.

The daily work of the Laboratory is financed almost wholly by industry through a procedure which allocates to each project its share of the cost of the entire experimental program. (A few projects are financed by governmental grants or agreements . These, for the most part, are extensions and supplements to funds provided by industry, thereby promoting the enlargement of certain experimental programs.) In general, the procedure is that of conferring with industrial representatives

concerning an occupational or public threat (air, water or food contamination), devising a program of investigation, estimating its cost, and then entering into an agreement whereby the eventual cost, as determined by standard methods of accounting, is underwritten by the sponsor.

The composite of all such projects, whether of short or long duration (some have been carried on systematically for many years), or of large or small scope, make up the work of the Laboratory. The funds so provided make up its financial resources, out of which all of the costs of the experimental work, professional services (including those contributed to this medical center, and to indigent persons), and educational activities, are defrayed. The Institute of Industrial Health, the representative of the teaching activity in the Graduate School, is financed almost entirely in this manner, this being an overhead charge on the experimental program. Since the product of this professional training is greatly needed in industry, this too is regarded by the industrial sponsors as a reasonable part of the cost of the experimental work. Incidentally there are no endowment funds, and there have been no large gifts, aside from those concerned with the provision of physical facilities although a few organizations have made small contributions to the "good of the cause" out of recognition of specific or general contributions of the Laboratory to problems of industrial hygiene.

It is of some importance to recognize that no funds of the University of Cincinnati have ever gone into this enterprise either as investments in facilities or in operating costs, the initial policy having persisted through the years that the entire activity should be financed by industry as the primary beneficiary of the effort. The experimental work

on the potential hazards of industrial materials has been accepted by industry as being in the same category of necessary research as their own technological investigations, except that such work can be done better and more responsibly, and hence in a more trustworthy manner, in a public institution than on their own premises. Incidentally, it can be done, at present at least, at lower cost in a university center.

The relationship between an industrial organization and the University, in the prosecution of the research, is defined in a formal agreement in which the rights and the public posture of the University are fully protected. All such agreements are executed for the University by its Board of Directors. Under these terms, patent problems are avoided, and "the dissemination of information for the public good", is assured, which is to say that there is no compromise of the rights of publication.

The Type, Scope and Quality of Research

The researches of the Laboratory are in the realm of applied science, as is almost all medical research. That is, they seek the solution of specific problems of health and disease, in an effort to understand and define industrial hazards and stresses, and to find means for their control by medical and technical means.

The experimental program, in common with the character of organized research, generally, is determined by the needs of the time, in terms of current hygienic problems, by the interests and abilities of the staff, by the adequacy of the facilities, and by the adequacy of funds made available. Within these limitations, the "climate" of the

Laboratory is not unduly restrictive of the efforts of the senior members of the staff, within the scope of the experimental program, and opportunity is afforded for ingenuity and creative talent, since many of the problems are of such a sort as to challenge the capabilities of the investigator. Immediate answers to certain practical problems are often called for, but the impulse to find an ultimate answer is cultivated. On this account - that is on account of the investigative climate - some valuable contributions to physiology, biochemistry, pathology and clinical medicine have been made. An examination of some 300 publications (mostly articles in scientific and professional journals, some formal reports, some books, and some chapters in standard works) will serve to put these in proper perspective, and to negate the view that no significant contribution to the field or to this medical center has been made. It may be noted that some of the contributions have been of modest proportions. This is in keeping with the policy of the Laboratory, that no problem involving the health and safety of industrial workmen is beneath notice, while no such problem is too great to be attacked. The one qualification to the latter statement is that if there is known to be a group better equipped in a specific direction than ourselves, we either attempt to rectify our position, or suggest the advisability of consulting the more expert group.

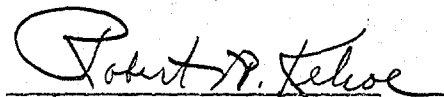
On the whole, however, no special pleading is pertinent in the consideration of the quality of the researches. They must not be considered, however, on the basis of whether they are "fundamental" or applied, or in the despised area of "contract research". These differentiations are irrelevant. Good research is soundly conceived, critically conducted, productive of pertinent information, whether useful now or later, and

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intellectually satisfying. Poor research is lacking in one or more of these qualities. I am prepared to let the product of our work speak for itself. On the other hand, I must raise the question of the primary goal of medical research, generally. If this is not such as to stamp most of such research as "applied" in character, regardless of its contributions to pure science, then our purposes and aspirations as medical investigators should be reexamined.

Finally, it is recognized that this memorandum is couched, for the most part, in general terms, and that generalizations may not answer valid questions concerning the details of day-to-day working policies and attitudes, as well as the acts of individuals. An invitation is here extended to those who may have reservations of judgment concerning such details, to make further inquiry. I shall welcome such inquiries.

Signed:


Robert A. Kehoe, M.D.
Director

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