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*Liftings of vector fields to 1-forms on the r-jet prolongation
of the cotangent bundle*

Abstract: For natural numbers r and $n \geq 2$ all natural operators $T_{|\mathcal{M}f_n} \rightsquigarrow T^*(J^rT^*)$ transforming vector fields from n-manifolds M into 1-forms on $J^rT^*M = \{j_x^r(\omega) \mid \omega \in \Omega^1(M), x \in M\}$ are classified. A similar problem with fibered manifolds instead of manifolds is discussed.