1043-18-162   **Rina Anno*** (`anno@math.uchicago.edu`), The University of Chicago, Department of
                     Mathematics, 5734 South University Avenue, Chicago, IL 60637. *Tangle category actions.*

Let us say that the category Tan of tangles acts on a 2-category C if there is a functor from Tan to the decategorification of C, bijective on 0-objects. In practice it means that there is a collection of categories C_n indexed by natural numbers (i.e. by objects of Tan), and an assignment of a functor $C_n \to C_m$ to each (m, n) tangle. Objects of C_n are 1-morphisms of C. Actions of this type appear naturally in algebraic geometry and representation theory of Lie algebras. I will review several examples (by M. Khovanov, C. Stroppel, S. Cautis and J. Kamnitzer, and myself), and investigate the structure theory of these actions. (Received August 25, 2008)