

CHEMISTRY WITHOUT LIBERAL ARTS IS SCIENCE WITHOUT POETRY: AN EVENING WITH ROALD HOFFMANN

by Barbara Reiser and Jane Suda

On Saturday, March 12, the Parents' Association of Stuyvesant High School hosted a lecture by Roald Hoffmann, Nobel Laureate, Cornell University Professor, Columbia College and Harvard University graduate, and alumnus of Stuyvesant High School. In his lecture, titled "A Little Chemistry, and More About What I Learned From Stuyvesant and 45 Years at Cornell," Dr. Hoffmann recounted significant personal and professional life experiences, provided insight for current Stuyvesant students and parents about the benefits of a diverse liberal arts education, and concluded with advice about college.

Dr. Hoffmann began his discussion with some history, starting in Poland. Projected photographs showed the attic in which he hid from the Nazis during World War II. He talked about his childhood in displaced persons camps in Europe, about coming to New York City at eleven and a half to learn English, his sixth language, and about attending different public schools in Queens and Brooklyn before he entered Stuyvesant.

Dr. Hoffmann showed pictures of himself and Stuyvesant at the time he attended high school, which he called a "wonderful experience from beginning to end." He gave specific names of many Stuyvesant teachers with appreciation of what they meant to him, and spoke about the stimulating environment he found at Stuyvesant. He recalled taking all advanced courses while at Stuy—except Chemistry. He told of how he considered art history before declaring Chemistry as his college major after summer research internships motivated him to persist through the routine of his largely uninspiring science classes.

Dr. Hoffmann characterized himself as a theoretical, as opposed to experimental, chemist and proposed to explain the distinction. He introduced us to some of the history of Chemistry. His love of even the small blocks of the Periodic Table which define his field was contagious as he mentioned the beauty of various molecules and pointed to their forms, orbitals, and symmetry. Dr. Hoffmann showed diagrams of the molecules of Taxol, a cancer fighting drug, and extolled the beauty of their molecular structure. He showed images of a Yew tree and discussed how the bark and needles of the tree are used to

create Taxol. He showed images of a chemical factory, and pointed out that industry can produce the large quantities of Taxol needed to treat a cancer patient, while nature cannot. He talked about how our government and research institutes fund scientific research and thus subsidize the science used by industry and corporations. He explained that immigration policy ensures the strength of scientific research in the United States, despite weak science and math test scores nationwide, and reminded the audience that he came to the United States as an immigrant child not so long ago.

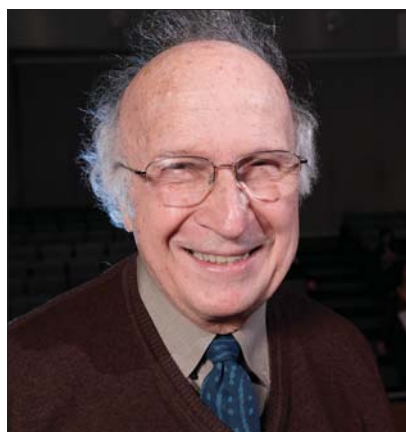
Dr. Hoffmann skillfully wove science, aesthetics, social issues, economics and philosophy together with a humanist perspective of the world in which we live. He revealed the complexity of relationships inherent in learning and discovery. He encouraged students to explore art and poetry and history and the social sciences as a means of nurturing a deeper understanding of the interconnectivity of all academic disciplines and human experiences.

Dr. Hoffmann also gave what he called "unsolicited advice"—that students "relax!" about college and be less concerned about the college they attend than what they study and where they go afterwards. He showed some data about the Baccalaureate origins of Science and Engineering PhD recipients. The data indicated that a group of 50 small, private baccalaureate schools (the Oberlin 50), have a superior record of producing students who go on to successfully obtain Science and Engineering PhDs from significant research institutions. He advised that students look beyond the Ivy League and the large research institutions when applying for college. He endorsed the Oberlin 50 and a broad liberal arts curriculum.

At the end of the lecture, the Parents' Association presented Dr. Hoffmann with an award acknowledging his dedication to Stuyvesant High School. Dr. Hoffmann signed copies of his books and answered questions. Those of us who were lucky enough to attend Dr. Hoffmann's remarks had the rare opportunity to hear from an undeniably brilliant but funny and thoughtful man with special ties to the Stuyvesant community.

[More photos from the event](#)

photos by Andrew Cribb



Professor Roald Hoffmann, Stuyvesant Alumnus Class of 55, Winner of the Nobel Prize for Chemistry 1981

(left) Professor Hoffmann signs a copy of one of his books for a student after the seminar and (right) on stage during seminar



Professor Hoffmann chats with attendees and signs copies of his books after the seminar



Wai Wah Chin, Co-President Stuyvesant PA and Professor Hoffmann

