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A PLACE IN HISTORY: WAS LINUS PAULING
A REVOLUTIONARY CHEMIST?

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In 1998 the American Chemical Society published the 75th anniversary issue of Chemical and Engineering News (1). In preparation for the anniversary issue, the journal provided the opportunity for approximately 175,000 ACS members to nominate their choices for the “Top 75 Distinguished Contributors to the Chemical Enterprise” since 1923, using a ballot published in the magazine. Readers could nominate up to twenty people, living or dead, American or non-American.

The result was a list of more than 1,200 individuals, giving a top-75 group in which four chemists far outpolled the next 71. The top four were Linus Pauling, Robert B. Woodward, Glenn Seaborg, and Wallace Carothers (2). The contributions for which Linus Pauling was cited in the poll were the nature of the chemical bond; valence bond theory; concepts of electronegativity, resonance and hybridization; and the application of structural chemistry to biological molecules (3).

A different kind of poll was taken by the British journals New Scientist and New Society some twenty years earlier, using a questionnaire published in May 1975. That poll sought to assess readers’ images and stereotypes of scientists by asking open-ended questions such as, “When I think of a scientist, I think of . . .” The poll received approximately 1600 responses, of which 119 came from professional chemists. Of the scientists, past and present, who were most frequently mentioned in readers’ responses, Pauling’s name was the fifteenth most cited. Others included Darwin and Einstein, Galileo, Newton and Pasteur, and, among contemporary scientists, Jacob Bronowski, Fred Hoyle, and Peter Medawar (4).

In the New Scientist poll, professional and popular-science readers seem to have mentioned Pauling, like Bronowski and Medawar, on the basis of public image and public fame in the 1970s, whereas the Chem. Eng. News poll more clearly reflects judgments by Pauling’s professional peers in the field of chemistry. Both polls point to a generalization that we hardly need to prove: that Linus Pauling is perceived both among chemists and among members of the general public as one of the most important figures in twentieth-century science.