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Michael A Abel* (maabel@math.duke.edu). *HOMFLY-PT homology of general link diagrams up to braidlike isotopy and its decategorification.*

In the construction of HOMFLY-PT homology, one must start with a link presented as a braid closure. This restriction was expected by Khovanov and Rozansky to be required for the homology to be an isotopy invariant. In this talk we explore the consequences of dropping this requirement and allowing general link diagrams. We explicitly show that the Reidemeister IIb move (where the strands have opposite orientations) fails, and discuss the effect on defining a virtual link invariant. Finally we will show that the Euler characteristic of this homology theory is a deformed version of the HOMFLY-PT polynomial which detects "braidlike" isotopy of tangles and links. This new polynomial agrees with the HOMFLY-PT polynomial on link diagrams which are presented as closed braid diagrams. (Received September 12, 2016)