1145-81-2440 **Zachary Cline*** (zcline@temple.edu), Department of Matematics, Temple University, 1805 N Broad Street, Philadelphia, PA 19122. *On actions of Drinfel'd doubles on finite dimensional algebras.*

Let q be an n^{th} root of unity for $n > 2$ and let $T_n(q)$ be the Taft (Hopf) algebra of dimension n^2. In 2001, Susan Montgomery and Hans-Jürgen Schneider classified all non-trivial $T_n(q)$-module algebra structures on an n-dimensional associative algebra A. They further showed that each such module structure extends uniquely to make A a module algebra over the Drinfel'd double of $T_n(q)$. We explore what it is about the Taft algebras that leads to this uniqueness, by examining actions of (the Drinfel'd double of) Hopf algebras H "close" to the Taft algebras on finite-dimensional algebras analogous to A above. Such Hopf algebras H include the Sweedler (Hopf) algebra of dimension 4, bosonizations of quantum linear spaces, and the Frobenius-Lusztig kernel $u_q(\mathfrak{sl}_2)$. (Title and abstract are subject to change.) (Received September 25, 2018)