

THE EARLY DAYS

The following essay was written by Walter Lauer eight months or so before his death. The essay is a remembrance of his early years at Minnesota. Many of you who remember those early days may recall some of the incidents Professor Lauer recounts in his essay.

SOME EARLY HISTORY OF THE DEPARTMENT OF CHEMISTRY

by Walter M. Lauer

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Dean George Bell Frankforter came to Minnesota from Nebraska in 1894 as head of perhaps the earliest independent school of chemistry in the United States. He was born in Ohio in 1859 and received his B.A. and M.S. from the University of Nebraska in 1886 and 1888 respectively. His study at the University of Berlin with Professor A. W. von Hoffman led to the Ph.D. degree in 1893. He returned to Nebraska for a year before coming to the University of Minnesota.

During his tenure, graduate work in chemistry was initiated, and one of the first university buildings (Smith Hall) in the United States devoted exclusively to chemistry was built and a faculty including MacDougall, Hunter, Frary, Harding, Temple, Sidener, Nicholson, Cohen, Baker, Kritchevsky, Sternberg and others, was recruited. The first Ph.D. in chemistry, granted by the University of Minnesota, was awarded to Paul Glasoe in 1902. Dr. Glasoe served with distinction as professor of Chemistry at St. Olaf College for many years. The second Ph.D. was awarded to Francis Frary in 1912. He remained at the University of Minnesota to establish what ultimately became the Department of Chemical Engineering. During World War I he was a major in the Chemical Warfare Service and in 1919 became the Director of research in the Director of Research for the Aluminum Company of America. Miss Lillian Cohen received her Ph.D. degree in 1913 and after some time spent with Professor Treadwell in Zurich returned to the University of Minnesota. As a teacher in General Chemistry she was held in high regard by generations of students. Former students upon returning to the campus, would invariably seek out Miss Cohen for a visit. Harold Brown, who served in the U.S. Bureau of Chemistry, received his degree in 1914 and Sterling Temple, later to become Director of the R. & H. Chemical Division of the duPont Company was awarded the Ph.D. degree in 1915. Paul H. M-P Brinton, Head of the Division of Analytical Chemistry (1921-26) at Minnesota was the sixth recipient of the Ph.D. degree in 1916.

Dean Frankforter was given a leave of absence upon the entrance of the United States into World War I. He served as a Major in the Ordnance Department of the Army and at the close of the war was a visiting Professor of Chemistry at Stanford University for one year. His return to Minnesota as Professor of Organic Chemistry was clouded

by an unfortunate situation prior to his entrance into the military service. Dean Frankforter decided not to renew the appointment of one of the junior members of his staff. In the opinion of many of the faculty members, this action was justifiable. However, others, finding gullibility on the part of the junior faculty member and prodded by long standing antagonisms which were apparently developed during the earlier days at Nebraska; succeeded in bringing charges against Dean Frankforter. They charged that the dismissal was arbitrary and without reason, that Dr. Frankforter's administration of the School of Chemistry was inefficient, that the work done in classrooms and laboratories was unsatisfactory to student and instructors and that reliance could not be placed on the word of Dean Frankforter. Testimony dealing with these allegations was heard and included in several voluminous documents. The net result of the entire unfortunate affair was 1) that the dismissal stood and 2) that in view of the turmoil it was to the best interests of the School of Chemistry that Dean Frankforter be granted leave to serve in the Graduate Department and that he relinquish his administrative duties but that he continue to serve as a faculty member until his retirement.

The charges were not proved; indeed letters from Presidents Vincent and Burton were indicative of support for Dean Frankforter. This lack of support for the dismissed faculty member led to a scathing letter by the junior staff member to President Burton (who had resigned and was then President of the University of Michigan) and to the Governor of the State of Minnesota appealing for castigation of the Board of Regents.

With the passage of time, the disappearance of some of the principals, the end of the war, and the appointment of Lauder W. Jones as the Dean of the School of Chemistry, the atmosphere cleared and graduate work expanded. Dean Jones was one of Nef's students at Chicago. During the war Dean Jones was in the military service and on leave from the University of Cincinnati.

Dr. M. C. Sneed, H.H. Barber, and J. C. Maynard, from Cincinnati joined the faculty and G. B. Heisig, C. D. Hurd, A. S. Scott enrolled as graduate students at the end of the war. Dr. Frank Whitmore spent a year here at Minnesota before going to Northwestern to head the Department of Chemistry. There was a lot of excitement and enthusiasm in the Department during this time.

Some of Dr. Frankforter's decisions were perhaps misunderstood. In the European universities, the Professor Ordinarius gave the lectures in the courses with high enrollment, since his income was augmented according to the number of students enrolled. While this was not true at Minnesota, Dr. Frankforter lectured to the beginning students in General Chemistry and in Organic Chemistry. He was an excellent lecturer and as was the custom in European universities, he always had a display of apparatus and chemicals on the lecture table for each lecture. Of course, when the bell rang at the end of each lecture, most of the students were on their way to the next class without the slightest attention being given to the display. This system, as you

can well imagine, irritated the junior staff members who were relegated to the quiz sections and laboratory without gaining the experience of lecturing to a large group of students, and without making much of a contribution to the content of the course. This was a mistake on Dr. Frankforter's part, but understandable.

Another decision which may have been the source of criticism but in my opinion added to the strength of the Chemistry Department was the appointment of Dr. Kritschewsky. Dr. W. Kritchevsky, a young Russian who received his Ph.D. in Germany with Professor Ullmann and according to the story current during my early days at Minnesota, was in some sort of political difficulty in Russia so that he consequently decided to leave his native country. He landed in New Orleans and since he was fluent in several languages, he acted as an interpreter. He finally landed on a ship that sailed up the Mississippi River to St. Paul. When he arrived in St. Paul he learned that there was a university in Minneapolis and he decided to explore the possibility of employment. He met with Dean Frankforter who was impressed. Dr. Frankforter supplied him with some of the necessities of life and put him to work on a research problem. His English was not without accent to put it mildly, and he did not appear as a lecturer for some time except upon one occasion when Dr. Hunter asked him to give a lecture in organic chemistry in German to his pre-medical students. Medical students in that day were required to study German. There was little money available then for research purposes and perhaps some faculty members resented the fact that Dr. Kritchevsky was kept on the staff, solely as a researcher.

Nonetheless, Dr. Frankforter and Dr. Kritschewsky studied the condensation of chloral and bromal with various aromatic compounds and it is very likely that they accomplished the synthesis of DDT twenty years before it was discovered in Switzerland. Dr. Kritchevsky continued on at the University until World War I when he went to Sherwin-Williams in Chicago to head a group interested in dyes. Later he developed the product with the trade name RIT. He brought his family and some relatives to this country and the faculty name of Kritchevsky has become familiar to biochemists. It is interesting to note that Dr. W. Kritschewsky never lost his belief in the virtues of "Naturkupper C", a discovery of his advisor Professor Ullmann.

It may be of some interest to document the salary scale in effect during Dr. Frankforter's time. For example, Dr. W. H. Hunter, with a Ph.D. degree just received from Harvard was appointed as an Instructor in Organic Chemistry for the year 1909 at a salary of \$1,000. However, he more than doubled his salary to \$2,500 by 1916.

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