

LES RENCONTRES DE STATISTIQUE APPLIQUÉE

Analyses statistiques de réseaux

Vendredi 15 septembre 2017

La triade comme sous-structure élémentaire pour l'analyse des processus sociaux

Fabien ELOIRE, Université de Lille 1, Clersé

L'Année sociologique

Volume 67 / 2017 - N° 1

Sociologie de l'alimentation

Études de
S. CAHILL
M.-C. LE PASTEL & M. PIZZANI
A. LAMBERT
J.-P. POUILLON
F. RICHARD
Th. DE SAINT-POL

Revue et présentée par
THIBAUT DE SAINT-POL

Varia

Études de
J. BRAILLY, F. ÉLOIRE,
G. FAVRE & A. PIÑA-STRANGER
C. JOST
J. BRAILLY
Th. DE SAINT-POL

puf

2017/1 (Vol. 67)

Vous consultez

Explorer les réseaux à l'échelle de la triade : l'apport des modèles statistiques ERGM [1]

par **Julien Brailly**

est postdoctorant à la Swinburne University of Technology (Australie) et
...

et **Fabien Éloire**

est maître de conférences en sociologie (université Lille-I, Clersé), spécialisé en
...

et **Guillaume Favre**

est maître de conférences en sociologie à l'université Toulouse Jean Jaurès et
...

et **Alvaro Piña-Stranger**

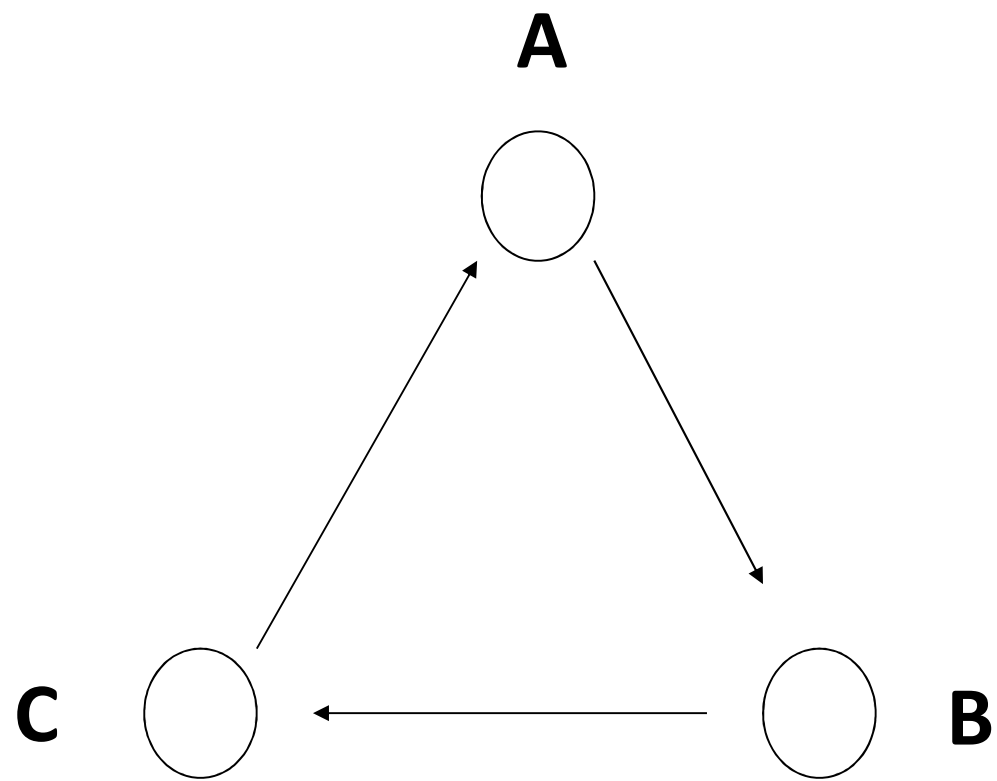
est maître de conférences à l'université Rennes-I. Il est chercheur du CREM. Il a
...

