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Open sets with trivial centralizers.

We will examine the set of diffeomorphisms with trivial centralizer. Smale has asked whether the set of diffeomorphisms of a manifold M with trivial centralizer is open and dense in the C^r topology for $1 \leq r \leq \infty$. Recently, Bonatti, Crovisier, and Wilkinson have shown that there is a dense set of diffeomorphisms with trivial centralizer in the C^1 topology for any manifold. However, Bonatti, Crovisier, Vago, and Wilkinson have shown that there is always a C^1 open set of diffeomorphisms \mathcal{U} and a dense set $\mathcal{D} \subset \mathcal{U}$ such that each diffeomorphism in \mathcal{D} has nontrivial centralizer. It is natural to then ask if there are C^1 open sets of diffeomorphisms with trivial centralizer. We prove that on the n -torus for $2 \leq n \leq 4$ that there is a C^1 open set of diffeomorphisms with trivial centralizer. (Received February 04, 2014)