1150-03-321 **John D. Clemens*** (johnclemens@boisestate.edu), 1910 University Drive, Boise, ID 83725-1555, and **Samuel Coskey** (scoskey@boisestate.edu). *New jump operators on Borel equivalence relations.*

We introduce a new class of jump operators on Borel equivalence relations, associated to countable groups. For each countable group Γ we define the Γ-jump of an equivalence relation E and produce an analysis of these jumps analogous to the situation of the Friedman–Stanley jump with respect to actions of S_∞. In particular we show that for many groups the Γ-jump of E is strictly above E and iterates of the Γ-jump produce a hierarchy of equivalence relations cofinal in terms of potential Borel complexity. We also produce new examples of equivalence relations strictly between E_0^ω and F_2, and give an application to the complexity of the isomorphism problem for countable scattered linear orders. (Received July 12, 2019)