

should be of value to anyone interested in the development of analysis. I was taught that mathematics was the art of avoiding computation but that adage would have seemed strange to any of the mathematicians mentioned above. Indeed the advent of the electronic digital computer has wrought such a profound change in numerical methods that today's numerical analysis does not seem to owe much to yesterday's efforts. The problems are different, the tools are different, and so are the goals (tables are out, pictures are in).

In any case the character of modern numerical analysis is irrelevant to the value of this book. We should all be grateful to Goldstine (and to IBM) for giving us the opportunity of seeing some great mathematicians at work.

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The economics of space and time, by Arnold M. Faden, The Iowa State University Press, Ames, Iowa, 1977, xiii + 703 pp., \$39.95.

The major vehicle for scholarly activity these days seems to be the journal article. At least, this holds true for scientific work at major American universities. Most scientific books are concerned with surveying, expounding or systematizing work that has had its origin in journal articles.

This is probably an appropriate state of affairs. The fact that most journal articles are more or less carefully refereed helps to screen out uninteresting or erroneous contributions to scientific knowledge. Publication rights are generally guarded with some care by a jury of one's peers.

The publication of Faden's *The economics of space and time* is a distinct departure from the journal article paradigm in at least two respects. First, it is a massive volume (703 pages) of original research, the bulk of which is appearing in print for the first time. Second, this research was undertaken in "splendid isolation"—to use the author's own words—over a period of more than a decade.

This isolation was no doubt due to a large extent to the subject matter of the book: it attempts to apply the mathematics of measure theory to the economics of spatial location. Measure theorists are a subset of mathematicians, and location theorists are a (rather small) subset of economists. The intersection of these two sets is, if not a set of measure zero, at least as close as one can come for all practical purposes.

Despite the difficulties of working in such isolation, I would say that Faden has produced an interesting and readable book. Measure theorists can profitably examine the book for the novel applications of measure theory to economic problems, and spatial economists can examine the book for generalizations and extensions of classical results, as well as some interesting suggestions of new techniques for research in this area.

Faden states at the outset that ". . . the thesis of this book is that measure theory is the natural language of spatial economics and, indeed, for all social science." The last phrase should perhaps be excused as parental exaggeration,