The Jones polynomial of a link could be defined through the representation theory of quantum sl(2). Soon after this link invariant was discovered, the Witten-Reshetikhin-Turaev 3-manifold invariant was constructed using the representation theory of quantum sl(2) at a root of unity.

The categorification program has successfully enhanced the Jones polynomial to a homological link invariant. We will explain some ideas of Khovanov which outline a procedure for categorifying the 3-manifold invariant and some progress in this direction. (Received July 28, 2017)