1030-16-38 **Sonia Natale*** (natale@mate.uncor.edu), FaMAF. Universidad Nacional de Córdoba, Medina Allende s/n., Ciudad Universitaria, 5000 Córdoba, Córdoba, Argentina, and **César N. Galindo**.
Simple deformations of finite groups.

Finite dimensional Hopf algebras with tensor equivalent categories of representations are obtained from one another by a twisting deformation. We give a series of examples showing that the notions of simplicity and (semi)solvability of a (semisimple) Hopf algebra are *not* twist invariants; that is, they are not categorical notions.

We show that certain twisting deformations of a family of supersolvable groups are simple as Hopf algebras. These groups are direct products of two generalized dihedral groups. Examples of this construction arise in dimensions 60 and p^2q^2, for prime numbers p, q with $q|p-1$. We also show that certain twisting deformation of the symmetric group is simple as a Hopf algebra.

We determine necessary and sufficient conditions, in group-theoretical terms, for a quotient Hopf algebra in a twisting deformation of a finite group to be normal. (Received June 28, 2007)