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count for the election of Bronk. Efforts to vitalize the Academy into the effective organization that it has become under the leadership of Bronk and Seitz began 2 years before the nomination of Conant, and had acquired sufficient momentum by April 1950 to override a nomination that to the majority meant a return of the Academy to the functions of "electing members and writing obituaries." It is pure journalese to ascribe the election of Bronk to a "seething vendetta."

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L'Accademia Nazionale dei Lincei

The issue of 11 March 1966 contained an excellent article, by Stillman Drake, on the Accademia dei Lincei. The article was mainly devoted to the early history of the academy and its connection with Galileo. The purpose of this letter is to draw attention to another recent publication, *L'Accademia Nazionale dei Lincei* (ed. 2, 1966, quarto, 68 pages), by Mauro Picone, the eminent mathematician who is now academician-administrator of the academy. The book contains a short history of the academy, with a list of some of the great men of the past who were members of this illustrious body; some details about the numerous publications of the academy; and a list of the recipients of its periodic prizes, which are awarded on a worldwide basis to scientists, writers, and artists who make outstanding contributions to the world's knowledge and culture. (Some of the awards are in monetary value equal to or superior to the Nobel Prizes. Among the several American recipients are Wallace O. Fenn and Albert Bruce Sabin, who received prizes in medicine in 1964.)

The book contains a reproduction of the academy's constitution with the signatures of its earliest members, including Galileo, and 17 large photographs of the two beautiful and historic palaces, Palazzo Corsini and Villa Farnesina, occupied by the academy. It may be ordered for 3500 lire ($5.80) from the Office of Publications, L'Accademia Nazionale dei Lincei, Via della Lungara 10, Rome.

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Fish Meal: Food of the Ancients

At last the FDA has approved the use of fish meal as a food additive for human consumption (News in Brief, 3 Mar., p. 1087). May I quote from Arrian's account of the voyage of Nearchus along the eastern shore of the Persian Gulf in the year 325 B.C. (*1*). And may I call this quotation especially to the attention of my friend, Ed Muskie, who has worked so hard to promote this addition to the industries of Maine.

> Below the Gadrosians . . . dwell the people called "The Fish Eaters." . . . Thinking here to seize corn by force Nearchus attacked the town, but the natives showed freely their flour, ground down from dried fish; but only a small quantity of corn and barley. . . . Only a few of them fish, for few have proper boats or any skill; for the most part it is the receding tide which leaves fish in pools which provide their catch. The more tender ones they eat raw, the larger and tougher ones they dry in the sun until quite sere and then pound them and make flour and a bread of them. . . . Even their flocks are fed on dried fish so that the mutton has a fishy taste like the flesh of sea birds.

While I trust the modern product is more palatable than that found by Nearchus, I commend to the reader the patience of the Ichthyophagae who, after 2292 years, have at last succeeded in selling their idea to the government of the United States.

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Reference

1. Condensed from *Arrian*, "History of Alexander and Indica," Robson, trans. (Harvard Univ. Press, Cambridge, Mass., 1933), vol. 2, pp. 383, 393.

Ph.D.'s and the Mother Tongue

The retention of Ph.D. foreign language requirements by a university is justified only if foreign languages are needed in a particular field of study. If so, those languages should be *used* during the graduate student's education with readings assigned for seminars or classes. Papers and research projects should refer to literature in those languages, not merely as a linguistic exercise but because the literature is essential to the field. If a graduate student can get his doctorate with no exposure to foreign languages beyond being tested in them, then the requirements are unneeded.

What requirement then might be a useful substitute? Many ideas come to mind, including a broadening in those subjects suggested by Hartman (Letters, 24 Mar.). I would like to suggest another—a proficiency requirement in the graduate student's own language—English. Much just criticism is made of Ph.D. candidates' common inability to express their ideas lucidly in writing. I suggest that they be required to pass a test in literary criticism and report composition, including a judgment of the organization and clarity of an average paper in the student's own field. Such a test would be difficult to evaluate objectively, but the requirement in general would go far to improve American scholarship.

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Sluggish Process of Purification

Rainey's estimates of the flushing times for removal of pollution from the Great Lakes ("Natural displacement of pollution from the Great Lakes," 10 Mar., p. 1242) are decidedly underestimates, even allowing for his simplifying assumptions. Increased eutrophication causes an increase of pelagic and benthic biomass which acts as a trap for nutrient elements and energy, which in turn permits recycling within each basin. Such systems are most dramatically evident in estuaries possessing two-layered, countercurrent flow, and which are automatically self-enriching. It is entirely likely that even open systems such as the Great Lakes, once enriched, will be "permanently" changed. A "major disaster for which there is no apparent solution" has already occurred in the lower lakes, since it is unlikely that the present rate of eutrophication will decrease in the next few decades. It is absolutely imperative that all available measures be taken to prevent the addition of phosphorus, in particular, to closed or semiclosed basins and to reduce the input of this element into open systems if any headway is to be made, whether in the next decades or centuries, toward controlling disastrous changes in freshwater ecosystems.

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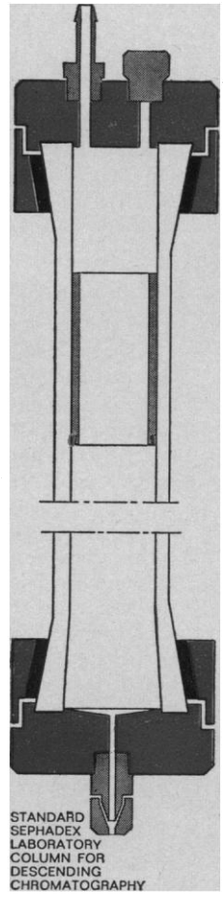

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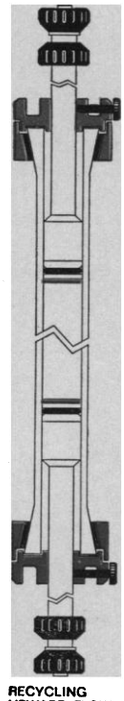

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