topics. These are all carefully treated with the exception of base change. Perhaps I should explain, since the phrase has come up several times, that base change refers to the analogue in étale theory of the result in singular theory that for a proper map of reasonable topological spaces $f: Y \to X$, one has for $x \in X$

$$H^*(f^{-1}(x)) \cong \varinjlim H^*(f^{-1}(U))$$

where U runs through neighborhoods of x. (The proof follows from the existence of neighborhood retracts of $f^{-1}(x)$ in Y.) Given the importance of this result, Milne's treatment is much too rapid. I recommend instead the proof in Deligne's Springer Lecture Notes SGA $4\frac{1}{2}$.

In sum, the author has done a tremendous service by organizing the material in a careful and united way which makes it possible for serious students to learn. In its way, the terse and brilliant account of the theory by Deligne (who disposes of the whole business in 65 pages) in SGA $4\frac{1}{2}$ is unexcelled. On the other hand, having watched graduate students trying to make sense of the many details, I can testify to the need for a book like this. Having tried to teach a course in the subject, I can testify to the achievement it is to write one.

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Curves on rational and unirational surfaces, by M. Miyanishi, Tata Institute of Fundamental Research, Bombay, 1978, Narosa Publishing House, New Delhi, 1978, 307 pp., $9.90.

Traditionally, algebraic geometry has meant the study of projective varieties, with its richest results having been produced for curves and surfaces in projective spaces. So, it was not always clear how deeply algebraic geometry was related to commutative algebra. Until rather recently, one might almost perfunctorily start out with affine varieties as zeros of ideals in a polynomial ring, but as soon as one got serious one would switch over to projective varieties and geometric arguments. Indeed, the great Italians (Castelnuovo, Enriques, Severi, ...) appeared oblivious to commutative algebra while developing their immensely successful algebraic surface theory. Even Hilbert,