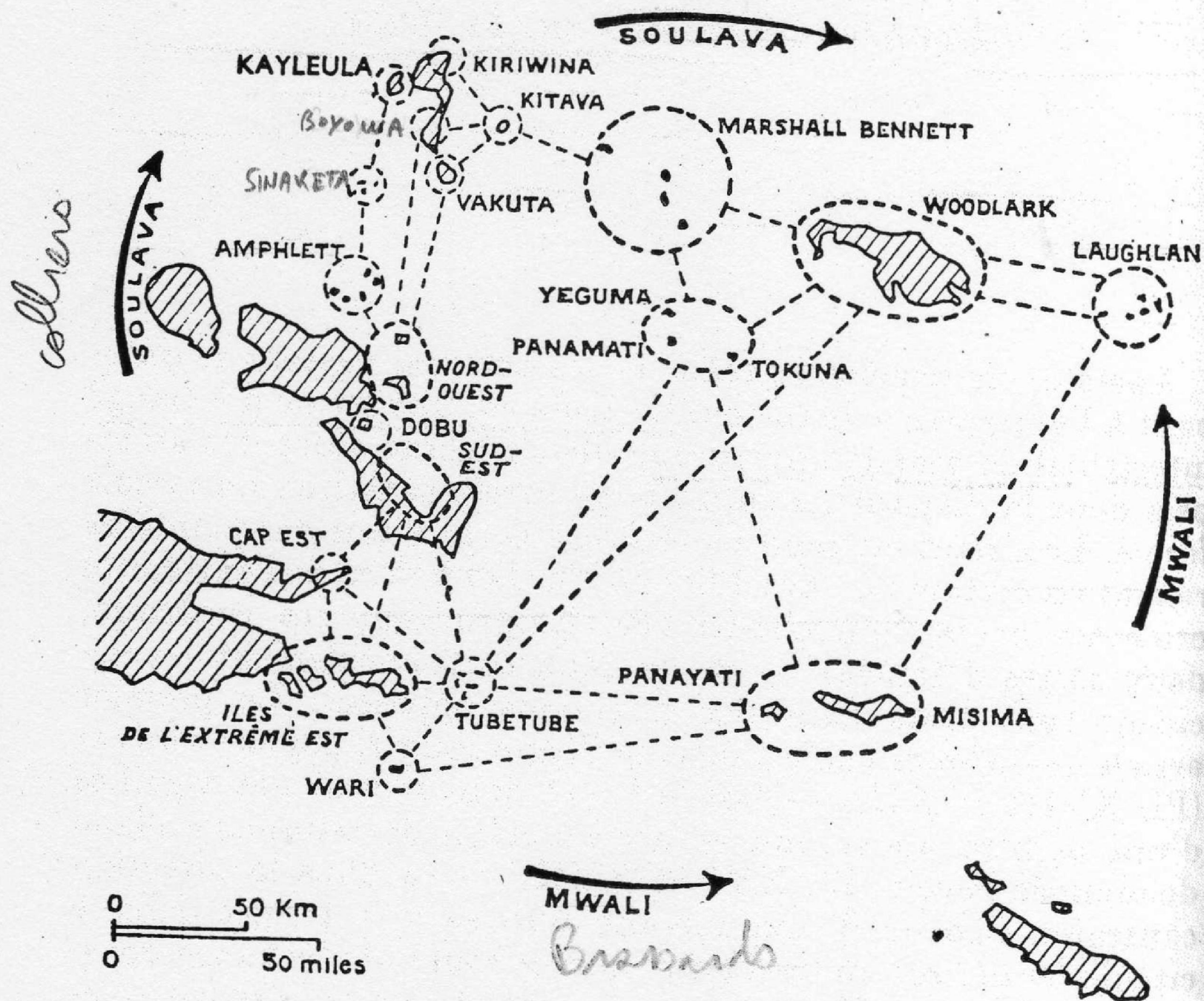
Plan en 2 parties

1. sur la notion de triade dans les sciences sociales
2. Sur la conception du social contenue dans les modèles *ERGM* ?

Plan en 2 parties

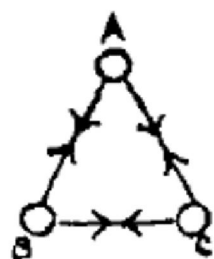
1. sur la notion de triade dans les sciences sociales
2. Sur la conception du social contenue dans les modèles *ERGM* ?



