

Hi Friends, Former Students, Canoeists, and Departmental Alumni,

Because the CBE Department went all-out in “advertising” my 90th birthday, I have been deluged with letters, cards, and e-mails. I have really appreciated all this attention and would have liked to reply to each of you individually. This being impossible, I’ll send out a general response, with a few personal greetings at the end.

For those of you who were not able to attend the banquet, it was overwhelming. About 180 people were there, with all sorts of postprandial speeches and presentations. Harmon Ray showed photos of me as a young kid, in my WWII uniform, as a youngish teacher – and even a picture of my birth certificate, just to prove that I was born in the great state of Texas! Dave Griffith then followed up by presenting me with a large framed letter from Governor Rick Perry of the Lone Star State.

After a number of people made exaggerated claims about my linguistic capabilities, Bob Armstrong presented a counterexample. He recounted the tale about a horrible mistake I made when I was a beginner in learning Dutch, much to the amusement of the audience. So when it finally came time for me to make a few concluding comments at the end of the evening (well past my bedtime), I had the chance to reinforce Bob’s comments by telling about an equally catastrophic error that I made shortly after I arrived in Japan for a one-year stay at Kyôto and Nagoya Universities.

For some reason or other, I had to write a letter to the U.S. Embassy in Tôkyô. I decided the address the envelope in Japanese, just to show that Americans can tackle foreign languages. It took me an hour or so to write out the address. Then I put the letter in the “out” box in the departmental office. About 30 minutes later, there were two departmental secretaries standing at my office door, blushing and giggling, and saying “Professor, you mustn’t send this letter – there’s a terrible mistake on the envelope.” They said they couldn’t tell me what it was, because it was so awful. So I took the letter and retreated into my office, determined to fix the mistake. The word for embassy in Japanese is 大使館 (tai-shi-kan = big+messenger +building), but I had written 大便館 (dai-ben-kan = big+excretion+building). Just one stroke difference in the second character had converted “U.S. Embassy” into “U.S. Big Outhouse”! No wonder the

girls were blushing and laughing. No doubt the entire front office staff had found the foreigner's error so hilarious.

At this point I wanted to shift the attention to the other members of the faculty who had made it past their 90th birthday, namely O. L. Kowalke (1878-1976) and O. A. Hougen (1893-1986). Each of these gentlemen had contributed to the university and their department in significant ways.

Otto Kowalke was known among the undergraduates as the "Old Bear," presumably because he had intimidated them. After graduating from Kaukauna High School, Otto had attended the Oshkosh State Normal School," which offered a 2-year program to train high-school teachers. He then served as a teacher and the principal of a high school in Fond du Lac. After five years, he left to enroll in 1902 in the University of Wisconsin, getting his BS degree four years later in Applied Electrochemistry. By 1909 he had earned his ChE degree (a professional degree intermediate between an MS and a PhD) in the Chemical Engineering Department, which had been formed in 1905, by the electrical engineer, Charles F. Burgess. From 1914 to 1941 he served as the Chairman of the Chemical Engineering Department, supervising the PhD theses of Olaf Hougen, Kenneth Watson, Roland Ragatz, Roger Altpeter, and Wayne Neill, all later professors in his department. After his retirement in 1948, he began auditing courses on the campus – history, geology, economics, astronomy, and more!

For 40 years, he supervised the UW residence halls, and for 18 years he served on the UW athletic board. He was a long time member of the Wisconsin Academy of Sciences, Arts, and Letters, and for a time served as its president. When he 97 years old the left-wing students wanted to rename one of the downtown streets the Ho Chi Minh Trail (after the communist dictator); a huge argument arose with many letters-to-the-editor on both sides of the argument. Otto sent in a well-reasoned letter pointing out the history behind the naming of the streets near the Capitol, thereby squelching the left-wing rabble-rousers. My last encounter with Otto was on a cold winter evening, when he was headed home after auditing a course on Bascom Hill; it was on N. Park St., and we were having a pleasant conversation, when all of a sudden he said "There comes my bus – I've gotta run!" And off he went. That was the last time I saw him, for

he passed away during the Christmas recess. I reminded the audience that the story I had related was not ancient history, and then I introduced his nephew Bill Schowalter (BS from UW, PhD from UIUC, teaching career at Princeton, Dean of Engineering at UIUC, and finally working at the University of Singapore).

