

1014-Z1-62

Mason A Porter* (mason@caltech.edu), MC 114-36, Caltech Institute of Technology, Sloan Annex 130, Pasadena, CA 30332-0160. *A Network Analysis of Committee Assignments in the United States House of Representatives.*

Network theory provides a powerful tool for the representation and analysis of complex systems of interacting agents. Here we investigate the networks of committee and subcommittee assignments in the United States House of Representatives from the 101st–108th Congresses, with committees connected according to “interlocks” or common membership. We examine the House’s community structure using several algorithms and reveal strong links between different committees as well as the intrinsic hierarchical structure within the House as a whole. We show additionally that structural changes, including a tighter community structure, resulted from the 1994 elections, in which the Republican party earned majority status in the House for the first time in more than forty years. In this work, we combine our network theory approach with analysis of roll call votes using singular value decomposition and successfully uncover political and organizational correlations between committees in the House without the need to incorporate other political information. (Received July 11, 2005)