

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

The spread of opinion on co-evolving networks¹ PRAMESH SINGH, S. SREENIVASAN, G. KORNISS, B. K. SZYMANSKI, RPI — We discuss a model of opinion formation in co-evolving networks. In realistic scenarios, the network constantly changes structure favoring connections between similar individuals (homophily). Here we allow the opinions to co-evolve with the reorganization of links in the network. This dynamical nature of the network impedes the spreading of opinions. We study how this resistance to the spread can be overcome and consensus can be achieved by randomly distributing a few committed agents (-nodes that are not influenceable in their opinions). In this model adjacent nodes influence each other if they are similar on at least Q attributes, where Q is the influence threshold. Nodes will rewire their existing links if they are not similar enough. We demonstrate through simulations that in the absence of committed agents, time to reach consensus in opinions diverges exponentially with system size N . However, as committed agents are added, beyond a small value of committed fraction, the consensus time becomes a slowly varying function of N . (Ref- F. Vazquez et al. - Phys. Rev. E76, 046120 -2007)

¹supported in part by ARL and ONR

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Date submitted: 19 Nov 2010

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