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Cotriples, stabilization and Andre-Quillen homology

André-Quillen homology for commutative A-algebras over a fixed ring B has been well studied since its independent formulation by M. André and D. Quillen in the 1960's. On the one hand, André-Quillen homology is the left derived functor of the abelianization functor. On the other hand, André-Quillen homology is a special case of a cotriple homology theory (an observation of Barr). Topological André-Quillen homology (TAQ) was defined for E_∞ spectra by M. Basterra, and together with M. Mandell she showed that all homology theories of E_∞ A-algebras over a fixed spectrum B are André-Quillen homology (with coefficients). A consequence of this is that the stabilization of the forgetful functor U from E_∞ A-algebras over B to A-modules must be TAQ. On the other hand, in the special case $A = B$, M. Kantorovicz and R. McCarthy showed that the linear approximation of the forgetful functor from E_∞ A-algebras over A to A-modules is TAQ. Since the linearlization used by Kantorivicz-McCarthy comes from a cotriple construction, this result is akin to Barr's observation that the André-Quillen homology of a ring is a cotriple homology. At the time that Kantorovicz-McCarthy studied TAQ, the cotriple linearization was only available for functors from basepointed categories. In joint work with B. Johnson and R. McCarthy, we have extended the cotriple model of linearization to functors from categories which need not be basepointed. In this talk, I will explain the extended cotriple model of linearization and examine TAQ as a cotriple homology in the general setting.