Part I, recording the proceedings of the meteorological section of the meeting, was also published in 1957 as a special supplement to the same journal as well as in the hard-cover edition.

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The College Influence on Student Character. An exploratory study in selected colleges and universities. Edward D. Eddy, Jr. American Council on Education, Washington, D.C., 1959. xii + 185 pp. $3.

In this study the provost of the University of New Hampshire and two recent college graduates (Mary L. Parkhurst and James S. Yakovakis) have contributed a most sensitive understanding of influences in college which have a lasting effect on students. The study was prepared for the American Council on Education because the council felt an "urgent necessity to develop in oncoming generations the strength of character to match the responsibilities that will be heaped upon the educated leader."

The purposeful search of the investigators for experiences inside and outside the formal educational process which touch the intangible phenomenon called "character" was conducted in a way which gives the findings unusual authenticity. Extended, on-the-spot observation at a diverse group of colleges, was coupled with incisive discussions with students, faculty, and counselors to produce fresh, lively, and strikingly candid testimony about what actually happens to students, in a personal sense, as they go through college.

The accent of the findings is impressively positive, but not complacent. Students respond when they are given responsibility, but it must be real, not fictitious, responsibility. They rise to a high level of performance, moral as well as intellectual, when a high level of expectancy on the part of the college community challenges them. They do build upon the insights of the teacher who has integrity and vision, but he must be a genuine article, for students quickly detect a "phony."

The central conclusion is that the dual goals of intellectual excellence and force of character are inextricably interwoven in the truly educated man. So the elements in the campus community which encourage character are those which also encourage learning. "The college," these observers believe, "finds its greatest contribution to the student in the Socratic theme that the unexamined life is not worth human living." Excellence of character will emerge as students are prodded to a more searching and strenuous intellectual development.

This vindication of the academic vocation in terms of its moral potential does not agree with the profile drawn of contemporary college experience in several other recent studies. Many students today can apparently refine their intellect without a corresponding enrichment of character. They seal off their moral control tower—the mechanism by which they reach value judgments—from the influx of intellectual communications. On many an American campus, a hiatus splits the educational process from the real life of students and the student's learning from the values he holds. An educated but morally *irresponsible* college graduate probably emerges far more frequently from the academic assembly line than does Eddy's intellectual of "Socratic-character."

What makes this inquiry so significant, however, is that it may have hit upon some of the vital influences which make the difference in the human outcome of the educational process. The Eddy report might well have been subtitled "A guidebook on how to avoid futility in liberal education." To educators concerned with the growth of the person as well as the mind of their students it will furnish encouragement and direction as they struggle against sweeping automation in the college industry.

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Free Radicals as Studied by Electron Spin Resonance. D. J. E. Ingram. Academic Press, New York; Butterworths, London, 1958. 274 pp. Illus. $9.50.

The development of paramagnetic resonance spectroscopy has opened new avenues in free radical research. Information and knowledge in this field have increased rapidly in recent years, and considerable future advances have to be anticipated. In this situation the monograph by Ingram fills an urgent need: it gives an excellent introduction to the field and a critical, systematic evaluation of the available experimental data.

The first four chapters of the book deal with the "unchangeable" facts: basic ideas, well-established experimental designs and methods, and basic molecular theory. The following five chapters discuss and summarize applications and achievements—physical, organic and biochemical, biological, and medical—in the physics of the field where many new facts have been discovered and existing theories could be confirmed. Of special interest are the applications of the method to radiobiological problems, where the existence of long-lived, radiation-produced radicals could be demonstrated and where the method is soon to be applied for the measurement of the life span of short-lived radicals produced in biological systems during irradiation.

Thus, the book will be more than a reliable source book of information and knowledge; it will also be a guide to further research in this steadily-growing important field. It is one of the standard works on free radical research which should be available in every laboratory.

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The Gulf Stream. A physical and dynamical description. Henry Stommel. University of California Press, Berkeley; Cambridge University Press, London, 1958. xiii + 202 pp. Illus. $6.

This well-written and stimulating book is a noteworthy contribution to the literature of oceanography and geophysics. The author summarizes the distribution in the northwestern Atlantic of temperature, salinity, other properties that characterize certain features of the Gulf Stream. However, he is careful to point out that although the name of this great ocean current is a familiar one, it is no easy matter to describe it accurately. The observational data can be interpreted in a variety of ways, depending upon the preconceived ideas of the compiler and the geographic pattern of the observations available to him. The computed values of current velocity and volume transport depend upon the selection of the level of no motion; even direct measurements of current are subject to these same uncertainties. In part these problems reflect the lack of adequate theories that should provide a model that could then be tested by properly planned field measurements. However, the theoretical oceanographer has been handicapped by the lack of an adequate description of the phenomenon he attempts to explain. This has led to what Stommel calls "the peculiar dreamlike qualities" that have characterized many of the descriptions and discussions of ocean currents. Stommel has made great contributions in recent years to a more rational attack on the problem of oceanic circulation.

The greater part of the book is devoted to a review of the theories of ocean currents. Stommel has broad theoretical interests, and he has also made many original observations on the Gulf Stream. Because of his background and interests he is uniquely qualified to write this book. Since its establishment in 1931,