ADDENDUM TO
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The following is to clarify the historical background for Gromov’s Compactness Theorem used in the above paper.

Theorem 1 of this paper depends on a version of Gromov’s Compactness Theorem for extracting a subsequence from a given sequence in the class \( \{ (M^n, g) \mid K_1 \leq K(M) \leq K_2, \, \vol(M) \geq V_0, \, \text{and} \, d(M) \leq D_0 \} \) such that the Riemannian metrics of the subsequence converges in the \( C^1 \) sense to a \( C^{1,\alpha} \) limit metric, \( \alpha < 1 \). The compactness theorem was first given by Gromov in [G] in the \( C^0 \) sense and Katsuda provided some of the details in [K]. Later, the \( C^{1,\alpha} \) version of the compactness theorem was proved by R. E. Greene–H. Wu [G-W] and S. Peters [Pe] independently. Some applications, geometric and other properties of the limit metric were studied by M. Berger [B] and the author [D] as well as several others. In [Pu], C. C. Pugh studied the \( C^{1,1} \) conclusions.

Recently, the author received a reprint [N] from I. G. Nikolaev. Theorem 2 of [N] states that in a space of bounded curvature \( M \) (in the sense of A. D. Alexandrov) it is possible to introduce the structure of a Riemannian manifold with the help of local harmonic coordinates, which form an atlas of smoothness \( C^{3,\alpha} \), and the metric tensor in the harmonic coordinates belong at least to \( W^2_q \cap C^{1,\alpha}(\Omega) \), where \( \Omega \) is some region of \( E^n \), in which local harmonic coordinates are defined, \( q > n = \dim M \) is an arbitrary number, and \( \alpha = 1 - (n/q) \).

References


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