

A Tribute to Máximo Barón

by Michael Hess

Máximo Barón turned 80 in February 2009. Hard to believe. It was only yesterday when I met him for the first time! Yesterday? “Yesterday” was 1995, at the IUPAC General Assembly in Guildford, UK. I was invited as an observer, and Máximo was already a distinguished titular member of the IUPAC Commission on Macromolecular Nomenclature, with a splendid scientific career.

His career started in Argentina where, as a young pupil with an unquenchable thirst for knowledge, he decided that he would become a scholar. However, he was also always dedicated to the experiment, curious to figure out how things work (e.g., photography). From the very beginning, he was fortunate to have teachers and mentors who understood his potential and introduced him to a variety of fields, such as chemistry, physics, history, and philosophy.

One of Máximo’s friends, E. Emmett Reid, a former professor at John Hopkins University, was 92 when he stated “I am interested in research and research is the future.” Since Máximo Barón will never stop being interested in the future, perhaps he will never really grow old.

It is not pure knowledge, but perception that is Máximo’s goal, and this is what he wants to share with his students. This drive was probably catalyzed during his early studies of epistemology with Vicente Fattone, one of the most outstanding Argentine philosophers of his time. Chemistry or physics, he absorbed everything that passed his curious eyes when reading, working in the lab, having discussions with colleagues. He was unknowingly following the road of science as taken by Alexander von Humboldt and Wilhelm Ostwald. Máximo would eventually come to believe, like Ostwald before him, that he had chosen the best path a young student can take for his profession. These early decisions, experiences, and encounters with gifted teachers at high school and university still echo in his teaching today. Even at the age of 80, Máximo Barón is still an active and respected teacher at the University of Belgrano—Facultades de Ciencias Exactas y Naturales e Ingeniería y Tecnología Informática, Argentina.



In 1947, he received a “Bachiller” degree from the Colegio Nacional de Buenos Aires. In 1954, the Doctor in Química from Facultad de Ciencias Exactas y Naturales Universidad de Buenos Aires. After a year as a research assistant at the Instituto Tecnológico, Argentine Ministry of Industry, he joined the Eastman Kodak Research Laboratories in Rochester, New York, USA. After two years, he returned to Argentina to ATANOR SAM Research Laboratories in Buenos Aires. In 1965, after two years as a teaching assistant in the Physics Department of the University of Buenos Aires, Máximo Barón accepted an invitation from George Wright of the Chemistry Department at the University

of Toronto, Canada. He had drawn the attention of Wright for his isolation and characterization of an until-then-unidentified chloral tetramer. He spent a very fruitful year in Toronto meeting students from many parts of the world and learned the extraordinary rigour and surgical manner in which his host ran his science, not the easy way, but enduring. In particular, that year in Toronto assured him that academia certainly was the world where he belonged and not the industrial

environment that he had also experienced.

Once back in Buenos Aires, he became an assistant professor, associate professor, and, finally, in 1982, a full professor of physics at the University of Buenos Aires. In 1997, he became professor of Physics at the University of Belgrano, Buenos Aires, where he was research coordinator from 1998 to 2000. During these years, numerous students went through his hands and graduated under his experienced advice.

One of his preferred fields of expertise became the dielectrical spectroscopy that he continued after his year in Toronto. Orville Thomas (Salford, UK), Mansel Davies, and Robert Cole were friends, tutors, and mentors who had a profound effect on his career. He entered the developing field of liquid crystals and liquid crystalline polymers. Later, he prepared two important documents for publication for the IUPAC Polymer Division. Between 1978 and 1992, he was a frequent participant in the Gordon Conferences on Dielectric Phenomena.

