

Title: Semiclassical limits of quantized coordinate rings

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Abstract: By now, the "Cheshire cat" description of quantum groups is well known -- a quantum group is not a group at all, but something that remains when a group has faded away, leaving an algebra of functions behind. Various attributes of an algebra A that should qualify it as "a quantum group corresponding to a group G " have been accumulated, an important one being that an appropriate algebra R of functions on G should support a Poisson structure which records, to first-order in a suitable sense, the noncommutativity of the multiplication in A . One then says that A is a quantization of R . The Poisson algebra R is typically induced from a family of quantizations, and is called the semiclassical limit of the family. These concepts are also important, more generally, for algebras of functions on manifolds, algebraic varieties, and other systems.

The aim of this talk is to introduce the above ideas, present a few examples, and discuss relationships among these concepts.