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SCIENCE

The Supernatural Department

The American university department has served science well. It has been a congenial unit, fostering esprit among its members and becoming the strongest unit in academic politics. The department has permitted more flexibility and innovation in both teaching and research than were possible under the Germanic model of a single professor, and a retinue of assistants, in each field. Together with an isomorphic structure of scientific and scholarly societies, meetings, and journals, it has administered the reward systems for young scientists to encourage them to apply a reductionist approach to problems that lie close to the front of their departmental interests. Reductionism has advanced science—Nobel Prizes are awarded for the best of such work—and has effectively prepared future faculty members for appointment to departments that carry on the traditions under which they were educated.

But new conditions have arisen. Reductionism is not the only way to advance science. Most doctorates of the next two decades will not be employed by universities similar to those in which they earned their degrees; the majority will enter other kinds of work for which a different education preparation may be more suitable. The department has lived a useful life, but the time has come to honor its history and achievements with a ceremonial and sentimental retirement party.

In terms of public interest, the most urgent problems do not fit into departmental boundaries. Those multiplex problems require synthetic as well as analytic studies and call for close collaboration of scholars from several disciplines—disciplines as far apart as genetics and law, or engineering and sociology.

In terms of science itself, the successes of reductionism have undermined some disciplinary boundaries. The corresponding departmental walls are no longer comfortable boundaries but have become barriers to the collaboration of scholars whose specialized knowledge and techniques defy traditional compartmentalization.

In terms of student interests, departmental boundaries are as much a nuisance as an aid to intellectual and vocational identification. Even at the Ph.D. level there is much field switching. In round numbers, 20 percent of American doctorates have moved out of their degree fields by 5 years after the doctorate. By 15 years, the percentage rises to 30, and by 25 years, to 40.*

In terms of the university's ability to improve its own programs and to adapt constructively to the financial, political, and other pressures beating upon it, a strong case can be made that the principal centers of curricular, research, and planning responsibility should be fewer in number and broader in interest than the department.

For all these reasons—public interest, scholarship, students, and university organization—the university now needs divisions larger than the department, divisions that will accommodate a variety of subgroups, long-lived and short-lived; pure, applied, or mixed; unidisciplinary and multidisciplinary; for teaching, research, or both.

Of course there wll be resistance to this proposal. There would be resistance at any time, but the 1970's offer an unusual opportunity for university reorganization. In the current buyer's market, young Ph.D.'s will respond to nontraditional opportunities in good universities. Growth in size will continue through the decade, and thus new appointments can be made. Universities are under severe financial, political, and intellectual stress; disadvantageous as that stress is in other respects, it is in times of crisis that new procedures and organizational forms are likely to be accepted, for it is then that outworn habits are most easily broken.—DAEL WOLFLE, *University of Washington, Seattle*

* Lindsey R. Harmon, *Profiles of Ph.D.'s in the Sciences* (National Academy of Sciences–National Research Council, Washington, D.C., 1965).