tastic reconstructions of what went on in these caves, emphasizing particularly sexual orgies and the initiation of frightened youths. Fat women and pregnant or copulating animals are read as fertility symbols, but primitive hunters know little of fertility, even today. Their job is to catch, not to breed, animals, and as every hunter knows an animal is most easily killed when preoccupied with sex or heavy with young. Fat women are no more fertile than skinny ones, just softer, warmer, and more conspicuously well-fed.

Another cliché of cave-art interpretation is that the masked or disguised men are all potent shamans or sorcerers. In primitive societies masks and disguises are almost universal and serve several purposes. Many of them, particularly among hunters, represent animals. They may symbolize an animal who once entered into a close relationship with an ancestor through some kind deed. Wholly without abstract symbolism they may represent a hunter disguised as an animal and mingling with an unsuspecting herd until close enough to strike.

Such disguises can be used in ceremonies, even little plays, which welcome the ancestral spirits home for the winter and bid them good-bye in the spring, or as disguises to conceal the identities of individuals in initiations or secret executions. If these figures represented deities such as the "owners" of animal species, one might expect them to be executed with as much care as the animal figures themselves, which is rarely the case.

In the Addaura cave etchings an actual scene is shown. Two men, apparently trussed up Commando-style, with heels held behind buttocks and tied by a cord running up their backs to their necks, flounder around with either erections or penis-sheaths in the midst of a circle of spectators whose arms are raised. What this window on the past means many have fancied but no one knows.

May I conclude by saying that looking at the plates of this book is an experience which cannot be conveyed by a subesthetic scientist in a review. Those interested will have to look at it themselves, or better yet visit the caves, with their hands behind their backs.

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Special Relativity. W. Rindler. Oliver and Boyd, Edinburgh; Interscience, New York, 1960. 196 pp. Illus. $2.25.

This textbook of the special theory of relativity covers all the essentials of the subject at a level that can be managed by a better-than-average undergraduate. Most of the results are presented in both four-dimensional and three-dimensional notation. Many of the exercises present real challenges and cannot be answered without some conceptual effort. Though the book appears to be conceived primarily for the type of instruction common in British universities, it might well be used in the United States, either as a basic text in a regular course on special relativity, or in an undergraduate honors course or seminar.

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The Bacteria. vol. 1, *Structure*. Irwin Clyde Gunsalus and R. Y. Stanier, Eds. Academic Press, New York, 1960. 513 pp. Illus. $13.

Not since Duclaux's *Traité de Microbiologie*, published more than half a century ago, has so comprehensive a treatise on a bacteriological subject been published as this series will represent. That five volumes are taken to do justice to the bacteria and that, even then, they deal almost exclusively with the true bacteria testifies to the amazing expansion of bacteriology, especially in the last 20 years.

Whereas the undertaking was heroic, the fulfillment, judging from the initial volume of the series, has to be regarded as short of outstanding. True, most of the important, recent, factual information on eubacterial anatomy is there; one can find no major fault with the adequacy of the volume in this regard. Yet, in spite of this and in spite of the major-league caliber of the contributors, this particular book is unlikely to become the microbiological classic to which it obviously aspires.

To those familiar with Topley and Wilson's masterly *Principles of Bacteriology and Immunology*, a treatise which in the coverage of its particular areas is comparable to *The Bacteria*, the contrast between the two major works is immediately evident. If I were allowed but one observation to distinguish the two, I would say that Topley and Wilson synthesize their field whereas Gunsalus and Stanier dissect theirs. Both stylistic approaches have their devotees, but the influences and longevity of the former are greater and infinitely more stimulating and gratifying.

This first volume of the proposed set is a tremendously uneven collection of reviews, divided according to the various anatomical parts of the bacterial cell. To be sure, the editors apologize in the preface for the disparities, but even they must have—or should have—grimaced painfully when sandwiching these chapters between the covers of one book. The conspicuous, avoidable defects of the last comparable multi-authored treatise on bacteriology—namely, Werkman and Wilson's *Bacterial Physiology*—should have forearmed Gunsalus and Stanier. This raises the question of the function of the editors in an enterprise of this nature, on the assumption that they are not mere figureheads.

In short, this volume, while doing a competent journeyman job, is singularly imperceptive of the larger and more meaningful opportunity which still cries for materialization. The void is all the more conspicuous now, but we shall be sustained by the belief that some microbiological scholar, who is also facile of expression, will, with perspective and insight, fuse the diverse elements of bacteriology into a profluent magnum opus that will be a focal landmark, as well as a milestone, in the field.

The individual chapters are as authoritative as one could wish; they were written by investigators most of whom are regarded by some others, and by themselves, as high priests of bacteriology. The articles are virtual ringers for the several reviews on the same topics which have appeared in various journals and symposium volumes during the past few years under the names of many of the very same authors. As mentioned above, this is essentially a collection of updated reviews. Beginning students and other novices will be greatly serviced by this convenient source of salient facts and by the extensive up-to-date bibliographies. The book, and its succeeding companion volumes, will be a godsend to every Ph.D. candidate in all branches of microbiology.

Disregarding the heterogeneity and disproportion of the treatments, most of