Elchanan Mossel* (mossel@stat.berkeley.edu), Statistics, U.C. Berkeley, Berkeley, CA 94720, and Dror Weitz and Nick Wormald. What slows mixing on (random) graphs. Preliminary report.

We consider local dynamics for spin systems on random regular graphs. These graphs locally look like regular trees. We discuss some results and some conjectures on how properties of Gibbs measures on the infinite regular tree determine the mixing properties of the dynamics. (Received March 07, 2006)