1116-05-483 **Joel Brewster Lewis*** (jblewis@math.umn.edu). *The Hurwitz action in real reflection groups.* Preliminary report.

In a group W, the set of length-k factorizations $c = t_1 \cdots t_k$ of an element c carries the *Hurwitz action* of the k-strand braid group B_k: the braid generator σ_i maps $(t_1, \ldots, t_i, t_{i+1}, \ldots, t_k)$ to $(t_1, \ldots, t_{i+1}, t_{i+1}^{-1} t_i t_{i+1}, \ldots, t_k)$. When W is a finite real reflection group and c is a Coxeter element of W, it was shown by Bessis that, when restricted to minimum-length factorizations $(t_1, \ldots, t_n)$ of $c = t_1 \cdots t_n$ as a product of reflections, the Hurwitz action is transitive.

In this talk, we consider extending Bessis' result to *longer* factorizations of a Coxeter element into reflections. It is no longer the case that the braid action is necessarily transitive, but we propose a conjecture that implies that it is "as transitive as possible" (up to the multiset of conjugacy classes of the factors). We prove this conjecture for classical types A, B/C, and D, for dihedral groups, and (by brute-force computation) for several small exceptional reflection groups. (Received September 03, 2015)