merits of Barney's "case method"; even the kineticists in our midst matured via Dodge's "Chemical Engineering Thermodynamics."

In this present age of devotion to "student-teacher evaluations," I doubt that Barney would fare very well—unless the students were required to render their assessments of him five or ten years after having suffered through his lectures. They might then, as I have, realize that their suffering was not in vain—indeed the fruits of our labors are great. For Barney imposed realities upon us while maintaining scholarly rigor with respect to the principles of chemical engineering; in particular, thermodynamics. And although his text on that subject is a classic, his research interests were catholic. Before absorption and simultaneous chemical reaction was formally acknowledged, B. F. Dodge directed seminal research in that area.

He was a precise and candid man, virtues hopefully still with us. Should we become devoid of these merits, it is solely because we suffer a paucity of great men such as B. F. Dodge. While we mourn his absence, his presence will not be forgotten nor will our love of him diminish.

I have no doubt that he arrived in the hereafter precisely on time and immediately proceeded to remind Plato of the first Three Laws to the everlasting joy of, amongst others, his great friend, R. Harding Bliss. □

ChE book reviews

FLUID FLOW AND HEAT TRANSFER
By Aksel L. Lydersen
John Wiley and Sons, 1979; 357 pages, $53.95 Hardbound, $22.50 Paperback

Reviewed by Kenneth J. Bell
Oklahoma State University

This book surveys a wide variety of subjects in fluid flow and heat transfer; in addition to the more obvious topics, there are chapters on Particle and Drop Mechanics, Liquid Filtration and Flotation, and Atomization, Dispersion, Homogenization, Crushing and Grinding. There is also a short chapter on Energy Economy. The general level of the treatment is at what might be termed the first professional level: these are the pieces of information and the equations that would be needed by a process engineer carrying out preliminary plant design. The need is to get reasonable answers to a wide variety of problems quickly, leaving the detailed design to be worked out later by specialists.

Little space is spent developing anything that might be considered a theoretical base if it does not contribute directly and immediately to problem solving. On the other hand, all working equations are there together with the necessary charts, tables, and nomograms to permit complete and consistent calculation of the answer required. There is also enough description of the various types of equipment to allow the non-specialist to make intelligent selections. Also, there are numerous completely worked-out examples (some of them of considerable complexity) which well illustrate the proper use of the design equations. Finally, the author includes a number of comments concerning points frequently overlooked or misunderstood by designers. If the book has a technical weakness, it is that the references that are given tend to be quite venerable so that anyone seeking additional information is going to be about ten years out of date.

So much for the technical content of the book. Where does it fit into the engineering curriculum? This is not so easy to answer. The book will not do for the introductory courses in fluid mechanics and heat transfer because of the almost total lack of presentation of fundamental material and the derivations of the working equations. It would perhaps be suitable for those few curricula which have advanced applied courses in these topics, but the faculty member would want to do a lot of updating with recent literature.

The book would be an excellent supporting volume for an undergraduate (or even a graduate) design course, but it cannot take the place of one of the books specifically oriented towards that topic (e.g., Peters and Timmerhaus). It is doubtful that it would be fair to expect a student to pay as much money as this for a purely subsidiary reference book, especially since much of the material in this book is to some extent covered in Perry's Handbook.

If it is hard to see where it fits into the chemical engineering curriculum, it is easy to recommend this book to the practicing engineer, especially one just beginning his career in process

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semester; one for seniors and one for graduate students. These tend to be more mathematically oriented. "The graduate courses are always pleasant because I usually get quite a few questions from the students and we have good discussions. But there is a lot to cover, so I wind up talking quite a bit," he says.

Bennett's teaching has had great influence around the world, since he has taught students on four continents—North and South America, Africa, and Europe. His first overseas teaching venture (at the University of Nancy in France) came in 1952, and reflected the influence of his continued love of the French language and culture that developed in his high-school and Yale days.

During his first visit to Nancy, Bennett helped form that university's chemical engineering department, according to one of his French colleagues, who added, "Having Prof. Bennett with us was extremely valuable. We benefited from his American experience and he gave us good advice on organizing courses and problems, on establishing laboratory experiments, as well as on the construction of buildings, and above all, the unit operations laboratory." During another visit to France in 1970-71, Bennett participated in research at Nancy on the design of catalytic reactors, and "made important contributions in the conceptual design of laboratory reactors," according to a colleague there, who also believes Bennett played a role in developing chemical engineering throughout France. He goes on to say, "Thanks to his perfect knowledge of the French language, Bennett has many times been consulted by academic authorities and even national ministries concerning important decisions in the domain of chemical engineering. Prof. Bennett's advice has always been heeded and followed." It is not surprising that the Bennett and Myers textbook is one of the basic books used by French chemical engineering students.

France also called to him during his 1977 sabbatical year, which he spent at the University of Lyon. At Lyon he worked as a laboratory researcher, read a great deal, and got to work with some of the leaders in the field of catalysis, many of whom were at Lyon. "I learned a lot there, and it helped me quite a bit, and influenced my career, too." Bennett reflects. He still maintains a cooperative research relationship with the University of Lyon, and exchanges transatlantic visits with some of its researchers.

Bennett's other extended foreign involvement was with a country in a quite different situation, Chile. He spent a period in 1964 at the University of Santa Maria in Valparaiso (under an Agency for International Development contract), returned there in 1972 as an Organization of American States lecturer, and last visited there in 1979. Thus he was in a position to watch that country's descent into turmoil, from the apparent normality observed on his first visit.

Bennett's teaching visit to Vienna, was shorter, only about a month in 1971. He also made two trips to Algeria, where he taught natural gas processing.

At home Bennett finds pleasure in many things other than his work. Besides being a "gourmet eater" (his son Johnathan is a professional chef), Bennett also enjoys classical music and art. He started playing piano at the age of eight and can play Scott Joplin rags, "ineptly" he claims. Otherwise, his tastes run more to Mozart, Beethoven, and Brahms. His interest in architecture and art now has professional guidance, since he married a UConn art professor and Egyptologist, Jean Keith, two years after his first wife, Elizabeth Jane Balch, died. Bennett and Keith were married August 24, 1979, on the anniversary of the eruption of Mt. Vesuvius, which buried the Roman city of Pompeii in 79 A.D., "a date quite suitable for us," Bennett notes. □

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engineering or returning to it. In its area of coverage, this book is more convenient to use and more comprehensive than the handbooks and it has the very great advantage of the worked-out example problems. The references, if not last minute, are at least solid and extensive. And I can also recommend the book for the faculty member called upon to teach design classes to have on his desk as a handy reference. The comprehensive problems given at the end of each chapter will also be useful to the faculty member.

In summary, this is a solid contribution to the chemical engineering literature, even if it does not suggest itself as a vital component of the undergraduate curriculum. I am certainly pleased to have a copy where I can reach for it. □