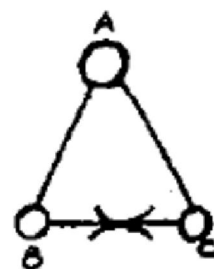


CARTE V. — Le circuit Kula

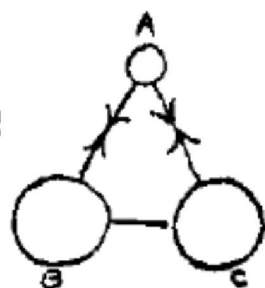
Type 1
 $A=B=C$



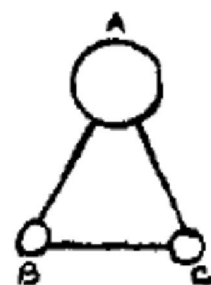
Type 2
 $A > B$
 $B = C$
 $A < (B+C)$



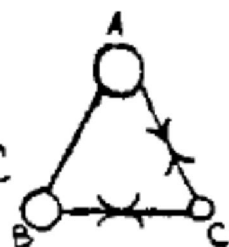
Type 3
 $A < B$
 $B = C$



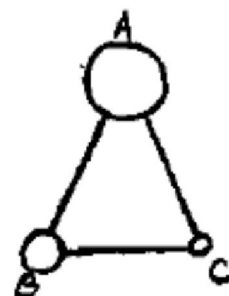
Type 4
 $A > (B+C)$
 $B = C$



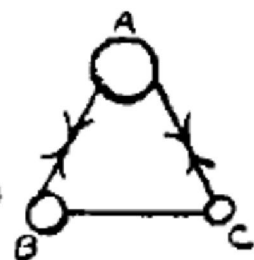
Type 5
 $A > B > C$
 $A < (B+C)$



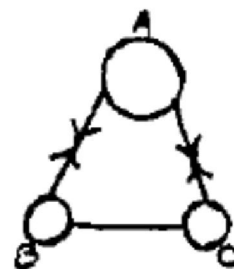
Type 6
 $A > B > C$
 $A > (B+C)$

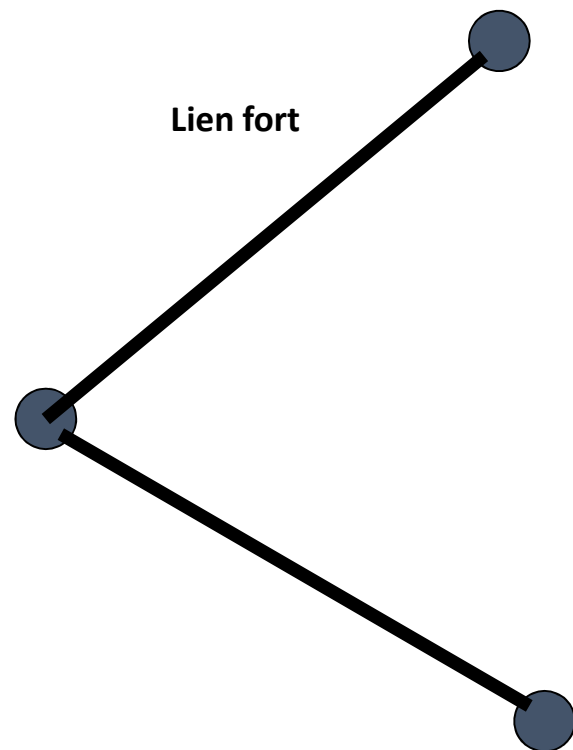


Type 7
 $A > B > C$
 $A = (B+C)$

