mathematician who already knows quantum mechanics will likely be much more excited by a book such as D. B. Lichtenberg's *Unitary symmetry and elementary particles.* This book, incidentally, contains a lovely explanation of the relationships among conservation laws, symmetries, and group representations. These points are virtually untouched by van der Waerden. For that matter, I might mention that $SU(n)$ for $n \geqq 3$ and, in particular, $SU(3)$, groups of considerable importance in modern physics, are totally absent from van der Waerden's book.

For the mathematician who would like to learn about quantum mechanics for the first time, I would recommend the Feynman *Lectures on physics.* As is well known, the third volume of these lectures achieves a remarkable tour de force: quantum mechanics is presented with only the most elementary use of mathematics. It would be nice to have, in addition, a book complementary to Feynman's a book which assumes considerable mathematical knowledge and maturity and yet which presents quantum mechanics with a minimum of physical prerequisities, but with the same force and sense of reality as in the Feynman lectures.

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BULLETIN OF THE
AMERICAN MATHEMATICAL SOCIETY
Volume 82, Number 3, May 1976

Jean Dieudonné,[1] *Cours de géométrie algébrique.* Vol. 1: *Aperçu historique sur le développement de la géométrie algébrique,* 234 pp.; Vol. 2: *Précis de géométrie algébrique élémentaire,* 222 pp., Collection SUP, Presses Universitaires de France, Paris, 1974, paperback, pocketbook size. Each vol. 34.88F in France = approx. $8.30.

I. R. Shafarevich,[2] *Basic algebraic geometry,* Die Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen, Band 213, Springer-Verlag, Berlin, 1974, xv+439 pp., $40.20. (Translated from the Russian by K. A. Hirsch)

The author of an introductory book on algebraic geometry faces many difficult choices. How is he to introduce his reader to some of the basic examples of algebraic geometry, give him some motivation, and teach him the modern language of the subject? As Dieudonné says in his introduction, "Algebraic geometry is surely that branch of mathematics having the greatest gap between the intuitive ideas which form the point of departure and the complex abstract concepts which lie at the base of modern research." No introductory book will succeed unless it makes a serious attempt to bridge this gap.

[1] Dieudonné's Volume 1 is an expanded version of an article *The historical development of algebraic geometry,* Amer. Math. Monthly **79** (1972), 827–866.

[2] The first four chapters of Shafarevich's book are almost identical with an earlier book, which has appeared in English translation as *Foundations of algebraic geometry,* Russian Math. Surveys **24** (1969), 1–178.