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*Fourier analysis*, by T. W. Körner. Cambridge University Press, Cambridge, 1988, xii + 591 pp., $95.00. ISBN 0-521-25120-6

When Arthur Dent, fortified by a prophylactic glass of beer, set off in ultimate pursuit of Life, the universe and everything, he was armed with only a towel. He was no braver than Tom Körner. This is truly an ambitious voyage through Fourier Analysis. Tom has real armour as a harmonic analyst of considerable personal accomplishment. Yet in both cases, the coping mechanism is the same—a kind of gentle English silliness which amuses, irritates, and finally enchants.

Let's go back to the beginning. The declared assignment is to provide a shop window for Fourier Analysis in a textbook which can be understood by a British undergraduate who possesses that knowledge which can be "supposed after two years of study." (A word of warning: the author teaches at the University of Cambridge where quite a lot is supposed to happen.) It follows that there are some bread and butter issues on which we must agree. What precise mathematical background is to be assumed, how do we organize the material so as to incorporate historical perspective, and which subject matter do we choose from the vast treasure house of Fourier Analysis?

The first practical decision on mathematical background concerns Lebesgue integration. Although Hardy wrote in 1922 that "No account of the theory of Fourier's series can possibly satisfy the imagination if it takes no account of the ideas of Lebesgue; the loss of elegance and of simplicity of statement is overwhelming" there still appears to be great reluctance to introduce these ideas early. Dr. Körner goes out of his way to avoid the Lebesgue integral (although he is obliged to define a null set in order to state Carleson's convergence theorem) and, it must be admitted, does so in a thoroughly sensible way. He concentrates wherever possible on continuous functions with finite integrals and even labels that class