Next I turned to Olaf Andreas Hougen, whose nickname among the students was "Big O," probably because of his height (about 6'4") and also because he was big in engineering teaching and practice. He worked a year after high school in order to pay for his college education, getting his BS from the University of Washington in Seattle in 1915. His ChE and PhD degrees were in ChE at the University of Wisconsin in 1918 and 1925. He served in various capacities in the ChE department at UW-Madison, including three terms as its chairman, during the period 1948-1964, with time away from Madison for army service in WWI, three years in industry, two years teaching elsewhere, and two years as Science Attaché to Scandinavia (located in Stockholm).

Olaf attained worldwide fame because of his excellent textbooks, *Industrial Chemical Calculations* (with K. M. Watson as coauthor), and the 3-volume work *Chemical Process Principles* (with K. M. Watson as co-author on the 1st edition, and K. M. Watson and R. A. Ragatz as coauthors on the 2nd edition). These books were in many ways unique, because they systematized the subject material, basing it on the best current information from physical chemistry. These books shaped chemical engineering for many years to come. In administrative matters, he was also imaginative and innovative. He was always asking "What will the new areas in ChE be in the next few decades?" By hiring Ed Lightfoot in 1953, he anticipated the rapid development of biological engineering. By hiring Warren Stewart and Bob Bird, he guaranteed the systematizing of the fields of heat, mass, and momentum transfer. By encouraging Roger Altpeter to develop the area of process control, he was guaranteeing that in this area, too, UW could play a leading role. One little example of Olaf's readiness to do something extraordinary took place shortly after I joined the faculty in 1953. Olaf came to a department meeting and said, "You know, there's going to be a meeting of the American Society for Engineering Education in Houghton, Michigan, next week. I think we should cancel

classes Thursday through Saturday, drive up there taking along with us some foreign visitors. The autumn colors should be fully developed, and this would provide the departmental visitors a wonderful opportunity to see some of the Midwest they might otherwise not see. We will also show our support of the ASEE." I'm sure that foreign visitors appreciated this unique experience.

Olaf was very proud of his department, and after he retired, he began to assemble materials for a departmental history: wonderful old photographs, stories about the early days of the department, material on the first chairman, Charles F. Burgess (founder of the Burgess Battery Company and others), student activities, including the visits to various chemical companies, and many other items. He then made about a half-dozen copies of the history up to the 7th decade of the department, in which he included a note saying that he hoped someone would continue his work, which he deemed not a finished work, and perhaps publish the entire story in time for the 100th anniversary of the department's founding. When I retired, I accepted Olaf's challenge and finished the compilation in 2005.

Olaf was also very proud of his Norwegian heritage and his family. He was active in the Norwegian Literary Society (Ygdrasil) and worked on the Hougen family genealogy. He influenced chemical engineering in Norway by serving as a Fulbright Professor in Trondheim and by hosting a number of Norwegian professors at UW. In 1969, he was knighted by King Olav V of Norway.

Olaf also shared his experience in ChE with Japanese colleagues in Kyôto and Nagoya Universities. Then he returned to UW via Taiwan, Thailand, and India, and subsequently he hosted visitors from those countries in Madison. He also interacted with the ChE community in Mexico, as a result of the fact that Fernando Garcia-Roël got his MS at UW in 1948, later becoming the President of the Technological University in Monterrey, Mexico. This interaction resulted in further exchanges between that Mexican institution and UW.

Once again, I pointed out that the Hougen story is not ancient history, and then I introduced Olaf's daughter, Esther Hougen Taylor, and two of her children, Martha and Richard. I also related that the famous newscaster, Eric Sevareid, was a nephew of Olaf, and

incidentally the author of *Canoeing with the Cree*, one of the great canoe trip adventures.

All in all, the evening had been a great success. I thoroughly enjoyed seeing some of my former PhD students, and also many people who had taken classes from me – including two, Byron Babcock and John Lambert, who had been in the very first course (in fluid dynamics) that I taught on my arrival in the department in 1953.

I also enjoyed seeing some of my friends from the Dutch division of the German Department and from the Japanese division of the East Asian Department.

It was great to see some of my fellow canoeists from years ago – in fact there were more of them than my PhD students. Perhaps one can conclude from that that my influence on outdoorsmanship was greater than that in transport phenomena! Most of all, the alumni could chat with their contemporaries and make new friends.

Many thanks are due to Mike Graham and many others who helped organize and plan the symposium and the dinner.

Bob Bird