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Jie Du, Brian Parshall and **Leonard Scott*** (11s21@virginia.edu). *Extending Hecke Endomorphism Algebras.*

The (Iwahori-)Hecke algebra in the title is a q -deformation \mathcal{H} of the group algebra of a finite Weyl group W . The algebra \mathcal{H} has a natural enlargement to an endomorphism algebra $\mathcal{A} = \text{End}_{\mathcal{H}}(\mathcal{T})$ where \mathcal{T} is a q -permutation module. In type A_n (i.e., $W \cong \mathfrak{S}_{n+1}$), the algebra \mathcal{A} is a q -Schur algebra which is quasi-hereditary and plays an important role in the modular representation of the finite groups of Lie type. In other types, \mathcal{A} is not always quasi-hereditary, but the authors conjectured in 1998 that \mathcal{T} can be enlarged to an \mathcal{H} -module \mathcal{T}^+ so that $\mathcal{A}^+ = \text{End}_{\mathcal{H}}(\mathcal{T}^+)$ is at least standardly stratified, a weaker condition than being quasi-hereditary, but with “strata” corresponding to Kazhdan-Lusztig two-sided cells.

The main result of this paper is a first step toward this conjecture, a “local” version in the equal parameter case, localizing at cyclotomic polynomials with some restrictions, and using the theory of rational Cherednik algebras. As time permits, I will try to place the result in a broader context. (Received September 17, 2015)