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Thomas Koberda* (koberda@math.harvard.edu), Department of Mathematics, 1 Oxford St.,
Cambridge, MA 02138. *Mapping class groups and covers of surfaces.*

If ψ is an infinite order mapping class of a surface Σ , it is possible that ψ acts trivially on the homology group $H_1(\Sigma, \mathbb{Z})$. I will discuss various methods for analyzing the action of ψ on the homology groups of certain finite covers of Σ , and I will show that often times one can find a finite cover Σ' of Σ such that ψ acts with infinite order on $H_1(\Sigma', \mathbb{Z})$. (Received September 19, 2011)