

INTERVIEW WITH DR. SANFORD M. ROSENTHAL

This interview was conducted at the National Institutes of Health April 13, 1981 by Victoria A. Harden

ROSENTHAL: Do you have the Kramer study on N.I.H.?

HARDEN: Yes, I have it, but I would like to know who Dr. Kramer was and what his association with the Institute was.

ROSENTHAL: He was an M.D. who was well enough off to stop practice and come as a volunteer research worker. I think he was from New York. He came down and did volunteer research work for a year or more during the thirties. He was an interesting old man, because he was doing chromatography of viruses way back there in the twenties. I didn't know anything about them then. It was very forward research, I would say now. I don't know that he accomplished anything but at least he had an idea. He was applying newly acquired chromatography to the viruses. I don't know that he ever published anything.

HARDEN: I see in American Men of Science that you were born in Albany, Georgia. That is interesting to me because I am from Georgia, also.

ROSENTHAL: Is that so? Well, then, maybe I should tell you something about going to Vanderbilt from 1914 to 1920. It was a real Southern country medical school then. The tuition fee was \$125 a year, and I remember some of the farmers' sons coming up with cigar boxes with their year's tuition in them. The whole picture of medicine in a place like that was completely different

from what it is now. First, the school could run, as far as I know, without any big endowments, mostly on the tuition. The doctors -- they had four full time men in the basic fields, anatomy, physiology, pharmacology, and bacteriology. The man in bacteriology had a commercial laboratory at the same time. The other clinicians gave their time free -- teaching was a part of their duty. Research wasn't carried on to any extent then. I know because I took a year off as a student instructor -- a half year for two years. The whole picture of diseases was completely different. Common diseases in Nashville then, in the poor clinics and poor neighborhoods, were tuberculosis, pellagra, some malaria. Typhoid fever was prevalent, and pellagra was very common. I can remember seeing a half dozen cases in one morning at clinic. The cause and treatment of syphilis hadn't really been established. Hideyo Noguchi at the Rockefeller thought he had the cause, but he was wrong, so they really didn't know the cause. The treatment, of course, was salvarsan, which is very laborious. A lot of the clinical effects of syphilis, like (tobes) _____, locomotia ataxia, and general paresis -- which is a mental deterioration -- took many years to develop. Since salvarsan hadn't been in use for many years, there were a lot of cases of those around. Clinics were run by volunteer doctors and medical students. Very often the doctors didn't show up so the medical students had to run the clinics.

HARDEN: With reference to treatment for these diseases, I heard a lecturer say recently that there were no pharmaceutical firms of any importance in the twenties. Where did you get the drugs you used?

ROSENTHAL: There were pharmaceutical firms for things like salvarsan. We were taught to write out prescriptions and the pharmacists had all the ingredients to make the prescriptions. The pharmaceutical firms were not very important at that time. I know that Merck was in existence and made salvarsan. I'm sure the pharmacists had a lot of things from drug firms. Most of the ingredients for their prescriptions had to come from somewhere, and I'm sure they came from drug firms. All that was changed a couple of years after I graduated by Simon Flexner, and the Rockefeller Institute appointed (Andy Robinson)_____ to try to change around the medical schools and put in full time people in the basic sciences and clinics. They gave Vanderbilt a good deal of money -- this was after I left. One example of the state of medicine at that time: I went from Vanderbilt to Boston to intern. Henry Cabot, one of the great internists of the epoch, said that he could only remember preventing the death of one person in all of his practice. I forget what it was, but it shows that without antibiotics and other current drugs, internists could do practically nothing. Digitalis and opium were the great mainstays of internists in those days. But surgery was something different. As I remember the surgical practice during my student years, there were large numbers of operations on fallen kidneys and fallen uteri. They did many, many operations because they thought that some of the symptoms were due to prolapse of one of the organs. They made many other mistakes. I remember one of the professors of surgery saying that iodine was one of the worse things you could use in the treatment of goiter. Well, they were good doctors, though, because they had a sense of doing their duty and sacrificed a good deal of their time in their efforts to treat people -- which

is something that few doctors do now -- and they didn't get too much money for it.

