

STANDARD NETWORK ANALYSIS REPORT

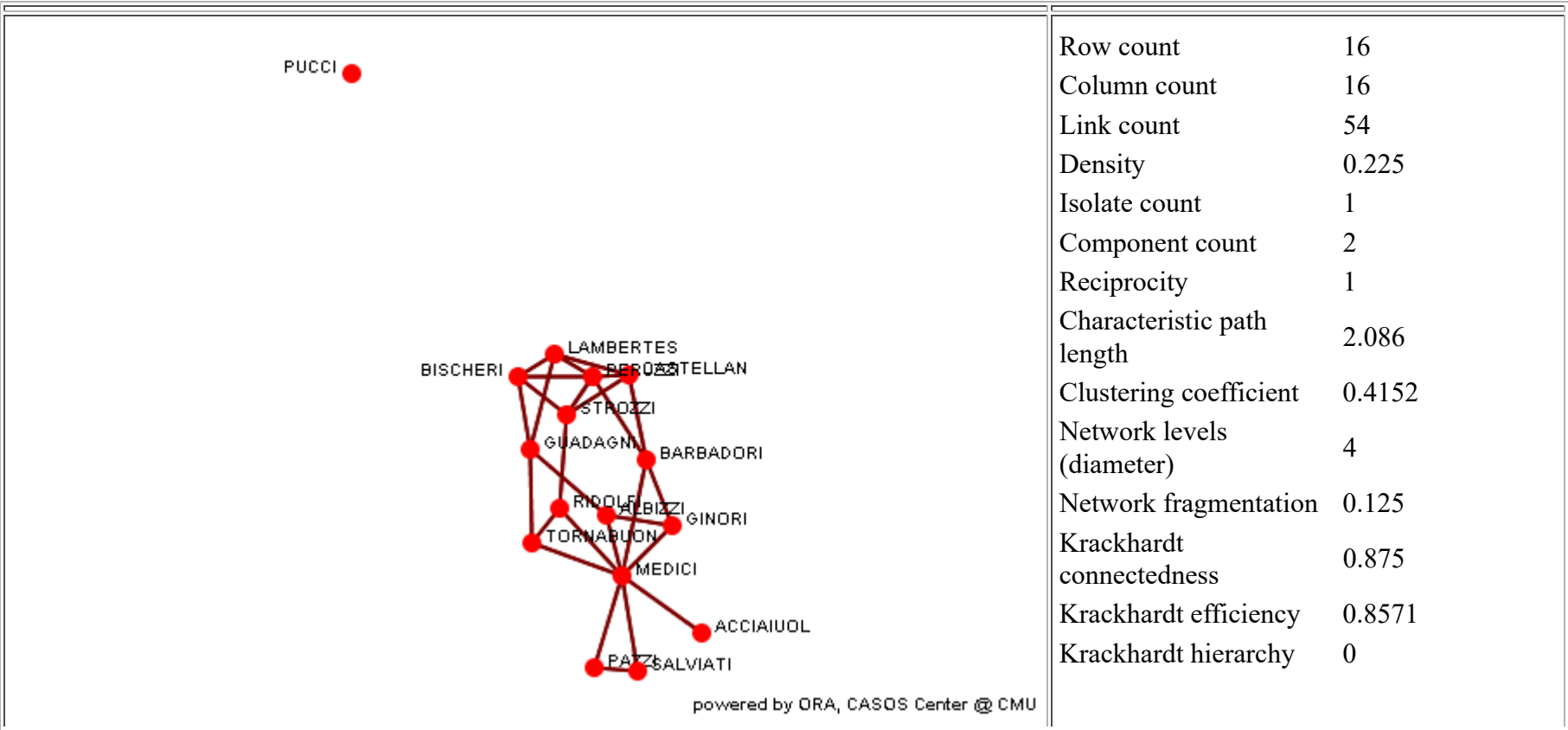
Input data: padgett

Start time: Mon Oct 06 10:51:24 2008

Calculates common social network measures on each selected input network.

Analysis for the Meta-Network

Individual entity classes have been combined into a single class, and all networks are combined to create a single network. If two networks connect the same entities, e.g. two agent x agent, then the links are combined. Link weights are made binary.

