

# Arc Reciprocity

## Description

In a directed network, two nodes ( $A, B$ ) are said to have a reciprocal relationship if there exists an edge from A to B and from B to A. The reciprocity is the ratio of reciprocal relationships in the network in to the total number of relationships (reciprocal or otherwise) in the network.

~~A dyad is defined as any pair of actors (nodes) ( $A, B$ ). In a directed network there are three possible kinds of dyads, no tie (link), one likes the other but not vice versa ( $AB$  or  $BA$  exists, but not both), or both like the other ( $AB$  and  $BA$  exist). The last one corresponds to a reciprocal relation and a reciprocated tie.~~

~~The prevalence of reciprocity is given by the ratio of number of ties involved in reciprocal relations to the total number of ties present in the network.~~

## Usage Hints

Algorithm must be applied to directed networks. Self-loops are ignored in the calculation.

This is global calculation for the input network, and as such the results are simply reported on the Console window.

## Links

- Source Code: [link](#)

## References

Hanneman, Robert A. and Mark Riddle. 2005. Introduction to social network methods. Riverside, CA: University of California, Riverside.

<http://faculty.ucr.edu/~hanneman/nettext/>

## See Also



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