Friendship Network - A Case Study

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Introduction
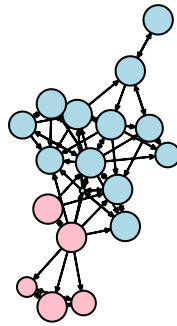

Figure 1. Visualization of Friendship Network by Gender
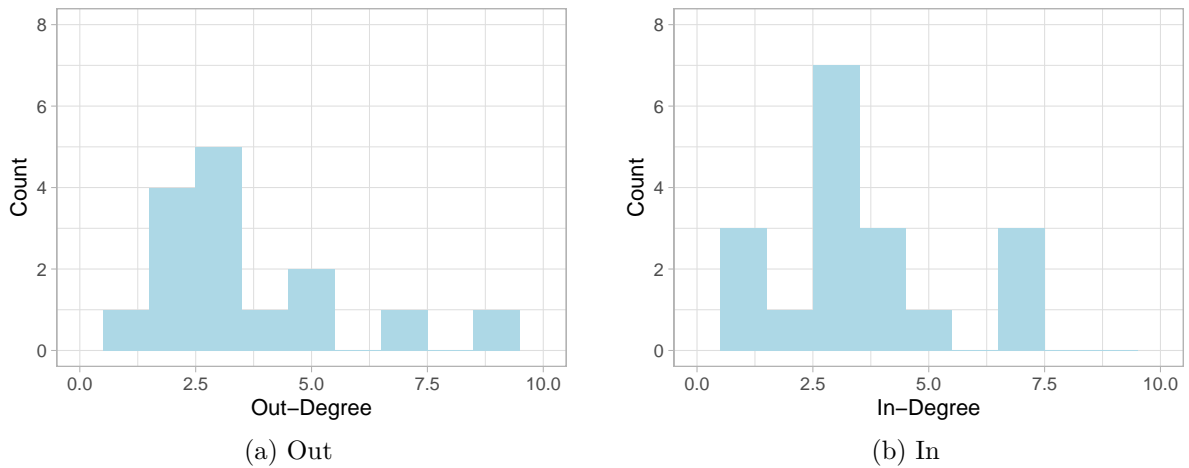

(a) Out

(b) In

Figure 2. Distribution of Degrees

Table 1. Results from ERGM Models

	(1)	(2)	(3)	(4)
edges	0.07***	0.04***	0.10***	0.05***
	(0.04)	(0.02)	(0.04)	(0.02)
mutual	2.46	5.25***	3.27**	5.35***
	(1.17)	(2.58)	(1.42)	(2.55)
homophily*	2.13**	5.17***	2.19***	5.55***
	(0.54)	(2.18)	(0.51)	(2.06)
closure tend.*	3.60***		3.36***	
	(0.75)		(0.70)	
two path	0.73***		0.72***	
	(0.05)		(0.05)	
preferential tend*	3.04	1.60		
	(3.04)	(1.59)		
Num.Obs.	306	306	306	306
AIC	233.1	271.4	231.9	269.6
BIC	255.4	286.3	250.5	280.8

* p <0.05, ** p <0.01, *** p <0.001
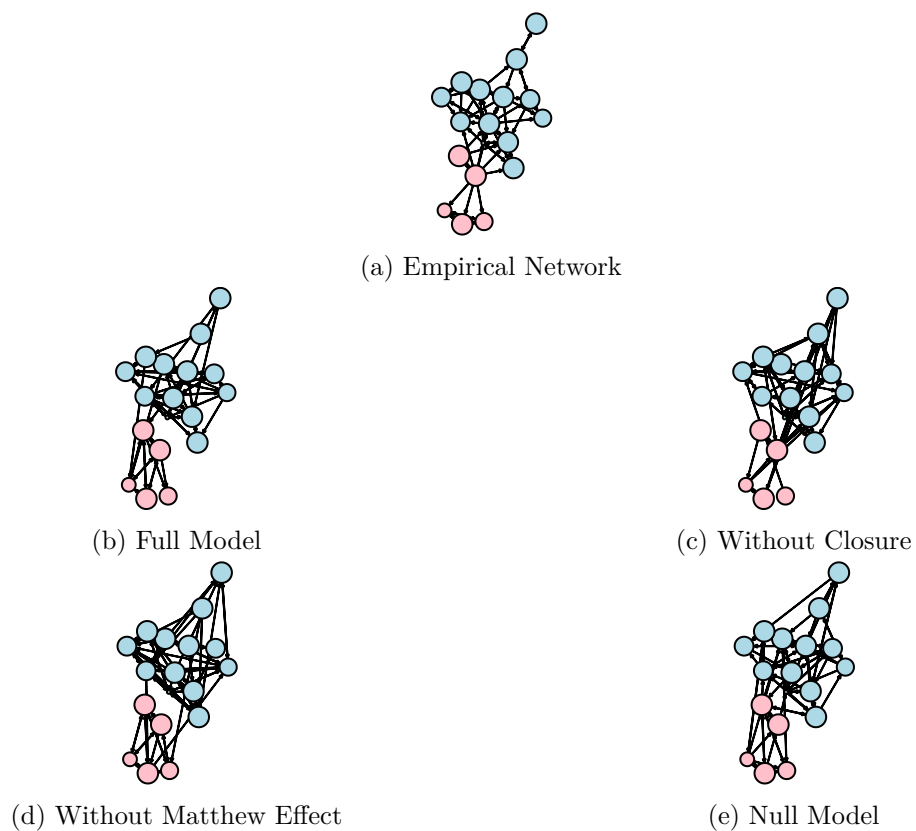closure tend* = closure tendency

Model Specification

Simulation

(a) Empirical Network

(b) Full Model

(c) Without Closure

(d) Without Matthew Effect
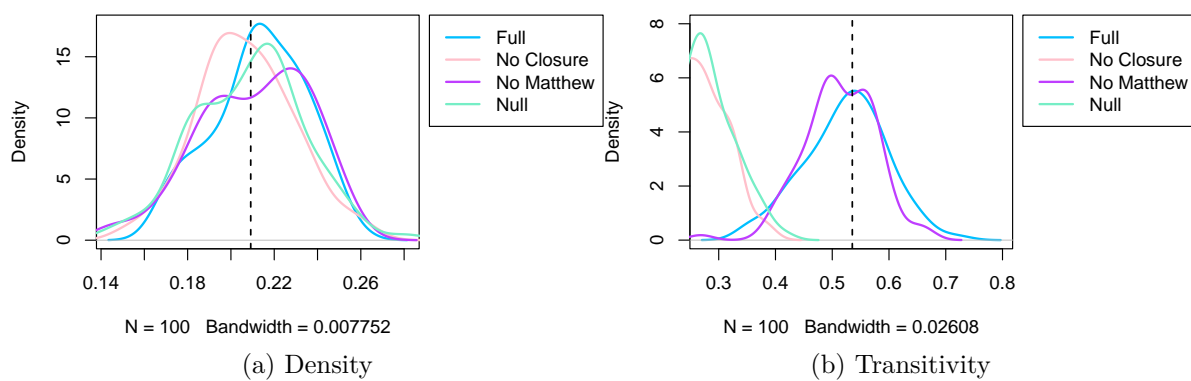

(e) Null Model

Figure 3. Visualization of Simulation

(a) Density

(b) Transitivity

Figure 4. Model Parameters