

dramatically between 1900 and 1950, but we do not learn how such changes influenced Alexanderson's work or how his accomplishments altered the firm.

With respect to the common assumptions about technological innovation, Brittain persuasively shows that electronics did not spring entirely from theoretical physics. Much of the creative work involved translating the science into practical devices, and this work was done by engineers such as Alexanderson. In tracing how Alexanderson moved easily between power engineering and radio electronics, Brittain reminds us that innovation is not the result of specialization as much as it is the product of cross-fertilization. Finally, he reveals how strongly electronics was shaped by the work of an individual. All too frequently, both contemporary observers and historians of R&D overemphasize the role of teamwork and downplay the role of individuals in providing original ideas, the vision of a new social and technical order, and the leadership needed to implement the vision. More than anything else, Brittain demonstrates in this fine biography that individual engineers such as Alexanderson have indeed played a profound role in

shaping both the technology and the culture of the 20th century.

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Female Functioning

Periods. From Menarche to Menopause. SHARON GOLUB. Sage, Newbury Park, CA, 1992. xiv, 282 pp., illus. \$38; paper, \$18.95.

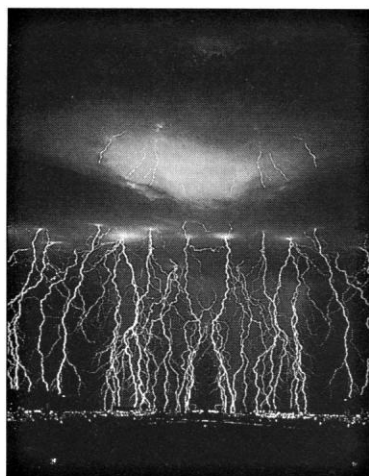
Menstrual Health in Women's Lives. ALICE J. DAN and LINDA L. LEWIS, Eds. University of Illinois Press, Champaign, IL, 1992. vi, 301 pp., illus. \$37.50; paper, \$16.95. Based on a conference, Galveston, TX, 1985.

Twenty-five years ago an activist women's health movement emerged in this country that had broad popular appeal; a representative text, *Our Bodies, Ourselves*, is now in its fourth edition, having sold more than three million copies and been translated into more than a dozen languages. Explicitly feminist,

this movement was critical of received medical knowledge and practices on two grounds: diseases primarily affecting women were being neglected (both in federally funded health research and in clinical practice), and entirely expectable events in women's reproductive lives (childbirth, menopause, the late luteal phase of the menstrual cycle) were being interpreted as potential health risks requiring medical management.

Critiques of the latter practice came both from within and from outside scientific communities. It was argued that a reductionist "biomedical model" (a set of concepts embedded in the practices of medicine and other socially powerful institutions) often inappropriately "medicalized" women's lives by focusing on biological events in isolation from their social and psychological contexts. When these biologized representations of women are taken up in the broader culture, they sometimes are represented as offering a scientific basis for resolving controversial social questions. (For example, a July 1970 *New York Times* article was headlined "Women Unfit for Top Jobs" because of the "raging hormonal influences of the menstrual cycle.")

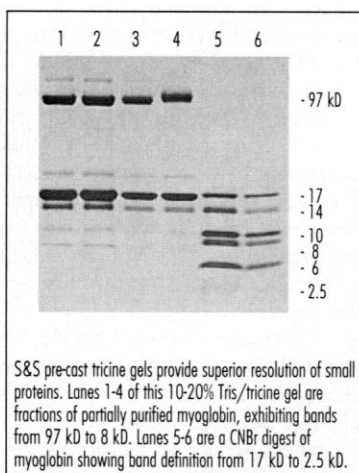
The two books under review report and summarize menstrual-cycle research shaped



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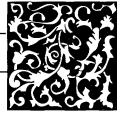
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Vignette: Special Necessities

I use an exercise in my social psychology classes—a simulation of a disaster—in which small groups of students are asked to draw up a list of the 10 things they would want to have in their “survival cells.” Perhaps because I teach at a women’s college and students are less embarrassed than they would be in a co-ed situation, menstrual protection appears—along with blankets, first aid kits, and books—on almost every list.

—Sharon Golub, in *Periods: From Menarche to Menopause*

by the concepts and concerns of the women’s health movement and addressed in part to the role scientific data can play in gender politics. *Periods: From Menarche to Menopause*, by Sharon Golub, is an accessible book summarizing research on a broad range of issues: the meanings of menstruation (cross-culturally and historically), menarche, physiological and psychological aspects of the menstrual cycle (including sexual behavior), menstrual variability and hygiene, dysmenorrhea, premenstrual symptoms and premenstrual syndrome, menopause. Despite the breadth of topics covered, references at the end of each chapter are comprehensive and up-to-date. (The indexing, however, is unpredictably incomplete.) The book is written in a readable style that combines clarity with concern for precision about empirical data and attention to their broader social contexts and significance.

