stantially increased. However, the original objectives—to teach fundamental organic chemistry and to give the student an opportunity to unify his knowledge of the field—have been retained. The "Tables of derivatives" have been expanded from 2000 to 2700 entries. The only change in the sets of problems are minor deletions in sets 1, 6, and 10. A few new problems, whose answers would not be available in the fraternity files kept on many campuses, would have been welcomed by those who have used previous editions of the text.

The authors are aware of the fact that the advent of many instrumental methods of analysis means that it is possible to identify several substances without recourse to the more laborious and slower chemical reactions. They contend, however, that a student who plans to do basic research on organic compounds must have a thorough understanding of the chemistry of functional groups no matter what the nature of his research may be. Although many teachers of organic chemistry prefer to include qualitative organic analysis with the introductory laboratory work, it seems that a worthwhile case can still be made for teaching a separate course in this area. In an age when descriptive chemistry is fast fading from the curriculum, this method of approach to the subject matter is an excellent teaching device, and the authors of this text are to be commended for their attempts to keep the material up to date. The book is recommended without reservation, especially to the young instructor embarking on a teaching career.

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Hypotheses and Data

Advances in Experimental Social Psychology. vol. 1. Leonard Berkowitz, Ed. Academic Press, New York, 1964. xiv + 319 pp. Illus. $9.

In the editor's preface, Berkowitz suggests the *raison d'être* of this stimulating collection of monographs—". . . it is the integration of facts with which we shall be primarily concerned." At a time when almost every new book in social psychology is a collection of reprints, this creative endeavor, the first in a series, is most welcome. Here is a judiciously selected pot pourri of original monographs that can inform the professional social psychologist as well as the psychologist outside of social psychology, who is genuinely interested in finding out what contemporary social psychological experimentation is all about. For example, although I am well acquainted with the current experimental literature in the area of social motivation, I found the monograph by Walters and Parke, "Social motivation, dependency, and susceptibility to social influence," the most effective statement that Walters has yet made of his notion that the ". . . relationship between such variables as social deprivation, dependency, self esteem, and various measures of social influence . . ." can be explained in terms ". . . of the development of habits of orienting and attending to others" and the ". . . behavioral effects of variations in emotional arousal."

The papers by Stanley Schachter, "The interaction of cognitive and physiological determinants of emotional state," and William J. McGuire, "Inducing resistance to persuasion," can be especially recommended to those "hard headed" experimentalists who are perpetually dubious about the possibility of doing good manipulative experiments in areas like emotion and attitude change. McGuire's monograph is particularly useful to the novice, since it is McGuire's first integrative theoretical statement pertaining to a series of complex, interlocking experiments that are designed to explore the power of the "inoculation model" in building defenses against persuasive attempts. When viewed in overall perspective, the logic of McGuire's research strategy stands out in sharp relief and is all the more impressive.

The area of small group research is also well represented by papers contributed by William A. Gamson, "Experimental studies of coalition formation," Marvin E. Shaw, "Communication networks," and Fred E. Fiedler, "A contingency model of leadership effectiveness." Gamson's deftly done critical review of theory and research in coalition formation is particularly outstanding for its clarification of basic concepts. His definition of a coalition as involving " . . . the joint use of resources to determine the outcome of a decision in a mixed motive situation involving more than two units," represents an important step forward in delineating the boundaries of this often loosely defined domain.

Berkowitz points out in the concluding section of his preface that "some problems obviously cannot be investigated adequately under the restricted and usually short-lived conditions of the laboratory." It is in this spirit that the monographs by Harry C. Triandis, "Cultural influences upon cognitive processes," and William A. Mason, "Sociability and social organization in monkeys and apes," are included. Both monographs represent a scholarly and effective integration of the existing evidence in these areas.

In concluding this review, I can do no better than to quote once more from the editor's excellent preface—"By presenting their hypotheses, the writers have contributed to the data collection and theory development that will question their own formulations." I can think of no more important function that a series of monographs could serve.

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Ethics as Technology

Ethics and Science. Henry Margenau. Van Nostrand, Princeton, N.J., 1964. xii + 302 pp. Illus. $7.50.

The hope implicit in Margenau's book is not difficult to grasp; familiar with and impressed by the progress of physical science, Margenau wishes to find parallel possibilities for ethics so that it too can progress. The physical sciences have their postulates; ethics has its postulates which it calls "imperatives." There is a kind of progressive verification in the sciences when things turn out to be the way the postulates predicted; comparably, ethical imperatives can be "validated," and validated empirically, since each of them is but a rule that tells us what to do to reach certain "primary values." We either can or can not reach those primary values by following the prescription of the imperative. The reader is cautioned that such a process of testing is difficult, that already we have much human experience to throw into the pot, and that such testing is far more difficult in this area than in, for example, astronomy. What about the "primary values"—

they are just freely posited and not deducible from anything else. But finally "as a practical antidote to this excess [of emphasis on the arbitrary nature of ethical imperatives] let us merely note the overwhelming unanimity that exists among people in all parts of the world with respect to the validating principles of ethics. I think humanity could agree without prompting that happiness, benevolence of fellow men, and peace are among them; and with that modicum of agreement ethics if conceived correctly as an empirical enterprize could go a long way" (p. 175). And there are other parallels: just as in physics no single observation counts decisively against a theory of some generality, similarly, in ethics no single man's experience is to be counted decisively; observations *en masse* would be weightier.

