other case of job discrimination. Many, but not all the women holding this title, were appointed merely as assistants to someone in tenured or tenure-track rank. Nor were the men invariably the ostensible principal investigators who applied for, and received, grants. I, for one, held this lowly rank but nevertheless worked and published independently and received numerous grants in my own name.

The astronomer E. C. Pickering (1846–1919) of Harvard has frequently been criticized for assigning to women only subordinate or routine tasks. One should, however, remember that he was among the first to open the door, at least halfway, to women. The first pioneering step in opposition to tradition is always the hardest.

Readers will find what Gornick presents informative and stimulating. As she demonstrates, women have won much ground since World War II, but vigilance on their behalf is still in order.

Supersymmetry and Supergravity

J. Wess, J. Bagger
180 pp. Princeton U.P., Princeton, N. J., 1983. $40.00

Supersymmetry and Supergravity by Julius Wess and Jonathan Bagger, based on lectures given by Wess at Princeton University, is an introduction to $N = 1$ supersymmetry and supergravity (N represents the number of spinorial charges in the underlying supersymmetry algebra). The first part of the book deals with developments in global supersymmetry leading to the construction of supersymmetric gauge theories; the second extends these constructions to local supersymmetry. Throughout, the book is concise, to the point, and enjoyable.

It is more than a decade since the idea of supersymmetry was introduced in particle physics. During the intervening years there has been a phenomenal growth in our understanding of supersymmetry and its local counterpart, supergravity. The basic attraction of supergravity is that it provides the only conceivable theoretical framework that allows for a possible unification of gravitation with the other fundamental forces of particle physics, that is, the electroweak and the strong interactions. While supersymmetry and supergravity have been, perhaps, the most novel innovation in theoretical particle physics over the past decade, their relevance to nature remains to be tested. According to the current thinking, we have the best chance of observing supersymmetry in the effects predicted by the unified gauge models that have recently been proposed using $N = 1$ supergravity. Most of the predicted effects are small, consistent with known experiments, and require further refinements in the experiments or higher energies (perhaps in the TeV domain) for their observation. Supersymmetry just might be a new frontier of particle physics. The current stage of interest in supersymmetry and supergravity is based on this hope.

This book, however, as the authors themselves point out, is not meant to be a systematic development of the subject. It does not compete with the 1977 *Physics Report Supersymmetry* of Pierre Fayet and Sergio Ferrara, the 1981 *Physics Report Supergravity* of P. van Nieuwenhuizen or the more recent book *Superspace* by S. J. Gates Jr, Mark Grisaru, Martin Rocek and Warren Siegel. The book does suffer from a paucity of references to the work of other authors, which might be caused by the motivation behind the present book. Wess remarks in the preface that the book is an attempt to explain the approach he and Bruno Zumino followed in their work on supersymmetry and supergravity. In this explanatory effort the book undoubtedly succeeds.

The introductory nature of the book makes it useful for beginners to gain a quick entry into the field and to develop a working knowledge of supersymmetric gauge theories. However, because most of the recent developments are sidestepped completely, researchers in the field would find it less attractive.

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Introduction to Health Physics. Second Edition

H. Cember
519 pp. Pergamon, New York, 1983. $60.00 cloth, $29.50 paper

The long-awaited second edition of Herman Cember's *Introduction to Health Physics* is a welcome sight. The 1969 edition has served seniors and first-year graduate students well as a text in radiation protection. The new work is timely, because much of the original material is now out of date.

Health physics, aiming to protect human beings and their environment from radiation, balances the need to reduce exposures to radiation as much as practicable against the benefits radiation can bring to physics, medicine and industry. Cember's book gives a systematic treatment of the relevant physics behind radiation protection and, applying the physics, describes methods for monitoring radiation and controlling exposures. Until several years ago, "radiation" in health physics meant *ionizing* radiation; today, health physicists are also concerned with nonionizing microwave and laser radiations.