Empirical study on assortativity in some collaboration networks[1]
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(and cooperators) have suggested extending the conception collaboration network
to some non-social networks, which have structures as sets of completed graphs
[1]. In this view of point, we may divide practical networks into four groups: a)
social collaboration networks, b) social non-collaboration networks, c) non-social
collaboration networks, and d) non-social non-collaboration networks. We have
done an empirical study on assortativity in some practical networks, which belong
to the four groups. The results show that all the networks of a) and b) groups
show positive assortativity, all the networks of d) group show negative assortativity.
This is in agreement with the conclusion obtained by Newman [2]. However, for
some of the networks belonging to group c), we obtained positive assortativity,
but obtained negative one for other networks belonging to the same group. The
details will be published elsewhere. Now we are trying to find the difference in the
structure properties of these networks, which may be responsible for different sign
of assortativity. [1] P-P Zhang, K. Chen et al., to appear on Physica A. [2] M. E. J.
Newman, PRE 67, 026126 (2003).

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