

Book Reviews

The Academic Mind. Social scientists in a time of crisis. Paul Lazarsfeld and Wagner Thielens, Jr. Field report by David Riesman. Free Press, Glencoe, Ill., 1958. xiii + 460 pp. \$7.50.

The study which this book reports was apparently inspired by a characteristically provocative statement by Robert Maynard Hutchins in 1954 to the effect that the spirit of the teaching profession in America was being crushed by the then current wave of investigations of subversion on the nation's campuses.

Paul F. Lazarsfeld and his associate, Wagner Thielens, Jr., have undertaken to demonstrate the actual impact of what they call "the difficult years" on the attitudes and behavior of college professors. They have restricted their inquiry to social scientists, on the assumption that social scientists were in a more sensitive situation during that period than other academicians and were more likely to feel such pressures as might have been present, and they have gathered their information through the technique of sample surveying. They have produced an absorbing and convincing document, an important book for everyone interested in intellectual freedom.

When an epidemiologist studies the distribution of a disease he does not concern himself primarily with healthy people. Similarly, the authors of this book devote the bulk of their attention to what they take to be the harmful effects of the pressures toward orthodox political thought and behavior during the years just prior to their study (1955). Through a series of questions relative to worries about repercussions arising from the expression of political opinion and cautions observed to avoid such repercussions, they are able to describe in detail the pattern of apprehension and retreat which these pressures created. Their long chapter on "Patterns of caution" may not come as a surprise to those familiar with the academic scene, but its dramatic documentation of the manner in which many professors gave way in the face of direct or implied threat, illustrated by quotations from the interviews themselves, makes sobering reading. There can be little doubt that the voice of the ill-starred senator and his numer-

ous apostles was heard widely through the academic grove.

As a result of the manner in which their sample was drawn, Lazarsfeld and Thielens are able to speak not only of the nation's social scientists but of its colleges as well. Thus they are able to demonstrate that it was not on the underprivileged, undistinguished colleges that the attack on nonconformist thought was concentrated but on the very colleges which their classification shows to be the outstanding universities in the country. It was on the campuses of high quality (as measured by various objective criteria) that the greatest number of accusations and actual incidents involving faculty members occurred, and this is no less true when one considers large colleges and small colleges separately. This is readily understandable when we discover that the number of professors with unorthodox views is very much greater in the colleges of high quality than it is in those of lesser distinction. Vulnerable individuals on these campuses attracted the attention of the investigators, not only to themselves but to their colleges as well. The collective effect of these individual cases was to focus the repressive campaign on the very peak of the American college system.

An analysis of particular interest in this connection describes the manner in which the administrations of these different levels of colleges met the threats to which they were exposed. It is apparent to begin with that the relationship between the administration and the faculty on the superior campuses differs substantially from that found elsewhere. The more outstanding the college, the more likely it is that the faculty has an effective voice in the determination of the college's policies regarding matters of academic freedom, and that the faculty actually meets with the administration to discuss these problems. The faculties at these colleges are more likely to feel that their administration has taken a clear-cut stand on questions of academic freedom and to feel confident that if they were actually accused of "leftist leanings," their administration would support them. They are more likely to feel that their administration has handled such incidents as have arisen in a manner

which protected the rights of the faculty. While they are considerably more likely to be aware of accusations of subversion on their campuses (for the reasons just seen), they are less likely to interpret these accusations as actually threatening the academic freedom of faculty members. Despite the fact that the level of concern with questions of academic freedom is very high on the superior campuses, and that the number of professors who are themselves susceptible to attack because of their unpopular views or associations is also high, the actual incidence of cautious behavior, such as screening controversial items out of reference material assigned to students or toning down one's writing in order to avoid criticism, is lower on these campuses than on those of lesser quality. It is certainly not easy to trace all the causal relations in this complicated pattern, but the authors, quite properly in my opinion, attribute a very considerable significance to the role of the college administration in determining the impact that an attack on academic freedom will have on a college campus.

While it was inevitable that Lazarsfeld and Thielens should have concentrated their attention on the negative aspects of the "academic mind," one must not be misled into concluding that the picture is generally negative. As the authors point out, the data present a "dilemma of interpretation. Should we say that 'only' one out of ten professors have been affected in their writings, or should we be appalled by the fact that thousands of college teachers have taken such precautionary steps?" Granting the importance of the individual sinner, this book convinces me that Hutchins greatly exaggerated the impact that the various loyalty investigations were having on college faculties. Consider the following statistics: 85 percent of the social scientists interviewed denied that they had toned down anything they had written in recent years in order to avoid controversy; 85 percent denied that they were now more careful about assigning reference materials to students; 71 percent said they never went out of their way to make it clear that they had no extreme political opinions; 78 percent denied that they felt their academic freedom had been threatened in any way during the preceding few years.

One may argue that these data simply demonstrate how orthodox and noncontroversial most college professors are, and there is evidence that this is in fact a partial explanation, especially so far as the denominational colleges are concerned. The fact remains, however, that social scientists generally, and especially those in secular colleges (where most social scientists are), are far more "liberal" than the general public in their

views on political issues. No doubt many professors were unmoved by the investigations of subversion, either because they sympathized with them or because they could not imagine themselves being affected by them; other professors were threatened and drew back in the face of threat; others, including what would appear to be a substantial majority of the more distinguished members of the profession, perceived the threat clearly enough and were disturbed by it but did not yield to it. It would be regrettable indeed if this final fact were lost in the concentration which this book gives to its documentation of weakness and retreat on the campus.

