

1067-S1-2216 **Craig M. Johnson*** (craigj374@gmail.com), Marywood University, 2300 Adams Ave.,
Scranton, PA 18411. *Inversions and the Dihedral Group in Music*. Preliminary report.

An inversion is defined here as the function giving the new key of a piece of music resulting from inverting every note across a specific pivot note. The set of 6 distinct inversions form a coset of a particular subgroup of the dihedral group D_{12} of order 24. We explore the structural and aesthetic effects of performing inversions on different genres of music compositions. Why does the human ear perceive some musical segments as beautiful and others as dissonant? A different partition of D_{12} may provide the answer. (Received September 22, 2010)