HARDEN: Why did you decide to specialize in pharmacology?

ROSENTHAL: After I spent two or three years in residency and internship, I loved it in the hospital, but I decided I didn't really feel comfortable in private practice, so I stopped in the middle and went to John J. Abel, who was professor of pharmacology at Hopkins and one of the fathers of modern pharmacology in this country, and asked him if I could work there. He didn't have any money for me at the time, but I started in, and after six months he did get me a Rockefeller grant. I stayed there three years and worked with him.

Looking at some of your other questions -- Reid Hunt was already dead when I arrived on the scene, but I remember some people who knew him saying that he was the laziest man around. Most of your other questions tied in with Dr. McCoy, the Commissioned Corps, and the civil servants that worked in the Hygienic Laboratory. The Commissioned Corps was the important part of the work, but Dr. McCoy wanted some basic research going at the same time. I think he tolerated it for the reputation of the Hygienic Laboratory, and he always appointed a few people from the universities to come in and head one or two departments. One was pharmacology and one was chemistry at that time. Reid Hunt was brought down as head of pharmacology. He had done some interesting work in pharmacology, (acetacoline)_____ I think it was. He had showed that it had a profound effect on the parasympathetic system.

HARDEN: Would you comment on the philosophical shift that occurred with the advent of the Roosevelt administration? Dr. Thompson replaced Dr. McCoy, and from what I understand, there was tension between them.

ROSENTHAL: Well, they wanted to expand. Parran had a vision of a large institution, and McCoy didn't feel that way.

HARDEN: Why did McCoy not want to expand?

ROSENTHAL: He knew everybody personally; he watched what they were doing. He didn't want it to get out of hand. He was very parsimonious. He didn't want to spend a lot of money -- he thought it was a waste of money. He was a real Scotsman. He kept an eagle eye on everyone around the Institute. In the Commissioned Corps, when a new person was assigned to the place, the director, Dr. McCoy and Dr. Thompson after him, had the new person over for dinner. They got some idea about the man personally from this informal interview. The personnel officer at the Hygienic Laboratory -- I think his name was Feltz -- when you came in he saw to it that you found a place to live and helped you find a place to live if you didn't have one, and did all kinds of personal services for each individual that came to the place. He was a very nice person who took your problems and tried to help you with them. They had only one personnel officer at the time. He didn't have too much to do because we didn't have much change in personnel. I knew Dr. Thompson, of course. He was head of the Hygienic Laboratory and later head of N.I.H., but I was on the civil service side at that time. The commissioned Corps had their little social cliques and stuck together

pretty tightly. I was on the outside of that so that I didn't get to know Dr. McCoy or Dr. Thompson personally very well.

HARDEN: Why was the Commissioned Corps so opposed to extending commissions to Ph.D. scientists or other civil servants?

ROSENTHAL: For one thing, most of the commissioned officers at the Hygienic Laboratory came up the hard way without going through any special research training, and they probably had a certain feeling of inferiority towards anyone who was a Ph.D., who didn't have to work out his own methods and who came with more advanced information than they might have. It is hard for me to say for sure because I wasn't on the inside of the Commissioned Corps.

HARDEN: Do you remember any international exchanges?

ROSENTHAL: No, there weren't any foreign fellows at all in the Hygienic Laboratory. The first one I remember was Dr. St. Georgi at N.I.H. who came here in the forties, I guess. I don't remember any other foreign fellows or appointees.

HARDEN: What about people from here travelling abroad?

ROSENTHAL: I don't remember any at the Hygienic Laboratory. Of course, after N.I.H. was established they had a much more generous travel fund. There was a good deal more travelling around under Dr. Thompson.

HARDEN: Would you comment on what lines of research were most

promising in the 1920s and 1930s?

ROSENTHAL: I think tissue culture was started in the twenties. It was a very important contribution. Alexis Carrel at the Rockefeller Institute started it. It led to cultivation of viruses and cultivation of mammalian tissues, too. Demonstration of the viruses was also a very important thing -- most of that also started at Rockefeller Institute. The French had first shown that you could get the virus filtrate through a membrane that screened out all the bacteria and show that it was infectious. While these things didn't require a great deal of technical instrumentation, they were very important discoveries. They laid the foundation for virology and vaccination against the viruses.