To those readers of *Science* who may have come to believe that social scientists have difficulty in writing comprehensively, I am pleased to recommend this book as a model of straightforward, unpretentious exposition. The authors present a rather considerable array of statistical data, but, partly through the effective use of graphic representation, they succeed in maintaining the readability of the text. I should also urge that the reader not skip over the long postscript contributed by David Riesman, analyzing the problems of interviewing college professors. His description of the consequences of confronting "avant-garde" or "rear-guard" professors with "blue-stockings" or "market research" interviewers is both instructive and amusing.

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Embryos and Ancestors. Gavin de Beer. Clarendon Press, Oxford, England, ed. 3, 1958 (order from Oxford University Press, New York). xii + 197 pp. \$4.

In 1939 Gavin de Beer published *Embryology and Evolution*, attempting to show, as he puts it, that "after rejecting the theory of recapitulation, a much better synthesis could be made of our knowledge of embryonic development and evolutionary descent, opening up new fields for observation and co-ordination of studies in embryology, genetics and evolution." In 1940 he produced an expanded and altered version of a similar argument in the first edition of *Embryos and Ancestors*. This appeared in a revised edition in 1951, and the volume under review here represents the third edition. None of the previous versions or editions has been reviewed in *Science* or was reviewed in the *Scientific Monthly* (a fact interesting and probably significant in itself). Nevertheless, since early

editions of the book have been so widely read, it seems more appropriate in this review to compare the present edition with its predecessor than to discuss it as a completely new contribution to knowledge.

The third edition is a thoroughgoing revision of the second; the whole text has been reset. The main organization of the book is much the same, although some passages have been shifted in position and the chapter on the evolution of the coelenterates, which occupied two pages in the second edition, has been eliminated as a separate chapter, its content having been incorporated into the chapter on the germ layers. Clarifications and minor changes of content and of references are liberally scattered throughout the whole text, and in a number of cases actual interpretations are modified. The author, for instance, goes to great lengths in both the second and third editions to distinguish between neoteny and paedogenesis, yet one generalization specified as concerning neoteny in the second edition is referred to as paedogenesis in the third. One of the general conclusions in the second edition reads: "Phylogeny plays no causal part in determining ontogeny except in so far as past external factors have been responsible for exerting selection and preserving those internal factors which are operative in the ontogeny of the descendants." In the new edition this is shortened simply to "phylogeny plays no causal part in determining ontogeny." De Beer has also introduced some new terminology, designating as *neanic* novel evolutionary characters which have made their appearance early in ontogeny and as *ephebic* those which have appeared at later stages in the life history of the individual. The principal change in the new edition is one of size. While the actual text (minus bibliography and index) of the second edition occupies 142 pages, that of the third fills 174 pages. The bibliography is increased from more than 270 references to over 350. One new illustration has been added, and one new table, both from the work of A. H. Schultz.

The material added in the latest edition includes amplification of what was said, in the earlier editions, of the positions of the classical authors of the 19th century, and also the exposition and discussion of new data, some of which became available only after the appearance of the preceding edition. In some cases, in the text and in one table, examples are multiplied—in particular, more evidence is drawn from the plant kingdom than in the previous edition. Where new evidence is brought in, it is drawn principally from the same fields as in earlier editions—from the study of morphogenesis, taxonomy, natural history, evolution. Since so much of the argument hinges on

the time of action of genes, it is a great pity that no reference is made to von Ubisch's success with androgenetic merogony or to Briggs' success with nuclear transplantation. De Beer has failed, furthermore, to take up any of the modern studies on developmental genetics which are so apposite to his theme and thus has missed his opportunity to effect the synthesis between embryology, genetics, and evolution which he has stated to be his primary aim.

A number of embryologists now question whether attacks on the recapitulation theory are any longer necessary. Certainly a number of recent textbooks, while they may still describe the doctrine, refute it at the same time, and there seem to be increasingly fewer which labor it as tenable. Whether or not, however, belief in recapitulation is a present danger, de Beer's continuing attempts to bring together data from embryology and evolution are commendable, and the resulting books provide stimulating collateral reading for students.

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Pollen and Spore Morphology/Plant Taxonomy. Gymnospermae, Pteridophyta, Bryophyta. (*An Introduction to Palynology*, vol. 2). G. Erdtman, Ed. Almquist and Wiksell, Stockholm; Ronald, New York, 1957. 151 pp. Illus. \$8.

This volume is divided into three parts. The first and major portion is devoted to illustrations of pollen grains of 57 genera of gymnosperms and of spores of 113 genera of pteridophytes and 69 genera of bryophytes. The second section, by B. Afzelius (Gulveg), discusses new methods of studying the wall structure. The third part, by J. Eadwan Pragloiski, is on the preparation of ultra-thin sections.

The pollen and spore illustrations depict distinguishing characteristics of one or more species, either as entire palynograms or as sketches illustrating structural details of the exine or sclerine of similar species or genera. The text for these illustrations will be published as volume III of the series. This is the first comprehensive coverage of these categories on a world-wide basis. Figure 2 is especially helpful to beginning palynologists in that it shows lateral, distal, and proximal perspective sketches of the same grain. Fern spores have been illustrated previously by many authors, usually for local geographical areas, but this treatment brings into one place illustrations of genera that are found in widely separated floras. Very few authors have