



Walter B. Gratzer (1932–2021) – molecular scientist and science writer

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Abstract

Walter Gratzer (1932–2021) arrived in England as a child refugee from Nazism, without speaking English, and became one of the most successful and influential science writers. His principal career was in molecular biophysics at King's College London, researching the structure of nucleic acids and proteins.

Keywords Walter Gratzer · John Maddox · Nature magazine · King's College London · Science writing

Walter B. Gratzer (1932–2021, Fig. 1) [1] was born in Breslau, Germany (now, Wrocław, Poland) in a Jewish family of a German father, Hans Grätzer, and a Hungarian mother, Margit Perlstein. The family lived in a small town in the region of Katowice, Poland. Fleeing the Nazis, they first moved to Czechoslovakia, and in 1939, to England. Most of Gratzer's extended family were murdered in the Holocaust. Scholarships helped him to study at Oxford University. He started in chemistry when the future (1956) Nobel laureate Cyril Hinshelwood was the professor there. Gratzer learned spectroscopy from Richard Barrow and worked on the analysis of the emission spectrum of carbon monoxide. After two years' national service, in 1957, he started work at the National Institute of Medical Research in North London. He researched hemoglobin and obtained his PhD in 1960.

He then spent a postdoctoral stint at Harvard University. Paul Doty was his mentor, and Gratzer worked on protein structure and stability. He built a rudimentary circular dichroism device for the study of helices and coils. His friendship with James D. Watson dated from their meeting at Harvard in the early 1960s. Later, he helped Watson to produce his book, *A Passion for DNA* [2]. Upon his return to the U.K., Gratzer joined King's College, University of London, in 1963 and was a member of its biophysics section. First he was an associate of the College and later of the Medical Research Council (MRC) Biophysics Unit. Eventually, he

became a Professor at King's College and a member of the MRC Muscle and Cell Motility Unit.

Also in 1963, he married Hannah Gould, a research scientist of later fame in the study of the molecular biology of allergy and asthma. She was also at King's College. When Gratzer joined King's, John Randall, the inventor of the cavity magnetron, was the head of biophysics. Maurice Wilkins was also there, who became Randall's successor. Wilkins was a co-recipient of the 1962 Nobel Prize along with Watson and Francis Crick for the structure of DNA. Among several other topics, Gratzer worked mostly on RNA conformation and on ribosome structures. When, following Randall's retirement, the biophysics unit changed its research direction, Gratzer's interest shifted to membranes. He continued his research of membranes after his own official retirement and focused his attention on their mechanical properties.

Gratzer had a parallel career in science writing though never in a formal position. John Maddox, the legendary long-term editor of *Nature*, invited Gratzer to run the renewed column "News and Views." Gratzer wrote this *weekly* feature for 6 years. Even when he left for his summer holidays his column kept appearing: he would submit several entries in advance before starting his vacation. The column appeared without the author's name and the anonymity allowed it to be more colorful than without such a protection it might have. Even when Gratzer no longer wrote the column, he stayed on at *Nature* as a consultant and witnessed – really, contributed to – the enormous growth of the magazine in influence and authority.

It was at Maddox's suggestion that Gratzer compiled the popular *A Bedside Nature* from the history of the first 85 years of the magazine [3]. The first issue of the

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Fig. 1 Walter Gratzer in his office at King's College London, 1998 (photograph by I. Hargittai)

magazine appeared in 1869 and for more than a decade it incurred losses. Nonetheless, the publisher, Alexander Macmillan, supported the editor, Norman Lockyer. *Nature* was founded “to inform the reading public of new scientific and technological advances and to promote the interests of science politically, to disseminate new results among scientists and to allow the ventilation of controversies.” *Nature* could boast many first reports of seminal discoveries, such as, for example, the Watson–Crick report “The molecular structure of nucleic acids,” which is reproduced in *Beside Nature* as its last entry. But the compilation was not primarily concerned with selecting the most important discoveries. Its aim was, in Gratzer’s words, “to present a panorama of science, seen against the backdrop of nineteenth- and twentieth-century history, with its triumphs, débâcles, surprises and absurdities, all reflected in *NATURE*’s mirror.”

He produced other fascinating books. *The undergrowth of science: delusion, self-deception and human frailty* [4] was about major controversies in science in the twentieth century. *Eurekas and Euphorias: The Oxford Book of Scientific Anecdotes* [5] was a highly entertaining and informative collection.

One of his literary projects was an earlier editorial work, Longman’s *The Literary Companion to Science* [6]. His other books were about the history of nutrition [7], the science of macromolecules [8], and the history of drugs [9].

Gratzer developed a unique style in science writing, which spoke to a broad readership without patronizing it. His language was sophisticated but highly readable. He spoke about science from within and could express sympathy even toward those who wittingly or unwittingly committed fraud in their work and publications. He was a quiet, unassuming human being who was always ready to help without claiming credit. Over the years we have developed a pleasant interaction in which science writing was what connected us. In some ways he was a remote teacher for me, somewhere in Olympic heights, but always in human proximity in our encounters. He assisted me in getting to meet John Maddox and recording and publishing a conversation with the legendary editor of *Nature* [10]. Walter and Hannah were warm and welcoming hosts when my wife and I stayed with them during one of our London visits while working on our *Science in London* book [11]. He was most knowledgeable about science and scientists in the broadest sense and he had an exceptionally rich home library of books, including many gems of science writing. With many of his friends and readers, we will miss him, but he lives on in our collective memory and in his books.

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