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Terrence M Adams and **Cesar E Silva*** (csilva@williams.edu), Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267. *Rank-one transformations of ergodic index k in infinite measure.*

In 1963, Kakutani and Parry constructed, for each positive integer k , infinite measure-preserving countable state Markov shifts T such that the k -fold product of T with itself is ergodic but the $k + 1$ -fold product is not conservative, hence not ergodic. We construct infinite measure-preserving rank-one transformations T such that the k -fold product of T with itself is ergodic but the $k + 1$ product is conservative but not ergodic. Our examples are also rigid and of a different nature than Markov shifts. (Received September 16, 2014)