HARDEN: Do any particular instruments spring to your mind as being crucial in research?

ROSENTHAL: No, I think most of the instrumentation was borrowed from the other sciences. The physicists had developed the spectrometers. The microscope, of course, was important.

HARDEN: How did the public view medical research and the expenditures of tax dollars on it?

ROSENTHAL: I think that Parran laid the way for bringing the public around to the importance of research by the government. He addressed the public over the radio on venereal disease. He made gonorrhoea and syphilis words that you could say in public. I think that was the first time the Public Health Service had

attempted to do a public program.

HARDEN: Did a fear of "socialized medicine" harm the chances to get money for research at an earlier period?

ROSENTHAL: When I came to the Hygienic Laboratory -- it was 1928 -- I had been at McGill University for three years, so I didn't know too much about the state of the public during the late twenties.

HARDEN: Universities didn't even consider asking for government grants?

ROSENTHAL: No, I don't think there were any in the twenties.

HARDEN: Nor did anybody think there ought to be?

ROSENTHAL: No, I'm sure that's true. I don't think there was any feeling about the government in health at that time. The Hygienic Laboratory and its activities were not well known among people in general, although Dr. McCoy was always anxious to publicize any discoveries that came out of it. He did his best as a publicity agent himself, and I think he managed to do most of that on his own.

HARDEN: I came across a letter from Paul de Kruif to Dr. Kramer at the Hygienic Laboratory in which he said that while Americans may not have known about the Hygienic Laboratory, European scientists certainly did. Do you think he was correct?

ROSENTHAL: I went to Europe before I went to the Hygienic Laboratory, so I didn't have any reason to think about it at that time. I think it had a good reputation both here and abroad. They did some wonderful things.

HARDEN: In Europe, the Pasteur Institute sold pharmaceuticals to support itself. Why did the Rockefeller Institute or even the Hygienic Laboratory not manufacture and sell pharmaceuticals?

ROSENTHAL: The drug firms were not too highly thought of by the scientific research community. When I was working at Hopkins under Professor Abel, he was editor of the Journal of Pharmacology. He fought against allowing any member of a drug firm to become a member of the Society of Pharmacology, and there were none. No research workers of the drug firms were allowed to join the pharmaceutical society until after Abel's death.

HARDEN: Why were they not highly thought of?

ROSENTHAL: I think it was just a matter of Abel's idea that they were commercially oriented. They worked to try to make money for their firms, and he was suspicious. He didn't allow them to join the society, but I think he did allow certain publications in the Journal from the drug firms. So the drug firms didn't really develop their status until the late thirties, I would say, when they became an important part of research.

HARDEN: What do you think is going to happen to N.I.H. in the future?

ROSENTHAL: What is going to happen to the world? I don't know; I'm sure there is a lot of money wasted with the enormous staff they have here. But it's an investment that you get a certain percentage out of. You have to invest a lot to be able to find the ones who have the spark and the genius to make important discoveries, and you can't pick them out in advance. You have to employ a lot of people and hope that in that net you will get a fair percentage of outstanding people. I think N.I.H.'s roots are so deep now that it will be spared too much restriction. Every day in the newspapers you will find some articles on health and articles on research and promising things, even though they often don't turn out to be anything. But it's made the public aware of the importance of research, and for that reason -- and also for the reason that over eighty per cent of the research in this country is financed by N.I.H. research grants -- it would be very difficult for the government to cut off those funds.

HARDEN: Thank you, Dr. Rosenthal.

SANFORD M. ROSENTHAL

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MD--Vanderbilt, 1920

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Research interests:

Sulfonamide drugs

Pharmacology of arsenicals

Liver function tests

Therapy of shock

Colloidal test upon spinal fluid

Antidote of mercury poisoning

Hemaglobin and bile salt metabolism

Physiology of amines

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