theory. He finds them in $\mathfrak{L}^{\infty}$, which confirms the physicists's prejudices about the appropriate boundary condition, but doesn't seem to fit very nicely into the Hilbert space framework. In physics texts these non-normalizable eigenvectors occur right at the beginning and play a fundamental role throughout. A few of their properties may be derived from a simple theory based on Hilbert-Schmidt operators [3], but a detailed study seems to need scattering theory.

Schechter's book also contains a treatment of certain severe local singularities of v. It is proved that even in this situation the wave operators are weakly complete. This is reasonable, since the main factor affecting scattering should be the behavior of the potential near infinity. However there is an example due to Pearson [5; **1**, p. 167] that shows that it is possible for a wild enough local singularity to trap an incoming particle. Completeness of the wave operators is not a matter of mere formal manipulation; it requires serious analysis. One version of this analysis is provided in Schechter's book. In quantum physics the real world may be elusive, but some of the mathematics is now under control.

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Formal groups and applications, by Michiel Hazewinkel, Pure and Applied Mathematics Series, Academic Press, New York, 1978, xxiv + 574 pp., $52.50.

Formal groups are Lie groups treated in the style of the eighteenth century. This means, first of all, that there is no fuss about degrees of differentiability or global topology. We simply have a neighborhood of the origin in n-space with a "group law" composition $z = f(x, y)$ where the coordinates $z_i = f_i(x, y)$ are power series in the coordinates of x and y. The composition