1100-37-312 **David Kerr*** (kerr@math.tamu.edu) and **Hanfeng Li**. *Combinatorial independence and sofic entropy.*

We investigate the phenomenon of combinatorial independence with the framework of entropy for actions of sofic groups on compact metrizable spaces. In particular, we use independence to show that positive entropy for such actions implies Li-Yorke chaos, generalizing a result of Blanchard, Glasner, Kolyada, and Maass for single transformations. As a corollary, we deduce that the entropy of a distal action of a sofic group is either zero or minus infinity, and in particular is always zero when the group is amenable, extending a result of Parry for single transformations. (Received February 10, 2014)