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This nation's greatest scientific resource is the quality of the men and women who conduct-research, and the continued excellence of American science depends in the first place on our investment in the potential of young scientists to become the future leaders in their chosen fields. It is essential, therefore, that support be given not only to outstanding research programs conducted by established investigators, but also to the new proposals of qualified young scientists, and that the federal funds available for basic research should be adequate to sustain both types of research effort.

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Ph.D. Language Requirements Modified

As an additional comment to the three letters (30 Dec.) on the subject of the Ph.D. language requirements, may I contribute the information that the faculty of the graduate school of Cornell University last May 6th voted (4 to 1) to abolish the general language requirements for this degree and to allow each of the fields (about 74 authorized to offer Ph.D. programs for majors) to specify what foreign language proficiency, if any, it should require. It was understood, of course, that any professor might insist on having his students learn more languages than the field specified as minimal.

So far as I know, Cornell became the first of the so-called multiversities to adopt this reform. Currently, approximately 22 fields with 18 percent of the graduate students continue to operate under the two-language rule; 29 fields, with 50 percent of the students, have specified one foreign language; and 21 fields, with 32 percent of the students, have none. The largest of the fields officially in the first group are English, civil engineering, psychology, and linguistics; the largest of the second group are chemistry, education, mathematics, and electrical engineering; and in the last group the largest are physics, history, agricultural economics, entomology and limnology, and conservation. I believe more and more fields will eventually shift from the first group to the second and from the second to the third.

So far as I know, everyone on the faculty agreed that a thoroughgoing reading knowledge of two or three major European languages would be an asset for anyone in research or college teaching, even though more and more of the advanced scientific literature is published in English or is soon available in printed translations. However, the facts seemed to be that, for most fields, the information explosion and other modern developments has increased the importance of other areas of study while greatly reducing the actual use of foreign languages. Students generally needed more basic understanding of chemistry, physics, mathematics, statistical methodology, computer science, biology, economics, psychology, or sociology than they were able to get in their undergraduate training or to pick up in 3 to 8 years in graduate school. Even the advantages of having a student learn a second or third language for its effects on broadening his outlooks and sympathies and his appreciation of the modern world as a whole were surely far overrated. This was especially true for the student who, late in his career, was forced to acquaint himself with a language he had every reason to believe he would never use to any extent. JOHN D. HARTMAN

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While serving a term as Associate Dean for Graduate Studies of the College of Arts and Science, I proposed that the University drop any university-wide requirement of foreign languages for the Ph.D. degree, and substitute a policy of departmental option. Miraculously, the proposal passed and we now have a real operational criterion for relevant language requirements. Some departments have none, some have one or two or even three. and some have allowed an option in computing as a substitute for language requirements. The physics department, for instance, has none.

We also have avoided an enormous amount of administrative nonsense that resulted from the fact that passing the language requirement was prerequisite to taking the qualifying examinations. Ph.D. students are now treated in this respect like the adults they should be; if they need languages, they learn them. M. F. KAPLON

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SCIENCE, VOL. 155