If the reader begins to yawn, his enthusiasm might be freshened by Margenau's evident admiration for the progress of science and his hopes for similar "progress" in ethics. But the progress he conceives of surely has nothing to do with any substantive question in ethics, and, in fact, seems almost designed to extinguish the very raising of any such question. These questions have to do with those "primary values" about which Margenau gives us his personal assurance there is an "overwhelming unanimity . . . among people in all parts of the world." Unfortunately these "primary values" are never defined in this book; it seems virtually certain that even the slightest attempt to define a single one would end once and for all that "overwhelming unanimity" that Margenau sees. If every other serious ethical thinker devotes a major portion of his attention to the clarification of various possibilities and various meanings of "happiness," Margenau, in the case of G. E. Moore, finds such effort "manicured verbosity" (p. 106); after all, he has world unanimity on his side, a side, moreover, that remains utterly undefined. But he has hopes that "modern sociology" may come to the rescue: "These qualities [happiness, self-fulfillment, and the rest] would then become measurable, and this would enhance the precision of their meaning" (p. 167).

What is one to think of such an ethics conceived of as an "empirical enterprize"? That the whole enterprize has nothing to do with any serious ethical question, I have already suggested. Serious ethical questions are precisely questions *about* those "primary values"; they do not presuppose answers, let alone answers to be derived from worldwide unanimity. Consequently, to be successful, the enterprize must beg the question of precisely what "happiness" is, under what terms "peace" is acceptable, the identity of the self that is to be "fulfilled," and how "benevolence" is to be understood—in short, the staple questions of serious ethical discussion. It is only *after* these things are stipulated or derived from worldwide unanimity, that the "enterprize" can get off the ground. And yet stipulating answers to these questions, or generalizing answers from worldwide unanimity, hardly seems to be a contribution to any man's ethical thinking. For Margenau all ethical questions are already solved; we know where we want to go, and the only question is how to get there. If that were the case, or if that ought to be the case, then, indeed, we should march forth to find the correct recipes. And those recipes could indeed be "validated" empirically. But if ethical questions are more serious business than that, it is hard to see what Margenau's theory (which, in outline, is dismissed in a paragraph of Kant's *Critique of Practical Judgment*) contributes, except to quench ethical questioning. There must be some primary questioning of what either "we" or the whole world take for granted as values, if ethics is to express any ethical man's situation. Once that questioning ceases, that is, once the freedom of man is denied, then indeed we can look for recipes for a preconceived "happiness" or "peace," and then indeed ethics might begin to look like an "empirical enterprize." What is left over is the question of whether this isn't the extinction of ethics rather than its proper method.

It would be pleasant to end this notice with some attention to the merits of the work, but unfortunately they escaped me. The symbol-rattling and the diagrams symbolize and diagram the obvious and conceal the genuinely problematical; the erudition is parochial; the argument winds through private quarrels with his colleagues—Northrup, Sheldon, and Blanshard; the book remains an elementary and confused effort.

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Inherited Differences

Molecular Biology: Genes and the Chemical Control of Living Cells. J. M. Barry. Prentice-Hall, Englewood Cliffs, N.J., 1964. x + 139 pp. Illus. Paper, $3.35.

In this time of such swift and controversial advancements in the field of molecular biology, the mere attempt to write a textbook is laudable. That such an attempt includes, in a very succinct way, most of the major ideas of the day and that these ideas are supported, in part, by experimental design and results is better yet. J. M. Barry has done this in just slightly more than 100 pages in *Molecular Biology: Genes and the Chemical Control of Living Cells.* The brevity, of course, necessitates some gaps, but, fortunately, most of these are relatively inconsequential. Since this book is one of a series in modern biology, it will hopefully be complemented by the volumes that follow.

It is refreshing to see the author of a textbook point out that Mendel's work was not really lost in an obscure journal at the time it was published. However, Barry could probably be a little more academic in presenting, to beginning students, a scientific approach to theory: for example, such statements as the following, ". . . the laws of nature prevent us from ever gaining enough precise information about them to predict accurately their future behavior" (p. 33), hardly befit a science text written at any level. Further, Barry's own opinions about what are the best and what are the poorest experiments should probably be qualified.

Today, in the field of molecular biology, it is dangerous to state what is correct and what *might* be correct. Barry has been extremely cautious in putting forward some theories and excessively incautious with others. This may be permissible when writing for other researchers in the field but not when writing for the beginning student.

The book is generally quite readable, with only occasional twists of syntax, and is a welcome addition to a hopefully continued series. I predict, however, that its "half-life" will be relatively short.

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