fully realized, and many authors still pay lip service to convergence. The umbral calculus, being purely algebraic, was a major force in shattering the idol of convergence. Ironically, the new insight that it afforded us provides us with the hindsight to realize that, by now, it is partly superfluous, and that many of its results can be proved directly in the framework of formal power series without the intervention of "umbra". For example, Chapter 3 culminates with a theorem that is equivalent to the famed Lagrange inversion formula. The Lagrange inversion formula, traditionally belonging to analysis, is now fully realized to be a purely algebraic fact, and a very short algebraic proof can be found, for example, in Hofbauer [2].

But even if it is true, as some people claim, that everything that the umbral calculus can do can be done faster with just formal power series, nobody can deny the elegance, insight, and sheer beauty that the umbral calculus possesses, and Steve Roman's book is an excellent account of this beautiful theory.

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Theory of function spaces, by Hans Triebel, Monographs in Mathematics, Vol. 78, Birkhäuser Verlag, Basel, 1983, 284 pp., $34.95. ISBN 3-7643-1381-1

The paradox of Besov spaces is that the very thing that makes them so successful also makes them very difficult to present and to learn. The idea behind Besov spaces begins with a simple extension of the idea of Lipschitz continuity, augmented by the observation that higher-order differences must also be used. For $s > 0$ choose any integer k greater than s. Differences are defined inductively. The first difference of a function is $f(x+h) - f(x)$ ($x \in R^n$), and the kth difference is the composition of the $(k-1)$st and the first difference and is denoted Δ_h^k. Let $F(x, h) = \Delta_h^k f(x)/|h|^s$. The Besov space norm of f is the L^p norm of F in x followed by the L^q norm in h with respect to the measure $dh/|h|^n$. A function is in B_{pq}^s if f is in L^p and its Besov space norm is finite.

It was quickly found that there were many alternative approaches which give these same spaces. Today it is known that spaces defined by degree of approximation by entire analytic functions, spaces of functions which are values at 0 of solutions of the heat equation or Laplace's equation subject to