right way. For the fact that the product $V \times W$ of two algebraic varieties is again a variety, see P 191 Coro.))

The third assertion will be clear once we have discussed the Grassmanian manifold and proved an embedding theorem for vector bundles on algebraic varieties in Sections 5 and 6 of this chapter.

All these results are special instances of the general G. A. G. A. principle* that any global analytic object on an algebraic variety is algebraic. The importance of Chow's theorem and the G. A. G. A. principle is, in this treatment, primarily philosophical rather than practical. While we shall not use them as tools in our study — most of our techniques apply uniformly to all analytic phenomena on a variety, so it will not be useful for us to know, for instance, that a given meromorphic function or map is rational — they assure us that, in treating varieties as analytic rather than algebraic entities, we are still dealing with the same class of objects.

Degree of a Variety.

The fundamental projective invariant of an algebraic variety $V \subset \mathbb{P}^n$ is its degree, defined as follows: Taking the class of a k-plane $\mathbb{P}^k \subset \mathbb{P}^n$