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Anne Schilling* (anne@math.ucdavis.edu), Department of Mathematics, One Shields Avenue, University of California, Davis, CA 95616, and **Nicolas M Thiery**, **Graham White** and **Nathan Williams**. *Braid moves in commutation classes of the symmetric group.*

We prove that the expected number of braid moves in the commutation class of the reduced word $(s_1 s_2 \cdots s_{n-1})(s_1 s_2 \cdots s_{n-2}) \cdots (s_1 s_2)(s_1)$ for the long element in the symmetric group \mathfrak{S}_n is one. This is a variant of a similar result by V. Reiner, who proved that the expected number of braid moves in a random reduced word for the long element is one. The proof is bijective and uses X. Viennot's theory of heaps and variants of the promotion operator. In addition, we provide a refinement of this result on orbits under the action of even and odd promotion operators. This gives an example of a homomesy for a nonabelian (dihedral) group that is not induced by an abelian subgroup. Our techniques extend to more general posets and to other statistics. (Received January 31, 2016)