

*Kähleriennes*, Hermann & Cie, Paris, 1958. Read together, these books should be enough to explain the Hermitian algebra. This algebra is applied together with the Hodge theory to prove some of the pretty classical results on Kähler manifolds. For example the Hodge decomposition theorem, decomposing a cohomology class into a sum of harmonic  $(p, q)$  forms is proved. The Lefschetz decomposition theorem is also proved, and the Hodge-Riemann bilinear relations are discussed. This is done on the primitive cohomology of a Kähler manifold and an example is produced to show that the result is only valid on the primitive cohomology. Unfortunately there is a mistake in the computation on p. 200 which invalidates the example. There are a fair number of misprints in this chapter, but they generally do not detract from its quality. The reviewer found that after one gets past the algebra the rest is well written and gives an interesting introduction to the papers of Griffiths on periods of integrals on algebraic manifolds.

The discussion of Chapter VI is directed toward a proof of Kodaira's theorem that a Hodge manifold is projective. The proof follows Kodaira's original proof. One first proves Kodaira's vanishing theorem, and then makes an application of this result to the blow up of the Hodge manifold to produce enough sections to give an embedding in complex projective space. The proof of the vanishing theorem differs from Kodaira's in that Nakano's inequality is the crucial ingredient. The reviewer thoroughly enjoyed this chapter and found the exposition to be very clear. There are some confusing misprints in the discussion of the canonical bundle but it is an easy task to correct them. The reader should compare this chapter with the last few pages of the book by Gunning and Rossi, *Analytic functions of several variables*, Prentice-Hall, Englewood Cliffs, N.J., 1965, where a discussion of Grauert's proof of this theorem is given.

The topics treated in the book under review are fundamental. Every complex analyst should know (or learn) this basic material, and Wells' book is a good reference for these essential results about complex manifolds.

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*Topics in analytic number theory*, by Hans Rademacher, Die Grundlehren der math. Wissenschaften, Band 169, Springer-Verlag, Berlin, 1973, ix+320 pp.

*Topics in analytic number theory* by Hans Rademacher covers all the classical aspects of a subject which is presently undergoing a revolution. According to the editors, Professor Rademacher had been working on this