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**Olivia J. Chu\***, ochu@princeton.edu, and **Marc Wiedermann** and **Jonathan F. Donges**. *An Adaptive Voter Model in Heterogeneous Environments*. Preliminary report.

In human social systems, it is natural to assume that individuals' opinions influence and are influenced by their interactions. Mathematically, it is common to represent such systems as networks, where nodes are individuals and edges denote connections. Adaptive network models explore the dynamic relationship between node properties and network topology. For opinion dynamics, adaptive voter models provide two mechanisms through which changes can occur within the network. First, through homophily, an edge forms between two individuals who already agree; second, through social learning, an individual adopts one of their neighbor's opinions. Central to these models is assortative mixing: individuals more frequently attach to those who are similar to them, which facilitates the formation of sub-communities of like-minded individuals. However, it is not always the case that individuals want to cluster into homogeneous groups. Instead, they might attempt to surround themselves with individuals who both agree and disagree with them, in an effort to attain a balance of inclusion and distinctiveness in their social environments. In this work, we explore the effects that such preferences for heterogeneous environments have on the dynamics of the adaptive voter model. (Received March 03, 2020)