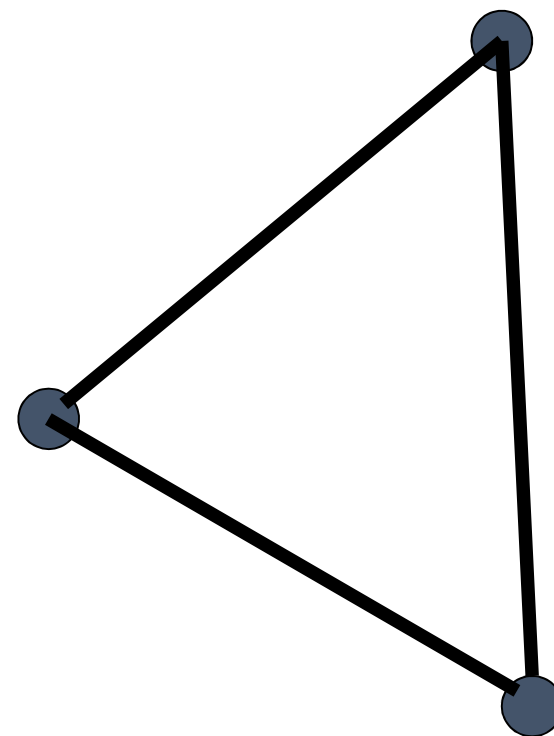


Type 8
 $A = (B+C)$
 $B = C$

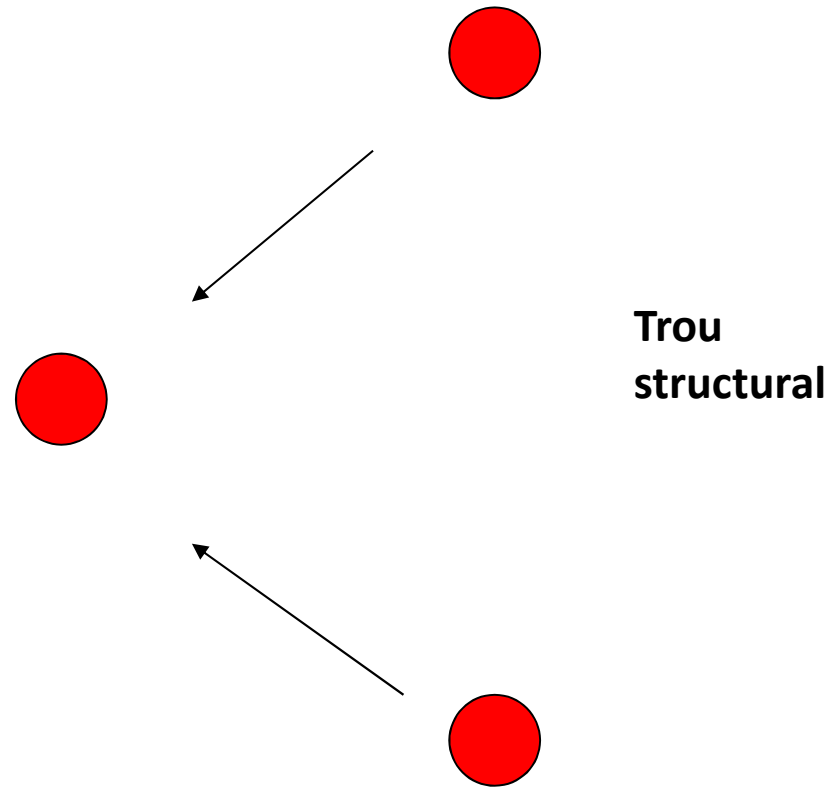




Lien fort



Triade interdite

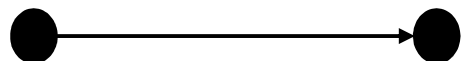


Plan en 2 parties

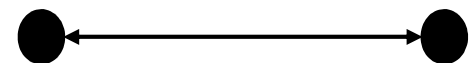
1. sur la notion de triade dans les sciences sociales
2. Sur la conception du social contenue dans les modèles *ERGM* ?

Les 4 hypothèses :

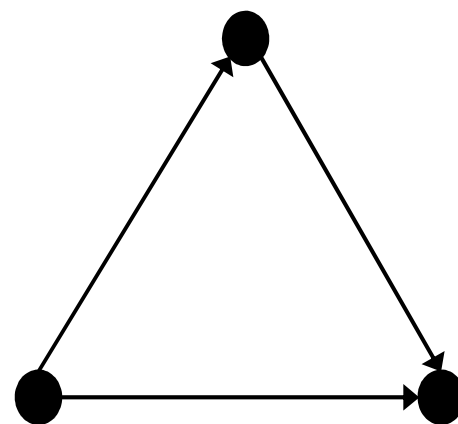
1. l'hypothèse de Bernoulli
2. l'hypothèse de dépendance dyadique
3. l'hypothèse de dépendance markovienne
4. l'hypothèse de dépendance du modèle du circuit social



