1128-16-150   **Stephan Weispfenning*** (`sweispfe@ucsd.edu`). *Invariant Theory of Preprojective Algebras.* Preliminary report.

For a finite group acting on a polynomial ring, the Shephard-Todd-Chevalley Theorem proves that the fixed subring is isomorphic to a polynomial ring if and only if the group is generated by pseudo-reflections. In recent years, progress was made in work of Kirkman, Kuzmanovich, Zhang, and others to extend this result to regular algebras by expanding pseudo-reflections to quasi-reflections. Naturally, the question arises if the theory generalizes further to non-connected noncommutative algebras. Our objects of study will be preprojective algebras which are certain factor algebras of path algebras corresponding to extended Dynkin diagrams of type A, D or E. We will point out additional difficulties in establishing quasi-reflections using the trace, reveal situations which do not occur for regular algebras, as well as discuss what algebraic conditions we want the fixed ring to have. (Received February 23, 2017)