

TWO GENTLEMEN FROM YALE

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R. Harding Bliss (1911-1971)

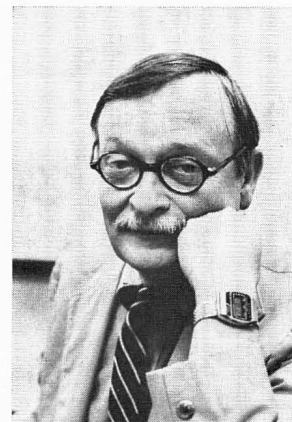
"Men," he remarked in the wake of one of our disastrous exam performances, "once again the Fourth Law is manifest—that Law in its original form states, you will recall, that there is always a parking spot on the other side of the street."

In an era which enshrines the illiterate, the "you know, man" cult of the witless who equate spasms with thought, he, R. Harding Bliss stands out, even in death, as a giant.

He taught from a wheelchair, a consequence of polio which was permanently visited upon him in the prime of his career. Yet that terrible infirmity failed to dampen his wit, charm, dedication to teaching and research. His was perhaps one of the first courses in Chemical Reaction Engineering to be offered in this country, if not in the world. It was a joy to participate in that offering, in spite of our all too frequent encounters with his Fourth Law. We did not "take" his course; rather we participated, for such was his zeal and humility that he wisely fashioned that course as an intellectual adventure marked by bilateral exchange—yet that classroom democracy never descended to the thought-barren level of a "rap" session. His was a classroom not a sandbox. It was a tough, demanding and therefore a most exciting arena. This was happily so because he was a tough, demanding and therefore a most exciting mentor. We loved him for those marvelous qualities enriched as they were by his wit and obvious love of his students. Such was that love that his departure from our midst ends not the grand affair. We love and are continually inspired by the memories. And I, for one, am seized by the intuitive vision of that grand gentleman of Yale now reminding Plato of the Fourth Law, to the everlasting joy of Dante and Bertrand Russell.

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J. J. Carberry, Professor of Chemical Engineering at the University of Notre Dame since 1961, received his doctorate at Yale in 1957, following undergraduate work at Notre Dame ('50) for which G. I. Bill-sponsored undertaking he prepped at Brooklyn Technical High School and, at FDR's invitation, in WWII. He spent six years with the du Pont Company, a few years at Cambridge (NSF-Sr. Fellow—1966; Churchill Fellow—1979/1982); was Senior Fulbright Fellow (Italy 1974) and in spite of his Irish-American heritage was elected Fellow of the Royal Society of Arts in 1980. Thus his is now an Anglo-Irish inheritance.

In 1968 he received the Yale Engineering Association Award for the Advancement of Pure and Applied Sciences and in 1976 was recipient of the R. H. Wilhelm Award (AIChE) in Chemical Reaction Engineering. He is a member of the Advisory Council for Chemical Engineering at Princeton University, an appointment apparently inspired by Nassau Hall's fond expectation that Princeton may now have fond hopes of winning a football game against Yale.*

Author of the text "Chemical and Catalytic Reaction Engineering" (McGraw-Hill) and co-editor of "Catalysis Reviews—Science and Engineering" (M. Dekker, Inc.), Carberry is now contemplating co-authorship with Aris McPhearson Rutherford of a seminal opus "Isaac Newton's Indebtedness to the Gill Report—Historical contrasts in Mercury Poisoning."

*They did.

B. F. Dodge (1895-1972)

We were accustomed to setting our clocks not by radio nor the Bureau of Standards, but by Barney Dodge's arrival at Sterling Chemistry Lab, Yale. A more secure standard did not exist. His scholarly standards were as precise as his office hours, and as consistent. His method of teaching leaned heavily upon the "case method." While some might question that as a philosophy of teaching, none of us, in retrospect, can question the

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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 inter-

ests 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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