

folds and manifolds of constant curvature are considered and results on the existence of harmonic and Killing tensors obtained. Several measures of deviation from constancy of curvature are defined and it is shown that if this deviation remains within certain limits the Betti numbers are unaltered. To the reviewer these relations between curvature and Betti numbers are among the most interesting consequences of the theory.

A chapter is devoted to the special case of semi-simple group manifolds, and here the deviation from flatness is explicitly calculated. Following this is a chapter on Riemannian manifolds carrying additional structure in the form of an affine connection with torsion (as in the case of the group space). A chapter on Kähler manifolds completes the main body of the book. This latter chapter includes important applications of the theory; for example, it is shown that if the deviation of the curvature of a Kähler manifold from constant positive holomorphic curvature remains within prescribed limits, then there are no effective harmonic tensors, and hence the Betti numbers are those of the complex projective space.

A final chapter by S. Bochner entitled "Supplements" is perhaps the most significant since it contains indications of new directions in which the theory is proceeding. Important as it is, however, the topics are so diverse as to make a brief summary impossible. The titles of the eight sections are: (1) Symmetric Manifolds, (2) Convexity, (3) Minimal Varieties, (4) Complex Imbedding, (5) Sufficiently Many Vector or Tensor Fields, (6) Euler-Poincaré Characteristic, (7) Non-compact Manifolds and Boundary Values Zero, (8) Almost Auto-morphic Vector and Tensor Fields.

The book contains in addition to the above a chapter outlining the relevant differential geometry and tensor analysis and a brief introduction to complex-analytic manifolds. It should be remarked that in addition to interesting theoretical contributions, Yano should be commended for the careful, readable exposition he has given here of this topic in global differential geometry.

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Higher transcendental functions. By A. Erdélyi, W. Magnus, F. Oberhettinger, and F. G. Tricomi. Based, in part, on notes left by Harry Bateman and compiled by the Staff of the Bateman Manuscript Project. New York, McGraw-Hill, 1953. Vol. I, 26+302 pp., \$6.50. Vol. II, 17+396 pp., \$7.50.

These two volumes compiled by the "Bateman Manuscript Project" represent a stupendous accomplishment. Under the able direc-