

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

A model study on dyad act-degree distribution in some collaboration networks¹ YUE-PING ZHOU, HUI CHANG, DA-REN HE, Yangzhou University, China — We (and cooperators) have suggested extending the conception collaboration network to some non-social networks, which have structures as sets of completed graphs [1]. A dyad is composed of two nodes, which are connected by one edge. In social network studies dyad often is considered as the basic units in networks. It should be more important in the extended collaboration networks. We suggest emphasizing the importance of dyad in organizing a network and studying the evolution of the extended collaboration networks by a dyad-act organizing model. The analytic and numeric studies of the model lead to a conclusion that most of the collaboration networks should show a dyad act-degree distribution (how many acts a dyad belongs to) between a power law and an exponential function, which can be described by a shifted power law. We have done an empirical study on dyad act-degree distribution in some collaboration networks. The results show good agreement with this conclusion. The details will be published elsewhere.

[1] P-P Zhang, K. Chen et al., to appear on Physica A.

¹Supported by Chinese National Natural Science Foundation, No. 70371071.

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Date submitted: 10 Nov 2005

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