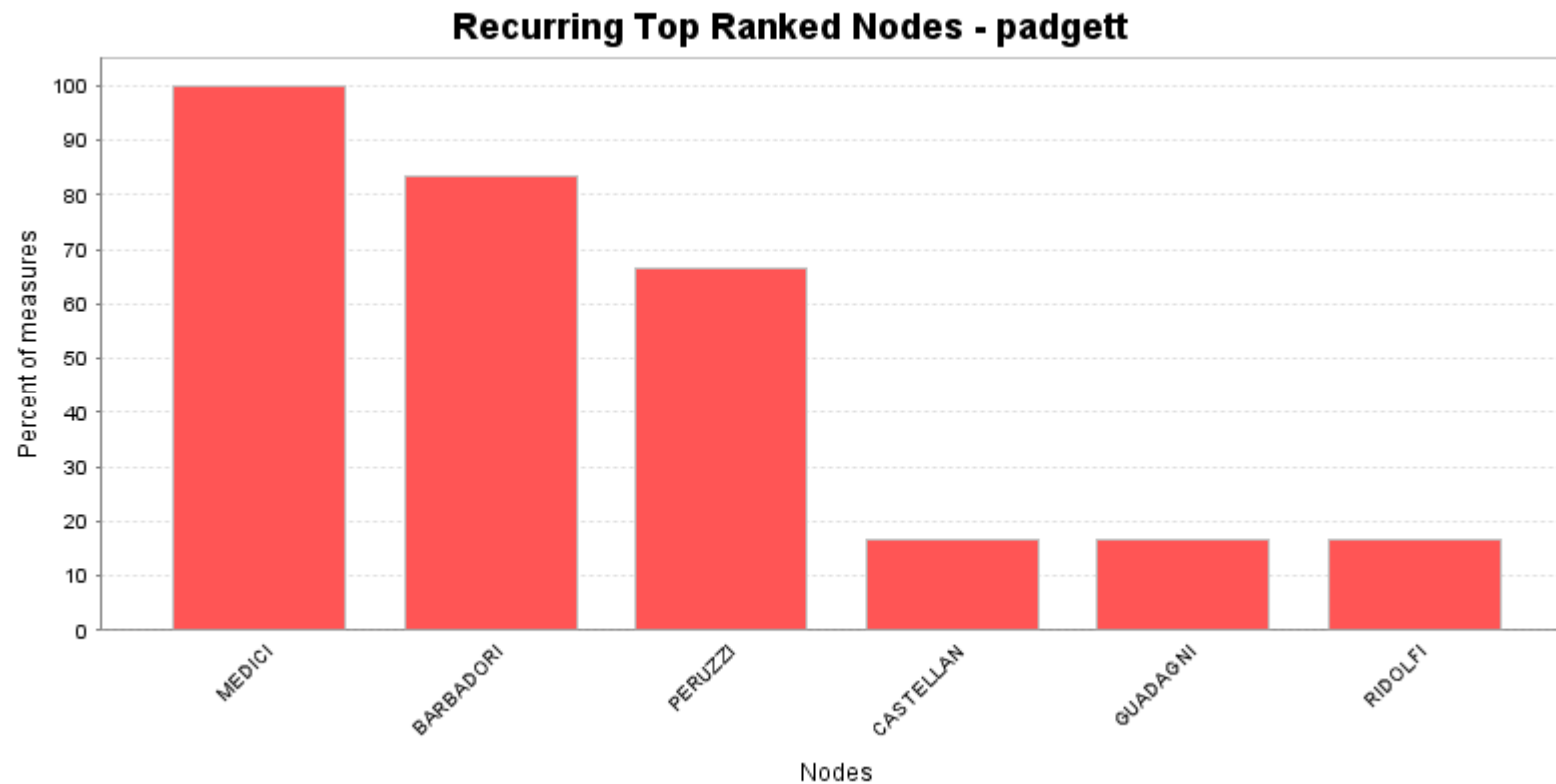


Krackhardt upperboundedness			1	
Degree centralization			0.3524	
Betweenness centralization			0.3678	
Closeness centralization			0.1717	
	Min	Max	Average	Stddev
Total degree centrality	0	0.5333	0.225	0.1152
Total degree centrality (unscaled)	0	16	6.75	3.455
Eigenvector centrality	0	1	0.6088	0.2727
Hub centrality	0	1	0.6088	0.2727
Authority centrality	0	1	0.6088	0.2727
Betweenness centrality	0	0.4127	0.06786	0.09843
Betweenness centrality (unscaled)	0	86.67	14.25	20.67
Information centrality	0	0.09243	0.0625	0.0207
Information centrality (unscaled)	0	1.815	1.227	0.4063
Clique membership count	0	5	1.875	1.364
Simmelian ties	0	0.4667	0.1917	0.1152

Simmelian ties (unscaled)	0	7	2.875	1.728
Clustering coefficient	0	1	0.4152	0.284

Key nodes

This chart shows the Nodes that repeatedly rank in the top three in the measures. The value shown is the percentage of measures for which the Nodes was ranked in the top three.



In-degree centrality

The In Degree Centrality of a node is its normalized in-degree.

