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Georg Cantor, his mathematics and philosophy of the infinite, by Joseph Warren Dauben, Harvard Univ. Press, Cambridge, Mass., 1979, ix + 404 pp., \$28.50.

A century and a half ago in 1831 Gauss, in a letter to Schumacher, wrote: "I protest against an infinite quantity as an actual entity; this is never allowed in mathematics. The infinite is only a manner of speaking."

Forty-one years later Georg Cantor, a young mathematician at Halle, was studying the uniqueness problem for trigonometric series. In 1870 he had proven that if a real function f was represented by a trigonometric series which converged for all x , then the series was necessarily unique; in fact, uniqueness was guaranteed even if the set of exceptional points, where convergence failed, was discrete. By the following year he had extended his