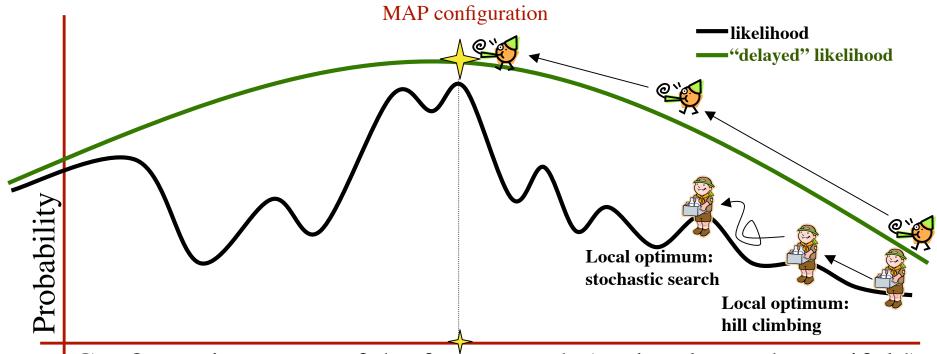
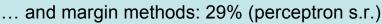
## Training Factor Graphs with Reinforcement Learning For Efficient MAP Inference

Michael Wick, Khashayar Rohanimanesh, Sameer Singh, and Andrew McCallum University of Massachusetts Computer Science Department (IESL)



Configuration space of the factor graph (on local search manifold)

When local search is used for MAP... **Error reductions** over likelihood approximations: 75% (mh+cd1) 43%(piecewise)





...and still reach the *global* optimum!



