

Christian B. Anfinsen During the Spring of 1937 it became necessary to find a university to support the graduate work that I planned, particularly one that would pay me enough to support my needs for peanut butter and a bed to sleep on. This turned out to be the University of Pennsylvania, where I spent two years toward the acquisition of a Ph.D. in organic chemistry. At the end of the two years I decided that straight organic chemistry was not my dish and, therefore, applied for and received a fellowship from the American Scandinavian Foundation to study for a year at the Carlsberg Laboratory in Copenhagen. I might add that my experience at Penn was didactically valuable. I also found that my ability to absorb the book learning and to spit it back in an acceptable way was enormously enhanced by the Swarthmore experience. The two years of honors where all of us were taught the importance of self-dependence and how to use a library and a typewriter properly made formal graduate work relatively simple.

The experience in Copenhagen was perhaps the most formative and exciting year of my life, and the scientific and social attitudes that I developed during that period return to me constantly. I was influenced by some other visitors at the Carlsberg Laboratory from Harvard University to apply for admission to the graduate school there, and began a Ph.D. in biological chemistry in 1941, receiving my degree in 1943, at which point I became an instructor and spent a number of years helping to teach those bright Harvard Medical School students during the days of accelerated medical training. I subsequently became an Associate in Biological Chemistry. After three years I went once again to Europe, this time to the Medical Nobel Institute in Stockholm in 1947. During this trip I fixed on some theoretical and experimental approaches to the chemistry of proteins which have been the kernel of my scientific activities ever since, and when allowed to cook for fifteen or twenty years, reached a

mass of sufficient size and, presumably, adequacy to convince the powers that be in Stockholm to give me a Nobel Prize in Chemistry in 1972.

In 1950, I was offered a position as Chief of the Laboratory of Physiology in the National Heart Institute of the National Institutes of Health in Bethesda. It was hard to turn down this offer, partly because of its scientific potential, and also because the move would double my salary overnight from about \$5,000 a year to \$10,000 a year. As many of you may remember, \$10,000 a year was an unbelievably high rate of pay in those days.

These were the days of the Southeast Asia troubles when so many of our brightest physicians were being shipped off to bandage fingers in the war belt. The Public Health Service permitted us to offer alternative service in the form of training at the National Institutes of Health and, over the ensuing eight or ten years, we admitted and trained literally hundreds of the very finest young minds in medicine—most of them at the stage of residencies at hospitals. I think I can say that essentially all of these individuals, exposed to intense and friendly training in the basic bio-medical sciences, are now leaders in the various medical centers of this country. With their talents, they also made it possible for us to move very rapidly in developing experimental ideas, and the production of publications of reasonable and sometimes more than reasonable merit proceeded swimmingly.

In 1962 I received an offer from Harvard Medical School to return as Professor of Biological Chemistry, and accepted the job mainly, I believe, out of nostalgia. However, the NIH was a strong drawing card and I returned there in 1963 to become Chief of the Laboratory of Chemical Biology in the Arthritis Institute. I should mention an important career-forming event, namely, the visit to my laboratory in 1956 by a young Israeli Ph.D. who came as a postdoctoral student and returned twice again in the next few years. Michael Sela was my introduction to The Weizmann Institute of Science in Rehovot, Israel. He is now, incidentally, finishing his tenth year of Presidency of that institution and has become a world figure in his field. I mention this because from this visit by Michael Sela, I made strong contacts with The Weizmann Institute, became a member of its Board of Governors and a member of the Scientific Advisory Committee about 1962, and have been returning for one reason or another once or twice a year ever since. I have come to know Israel very well as a result of this early exposure. I might say that similar visitors from Italy, particularly Naples, have led to a strong alignment with Italian biomedical science, and Naples has become another of our comfortable homes in Europe.

In 1981, for reasons that are not entirely easy to analyze, I decided to accept an offer to serve as Chief Scientist at a new company being formed by The Weizmann Institute and E. F. Hutton. My wife and I gave up our jobs at the NIH, shipped the automobile, piano and the like to Israel, and settled down for what we thought might be a five- or six-year period; however, about two weeks after we arrived, the folks at Hutton decided for one reason or another that they could not support this enterprise—and there we were. I stuck out the forced inactivity for about a year but finally, needing some kind of active scientific base, wrote to friends at The Johns Hopkins University where I came in 1982 as a Professor of Biology and Assistant to the President for Industrial Liaison. I am still at Hopkins, which is a delightful university where I can do some good.

While speaking of "career" I might mention the items of recognitions, publications, etc. I wrote one book called The Molecular Basis of Evolution, published in 1959, which did quite well; otherwise, my publication activity has been basically scientific papers in the professional journals. Over the years I have managed to become a member of the National Academy of Sciences and the American Society of Biological Chemistry, of which I was President in 1971-72. I also belong to the Royal Danish Academy and the American Philosophical Society, as well as (most recently) the Pontifical Academy

The Class of '37

of Science. Since most universities at graduations are generally in need of a token Nobel Prize winner to dress up some corner of the stage, I have managed to accumulate a dozen or so doctoral degrees (honorary). To this day, I try to think of some way of using the elegant hoods that are given (including the nice one from Swarthmore College). There must be some way of converting all this elegant cloth into bikinis or some other colorful kind of garment.

A few words about my family: I married Florence Kenenger in 1941, and we had three children, all now married. There has been a production of five grandchildren who are, of course, beautiful, gifted and brilliant. Chris III, Margot, and Carol all are doing quite well. Carol is the only scientifically-oriented one, and is now Professor of Biology at Providence College. I married Libby Shulman Ely in 1979 and, at the same time, converted to Orthodox Judaism which fitted quite nicely into her background and with my interests in Israel. Although my feelings about religion still very strongly reflect a fifty-year period of orthodox agnosticism, I must say that I do find the history, practice and intensity of Judaism an extremely interesting, philosophical package. Finally, I should mention that, through the National Academy of Sciences and its Human Rights Committee, I have become fairly active in the human rights area and have made a couple of rather intense trips in this connection. The most intense, perhaps, was one to Argentina during the presidency of General Vidella. At that point in my life I had stopped smoking for ten years, but two weeks in Buenos Aires got me back on the weed as an antidote to nervewracking interviews with relatives and State officials at all hours of the day and night.

More recently, I have become one of many scientists who are intensely interested in the situation in the Soviet Union, particularly as regards the dissident and refusenik population. All of this is a frustrating but absorbing aspect of life in our peculiar world.

I wrote a piece for a book put out by Swarthmore some years ago, called Swarthmore Remembered, which pretty well covers my feelings about our college: the nature of the student body; the elegance and quality of faculty; and the structure of the teaching program, particularly the honors program. It made an enormous difference in my life, and I would find it difficult to come up with another system that could begin to compete.