Barón’s international activities included stints as a visiting scientist at the Kemisk Lab at the Royal School of Pharmacy, University of Copenhagen (1971); as a visiting lecturer at the University of Salford, UK, (1971);

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guest scientist at the Instituto de Investigaciones Bioquímicas, Fundación Campomar, Buenos Aires, (1974); visiting scientist at the Francis-Bitter National Magnet Lab, MIT-Boston, USA, (1984); visiting professor, School of Physics, National University of San Luis, San Luis, Argentina, (1988); visiting scientist, Dielectrics Group, King's College, University of London, London, (1991, 1993, 1995); and, finally, as visiting professor at the School of Engineering Sciences, University of Osaka, Japan, 1996.

Besides authoring numerous scientific papers, he has written many book chapters and books, including the Spanish adaptation of *Invitation to Chemical Research* (in collaboration with E. Emmet Reid), 1969; *Elementary Thermodynamics* (1977); *Concepts of Thermodynamics* (1998); or a chapter on "J.J. Thompson and his Hydrogen Model" in *Models and Modellers of Hydrogen*, A. Lakhtakia, Pennsylvania State University (1996).

His research interests are matter-energy interactions, dielectric properties, magneto-optics in mesophases, symmetry and chirality, structure of small-ring molecules. In teaching, he favors polymer nomenclature and terminology, general chemistry and physics, history of science and technology, and scientific information research and retrieval.

In 1987, the Argentine Chemical Society proposed that he become the national representative on the IUPAC Commission on Macromolecular Nomenclature. Norbert Bikales, who was the commission's secretary

at that time, invited him to collaborate on the commission's various projects. He commented on the drafts of documents whenever he felt he could contribute and was surprised that his term was extended after two years because he did not exactly feel like an expert in nomenclature. In 1990, Pavel Kratochvil, chair of the commission at that time, invited Barón to attend the commission meeting at the IUPAC General Assembly in Hamburg. Pavel's letter of invitation helped Barón raise funds for his travel to Hamburg. This was his first opportunity to meet the other members of the commission in person, and he was surprised by the spirit of the group in which names or titles mattered much less than what a person contributed and how she or he fit in the team.

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After the Hamburg meeting, a very fruitful time began during which he cooperated on many documents. In particular, the two documents on liquid crystals became his "children," which he finally prepared for publication. Aubrey Jenkins, Bob Stepto, Jaroslav Kahovec, Pavel Kratochvil, and Bill Work, just to name a few, became his close friends. Soon, he was elected associate member, then, in 1997, titular member at the GA in Geneva. Having achieved this status made it easier to join the meetings and he could even combine his travels to meetings with further extracurricular scientific activities. In 1999, when Bill Work ended his term as secretary of the commission, Máximo Barón was asked to be his successor under the chairmanship of Bob Stepto.

During that time, I had the pleasure to meet this gentleman-scientist, to work with him, and to benefit from his scientific knowledge, social competence, psychological skills, and human warmth. What is a commission without a good secretary who keeps track of things and teams-up well with the chairperson? Frequently, the secretary is the one who prevents the chairman from being sucked too deeply into discussions and, in doing so, makes sure that a commission is run efficiently, sometimes through background discussions that take the steam out of issues, mediating behind the scene and making things run more smoothly. There can be no good chairman without a good secretary, and Máximo Barón is one of the best.

Although Máximo claims that he never really understood the reasons for his successful career, all those who had the chance to cooperate with him know the reasons very well. There were turbulent waters we had to steer through when IUPAC restructured, and Máximo's advice was a great help in passing through these rapids. Although he has since retired as secretary, he is still a well-respected and active honorary member of Division IV, the Polymer Division.

Aside from those I mentioned above, Ernest L. Eliel and D.H.R. Barton also were important mentors to Barón. However, I should mention first and foremost those who made Máximo Barón's career possible: his family. Without their support, little of the above would have been possible.

Máximo is also proud of having been accepted as a fellow, chartered chemist, and chartered scientist by The Royal Society of London. He is also a member of the Argentine Chemical Society, the American Chemical Society, the Argentine Scientific Society, the American Association of Physics Teachers, the Argentine Historians Society, and the Argentine History of Science Group.

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