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Robert Peck* (rpeck@lsu.edu) and **Jack Douthett** (douthett@comcast.net). *Wreath products and n -cube symmetry: a music-theoretical application*. Preliminary report.

In this presentation we explore the symmetry group (a wreath product) of the hypercube. We associate vertices of n -cubes with objects in musical spaces, and members of the symmetry group with transformations on those spaces. Among other applications we develop a non-Riemannian approach for the Cohn hexatonic system using a subgroup of the 3-cube and Cohn's sum classes. This idea is then extended to seventh chords and French sixths in the 4-cube. (Received September 17, 2010)