Periods provides a useful overview of the by now large body of menstrual-cycle research conducted from a feminist perspective (mostly by psychologists, sociologists, anthropologists, and nurse-researchers). As such, it will serve as a good introduction to this work for students (especially medical students), for scholars in women’s studies, and for scientists in related disciplines. More generally, a serious reading of this book will be especially eye-opening for scientists who may still think “feminist scientific research” has an oxymoronic ring, or that good science must be isolated from social concerns, or that “feminists” think menstrual experiences such as premenstrual symptoms are “all in the head” (all views I have frequently heard expressed in 20 years of doing menstrual-cycle research).

Menstrual Health in Women’s Lives, edited by Alice J. Dan and Linda L. Lewis, contains reports of research presented at the 1985 conference of the Society for Menstrual Cycle Research (now in its 14th year, with several of its previous conference proceedings also in print). This book too is shaped by the perspective and concerns of the women’s health movement, and the papers have some com-

mon themes, identified by the editors in the introduction as an emphasis on normal experiences, recognition of interactions among many variables, and challenges to negative connotations of menstruation.

The papers are organized into sections on premenstrual syndrome, changes over the menstrual cycle, menopause, and “contextual issues for menstrual health,” with an editors’ introduction to each section. (In this book too the indexing is regrettably incomplete.) The collection as a whole is genuinely interdisciplinary, without the “center-periphery” representation of disciplines found in some multidisciplinary conferences and their proceedings. Contributors come from psychology, anthropology, nursing, history, sociology, physiology, chronobiology, women’s health, theology, primatology, public health, medicine, psychiatry, and education. The book seems conceptually coherent, however, because the papers do have common themes and to some extent common references to previous research in this relatively new field. The most visible manifestation of the interdisciplinary nature of the volume is in the writing style, which the authors and editors have intentionally adapted to be accessible to researchers in disciplines other than their own.

The papers on premenstrual syndrome in *Menstrual Health in Women’s Lives* report data bearing on the definition and differential diagnosis of premenstrual syndrome and its relationship to non-clinical premenstrual symptoms and on some biological (circadian-rhythm desynchronization) and social (stress) correlates. More diverse in methodology and conceptual frameworks are the papers reporting data on changes over the menstrual cycle: for example, one uses a procedure for an “on-the-spot” sampling of situations from everyday life (throughout the subjects’ cycle a “beeper” randomly indicates when during the day data on feelings, behaviors, and their contexts are to be reported), and two others propose and test dynamic models for changes in linkages among bodily states, situational demands, and meanings ascribed to symp-

toms. Still others report on cyclic changes in sexual arousability in women and sexual behaviors in non-human primates.

Research on menopause reported in this book departs even more clearly from the assumptions of the biomedical model. Cross-cultural anthropological data are reported showing that Mayan and Greek women experience menopause differently in ways that may be related to differences in their nutritional status and their fertility patterns; their experiences of and responses to hot flashes were also different (no Mayan woman reported having hot flashes or cold sweats; Greek women reported these experiences but were not bothered by them unless they believed their menopause was occurring particularly early or late in life). Filling notable gaps in the menopause research literature on North American samples, other papers report data on the menopausal experiences of African-American and Mexican-American climacteric women. An investigation utilizing a random community sample of climacteric women in New England and their physicians further underscores the significance of context in understanding menopausal experiences: when the women were asked to name the major health problem of midlife women, not one mentioned menopause, whereas 21 percent of their physicians did.

It is data reported in the section on contextual issues that most clearly provide a challenge to the assumptions of the biomedical model, however. They range from historical accounts of the social function of beliefs about the incapacities of menstruating women to investigations of menstrual synchrony and of seasonal cyclicity to an exploration of ways parents’ interactions with their daughters change after menarche to an account of the social actors and interests determining how tampon safety is (and is not) regulated.

The data reported in *Menstrual Health in Women’s Lives* are clearly relevant for understanding the interplay of biopsychosocial processes shaping women’s menstrual experiences, yet most of them would not, *could not*, have emerged from research based on the assumptions that underlie most of the biomedical literature on these topics. Since assumptions of the biomedical model highlight potential biologically based health risks and largely ignore psychological and social contexts (and many biological ones as well), assumptions about context remain tacit and are very rarely tested empirically. These books provide data, methods, and concepts that will enable scientists who take them seriously to go beyond “medicalization” of women’s menstrual experiences to address a more complex—and interesting—set of scientific questions.

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