Input network(s): meta-network

Rank	Value	Unscaled	Nodes
1	0.533333	8	MEDICI
2	0.333333	5	PERUZZI
3	0.266667	4	BARBADORI
4	0.266667	4	BISCHERI
5	0.266667	4	CASTELLAN
6	0.266667	4	GUADAGNI
7	0.266667	4	LAMBERTES
8	0.266667	4	STROZZI
9	0.2	3	ALBIZZI
10	0.2	3	GINORI

Out-degree centrality

The Out Degree Centrality of a node is its normalized out-degree.

Input network(s): meta-network

Rank	Value	Unscaled	Nodes
1	0.533333	8	MEDICI
2	0.333333	5	PERUZZI
3	0.266667	4	BARBADORI
4	0.266667	4	BISCHERI
5	0.266667	4	CASTELLAN
6	0.266667	4	GUADAGNI
7	0.266667	4	LAMBERTES

8	0.266667	4	STROZZI
9	0.2	3	ALBIZZI
10	0.2	3	GINORI

Total degree centrality

The Total Degree Centrality of a node is the normalized sum of its row and column degrees.

Input network(s): meta-network

Input network size: 16

Input network density: 0.225

Expected value from a random network of the same size and density: 0.225

Rank	Value	Unscaled	Nodes	Context*
1	0.533333	16	MEDICI	2.95351
2	0.333333	10	PERUZZI	1.03772
3	0.266667	8	BARBADORI	0.399123
4	0.266667	8	BISCHERI	0.399123
5	0.266667	8	CASTELLAN	0.399123
6	0.266667	8	GUADAGNI	0.399123
7	0.266667	8	LAMBERTES	0.399123
8	0.266667	8	STROZZI	0.399123
9	0.2	6	ALBIZZI	-0.239474
10	0.2	6	GINORI	-0.239474
* Number of standard deviations from the mean if links were distributed randomly				
Mean: 0.225				
Std.dev: 0.104396				

Eigenvector centrality

Calculates the principal eigenvector of the network. A node is central to the extent that its neighbors are central.

Input network(s): meta-network

Input network size: 16

Input network density: 0.225

Expected value from a random network of the same size and density: 0.480502

Rank	Value	Nodes	Context*
1	1	PERUZZI	1.69028
2	0.954728	MEDICI	1.54297
3	0.842024	CASTELLAN	1.17627
4	0.827438	BARBADORI	1.12882
5	0.811606	LAMBERTES	1.0773
6	0.800749	BISCHERI	1.04198
7	0.786995	STROZZI	0.997226
8	0.659496	GUADAGNI	0.582388
9	0.569938	GINORI	0.290995
10	0.55936	RIDOLFI	0.256576
* Number of standard deviations from the mean if links were distributed randomly			
Mean: 0.480502			
Std.dev: 0.307345			

Betweenness centrality

The Betweenness Centrality of node v in a network is defined as: across all node pairs that have a shortest

path containing v, the percentage that pass through v.

Input network(s): meta-network

Input network size: 16

Input network density: 0.225

Expected value from a random network of the same size and density: 0.0876378

Rank	Value	Unscaled	Nodes	Context*
1	0.412698	86.6667	MEDICI	5.88061
2	0.157936	33.1667	BARBADORI	1.27176
3	0.111905	23.5	GUADAGNI	0.439009
4	0.0706349	14.8333	RIDOLFI	-0.307596
5	0.0611111	12.8333	PERUZZI	-0.47989
6	0.0587302	12.3333	ALBIZZI	-0.522963
7	0.0539683	11.3333	STROZZI	-0.60911
8	0.0515873	10.8333	TORNABUON	-0.652183
9	0.0325397	6.83333	CASTELLAN	-0.99677
10	0.031746	6.66667	LAMBERTES	-1.01113
* Number of standard deviations from the mean if links were distributed randomly				
Mean: 0.0876378				
Std.dev: 0.0552767				

Closeness centrality

The average closeness of a node to the other nodes in a network. Loosely, Closeness is the inverse of the average distance in the network between the node and all other nodes.

Input network(s): meta-network

Input network size: 16

Input network density: 0.225

Expected value from a random network of the same size and density: 0.465266

Rank	Value	Unscaled	Nodes	Context*
1	0.394737	0.0263158	MEDICI	-1.11799
2	0.365854	0.0243902	BARBADORI	-1.57582
3	0.357143	0.0238095	RIDOLFI	-1.7139
4	0.348837	0.0232558	TORNABUON	-1.84556
5	0.340909	0.0227273	ALBIZZI	-1.97123
6	0.340909	0.0227273	GINORI	-1.97123
7	0.340909	0.0227273	GUADAGNI	-1.97123
8	0.340909	0.0227273	PERUZZI	-1.97123
9	0.333333	0.0222222	CASTELLAN	-2.09131
10	0.333333	0.0222222	STROZZI	-2.09131
* Number of standard deviations from the mean if links were distributed randomly				
Mean: 0.465266				
Std.dev: 0.0630863				

Produced by ORA developed at CASOS - Carnegie Mellon University