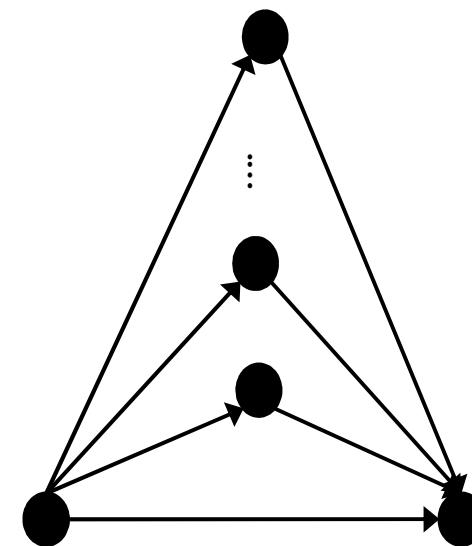
*Hypothèse de
Bernoulli*



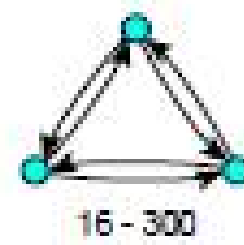
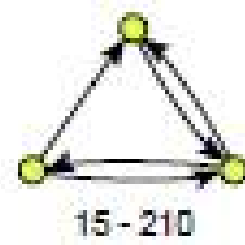
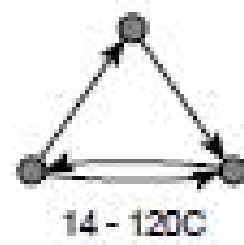
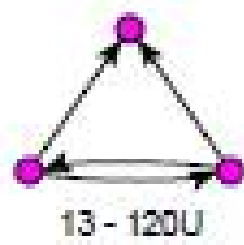
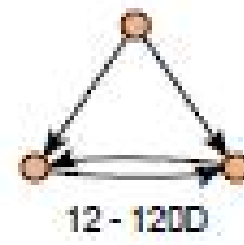
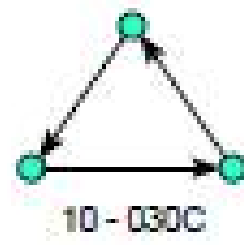
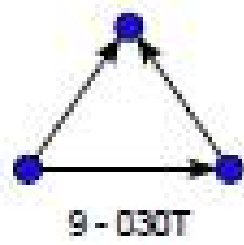
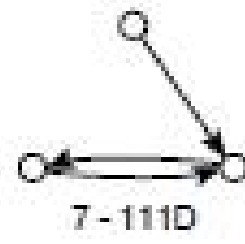
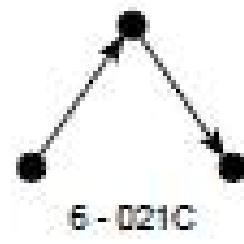
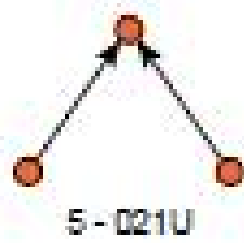
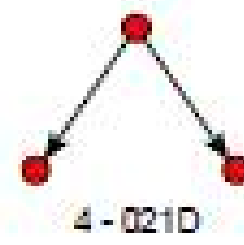
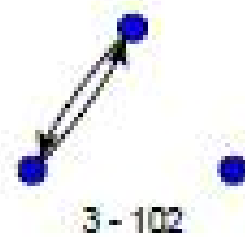
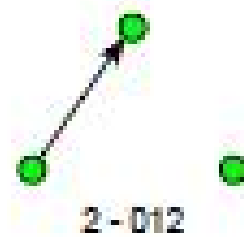
*Hypothèse de dépendance
dyadique*



*Hypothèse de
dépendance markovienne*



*Hypothèse de dépendance
du modèle du circuit
social*



Triadic census (Holland and Leinhardt, 1976)

Directed Networks

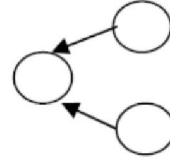
Density (τ_{15})



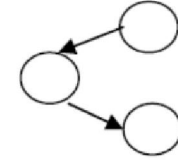
Reciprocity (τ_{11})



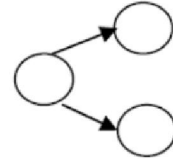
Two-in-stars (τ_{14})



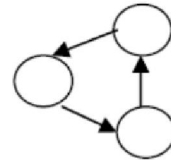
Two-mixed-stars (τ_{13})



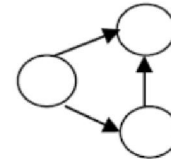
Two-out-stars (τ_{12})



Cyclic triads (τ_{10})



Transitive triads (τ_9)

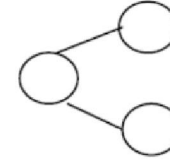


Non-directed networks

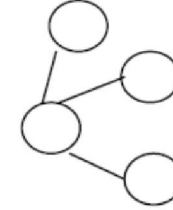
Density or edge (θ)



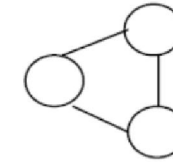
Two-star (σ_2)



Three-star (σ_3)



Triangle (τ)



And higher order star configurations