On the symmetric product and some derivation operator in the bundle of symmetric tensors

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Given a connection in an anchored vector bundle, we define the derivation d^s in the bundle of symmetric tensors as the symmetrization of the extendend connection. The operator d^s can be expressed in the form of the Koszul type formula, which has an analogous shape to that for differential forms. The symmetric product associated with the connection appears in this formula. The symmetric product in the case of manifolds was introduced by Peter Crouch. We present examples of symmetric products satisfying the Jacobi identity. We try to answer the question whether d^s defines a cohomology space of the space of symmetric tensors.