BULLETIN (New Series) OF THE AMERICAN MATHEMATICAL SOCIETY Volume 1, Number 2, March 1979 © 1979 American Mathematical Society 0002-9904/79/0000-0109/\$01.50

A Handbook for Scholars, by Mary-Claire van Leunen, Knopf, New York, 1978, ix + 358 pp., \$12.95 (paperback \$5.95).

How does one write a good mathematics paper? By discovering good mathematics, to begin with—to make rabbit stew, first catch the rabbit. Then comes thinking the material through until it falls into the right order with the right emphasis; this is the cooking that makes the material digestible. But there are also special techniques for scholarly writing, the seasonings that make it fit to serve. Now by definition a mathematician can work out mathematics. Thesis advisers and referees when necessary give us some ideas on organization. For good advice on seasoning, turn to this new book by van Leunen.

Her advice of course is not directed just to mathematicians, and topics like punctuating verbatim quotations are more important in other areas. We may also feel a certain complacency when she advocates bracketed numbers and a list of references in place of bibliographical footnotes. But much of the book will be useful—there is even a careful discussion of how to write an academic vita—and it is all quite enjoyable to read. The tricks and conventions of scholarly writing are not intrinsically interesting, but van Leunen treats the topics like a bowl of peanuts: she sprinkles in just enough epigrammatic salt that the reader who has finished one automatically reaches out for the next. The following samples will suggest the flavor.

- —Some characteristic faults of scholarly writing result from authors' attempts never to call themselves anything at all. They seem to confuse objectivity with disembodiment.
- —Most of us who went to American grade schools can remember long hours of copying articles out of encyclopedias. "The abode of the penguin is a hard and difficult one." It was called doing research. Then in college we found it was also called plagiarism.
- —You may know from private knowledge that behind the initials of "M. H. Peters" lies Mandrake Hannibal, but it's no business of yours to tell the world. Familiarity is equally out of place. "G. Kitson Clark" is the way you style the author you are citing, even if he asks you to call him "Kitsy" over lunch.
- —Do I need to say that male and female authors are treated just alike? Apparently, since I just read an article in which C. Vann Woodward was consistently called "Woodward" and C. V. Wedgwood was consistently called "Cecily Wedgwood" or "Miss Wedgwood." A pox on false gentility.
- —Remember that "above" as an adjective falls in the appositive (following) position rather than the attributive (preceding) position—"the lemma above," not "the above lemma." I never heard anyone try to say "the below lemma."
- —If you find yourself writing an introduction that seems to be nothing more than a table of contents, why not substitute a table of contents?
 - -Sit down and talk over with your typist what you have in mind. There's

no point in treating a typist as if he were a back-alley numbers runner, to be greeted with a wink, a raised eyebrow, a shrug, and silence.

—The purpose of an abstract is to summarize, not to tease. Many authors find it painful to trot their results out naked before the world; they want to seduce, to captivate, to tantalize. What results is the abstract of the seven veils:

An advance in the definition of certain operators is made possible by the application of several recent results in complexity. Full details are supplied, and illustrative examples are included. Data on related findings are presented in the final section along with implications for further research.

In other words, what's in this paper is a secret.

- —Adding an exclamation point to a plain declarative sentence makes it not emphatic but pathetic. If you are ever in doubt about whether a sentence merits an exclamation mark, try shouting it out the window.
- —When explicit motivation is necessary, be on guard against grandiose, far-reaching statements. Early in my career I had the task of correcting an extraordinary essay from a student that began, "All the world is turning to thoughts of mortuary science."

A book like this cannot really be reviewed. It can be (and is) recommended.

WILLIAM C. WATERHOUSE

BULLETIN (New Series) OF THE AMERICAN MATHEMATICAL SOCIETY Volume 1, Number 2, March 1979 © 1979 American Mathematical Society 0002-9904/79/0000-0110/\$01.50

Hyperspaces of sets, by Sam B. Nadler, Jr., Monographs and Textbooks on Pure and Applied Mathematics, No. 49, Marcel Dekker, Inc., New York, 1978, xvi + 707 pp., \$45.00.

This book is concerned with the structure and topological properties of two hyperspaces 2^X and C(X) of a metric continuum X. Here 2^X (C(X)) denotes the nonempty compact (and connected) subsets of X with the Hausdorff metric. Mathematicians started investigating hyperspaces in the early 1900s. In the 20s and 30s the Polish School of Topology determined much of the basic structure of hyperspaces. Their work culminated in J. L. Kelley's 1942 paper [3] which brought together several diverse aspects of the theory for the first time. In the 50s E. Michael wrote Topologies on spaces of subsets [4] and a series of papers on selections [5], [6], [7]. These papers were used to great advantage in studying hyperspaces. In 1959, J. Segal [9] obtained a useful inverse limit representation of hyperspaces. Then in the 70s D. W. Curtis, R. M. Schori and J. E. West [2], [8] using newly devised techniques of infinite dimensional topology made an important breakthrough. They gave a positive answer to the long outstanding problem: If X is locally connected, then is 2^X homeomorphic to the Hilbert cube? More recently, H. Toruńczyk [10] has obtained an amazingly short proof of this result using his incisive character-