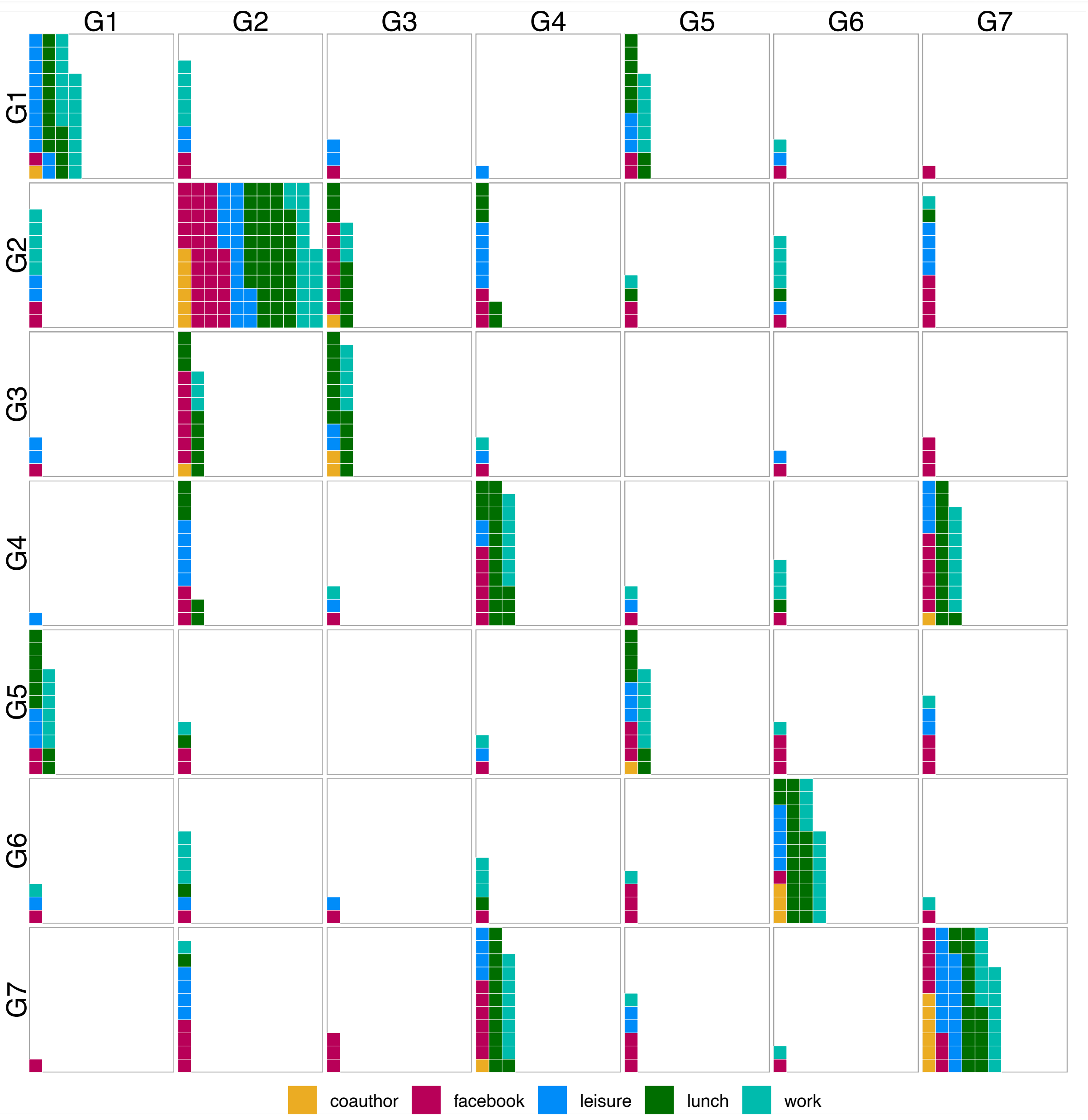
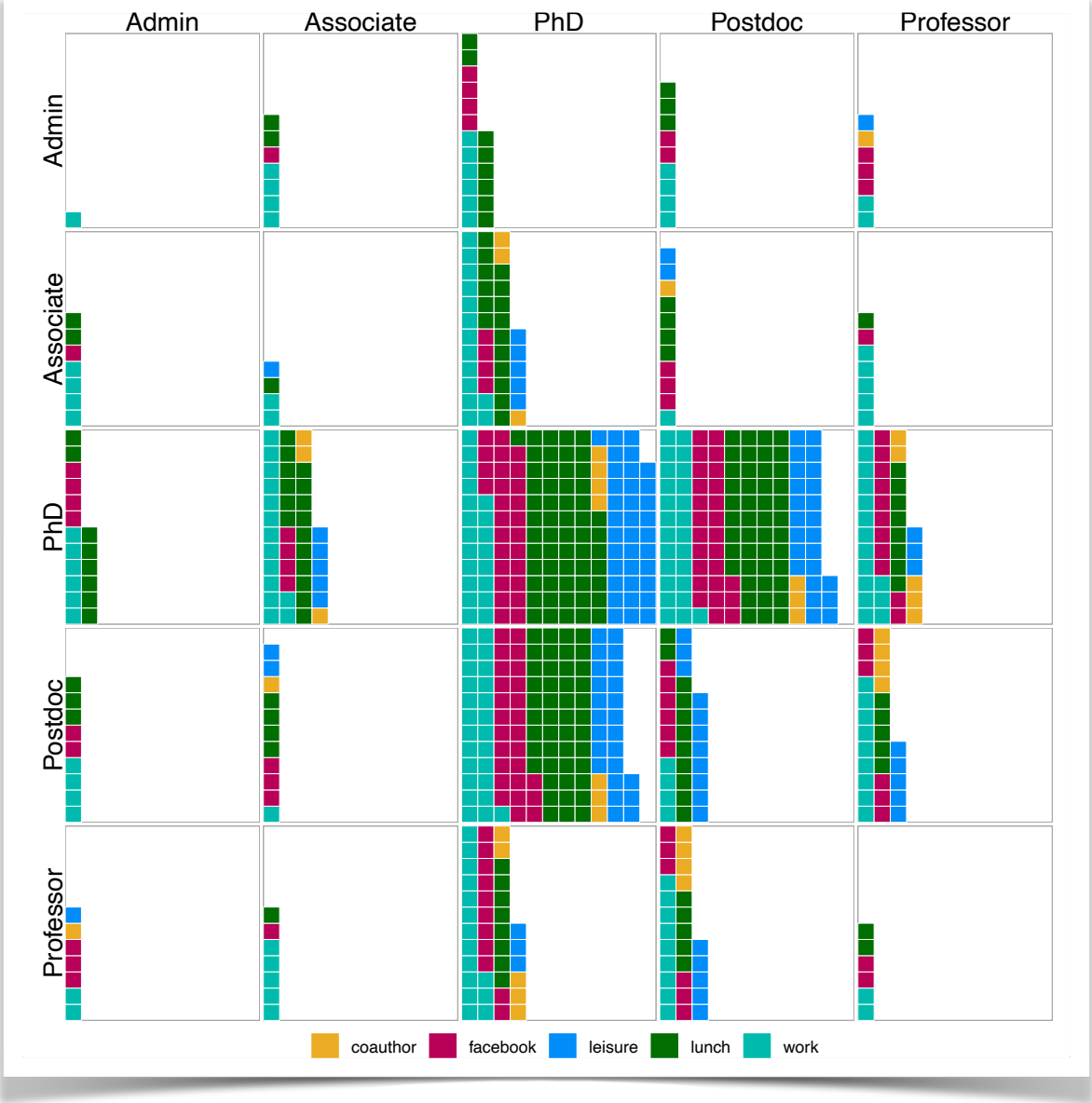
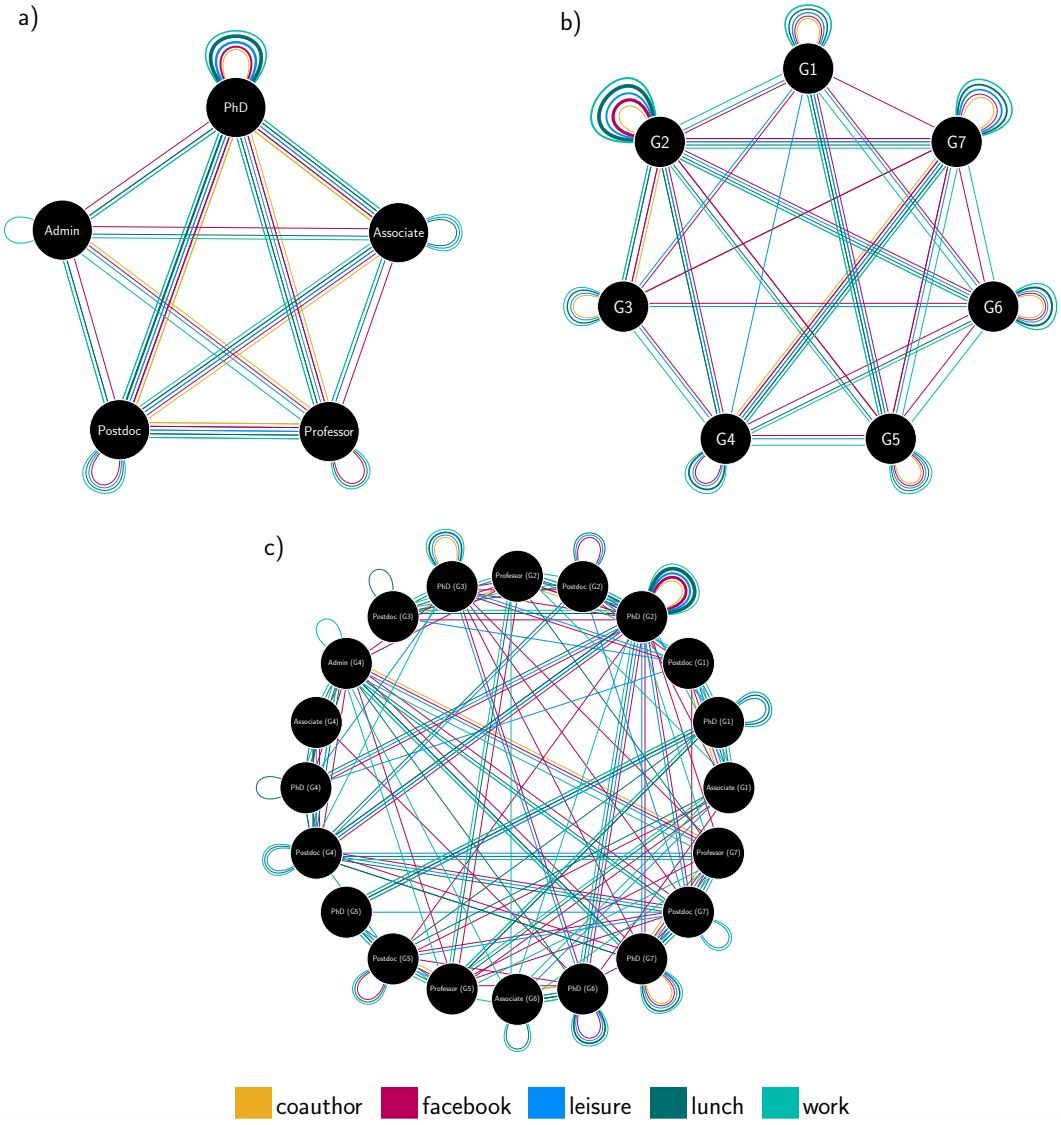
aggregated multigraphs: waffle matrices


G1
G2
G3
G4
G5
G6
G7
coauthor
facebook
leisure
lunch
work


Admin
Associate
PhD
Postdoc
Professor
Admin
Associate
PhD
Postdoc
Professor
coauthor
facebook
leisure
lunch
work


a)
PhD
Associate
Professor
Postdoc
Admin
b)
G1
G2
G7
G3
G6
G4
G5
c)
PhD (G3)
Professor (G2)
Postdoc (G2)
Postdoc (G3)
PhD (G2)
Admin (G4)
Postdoc (G1)
Associate (G4)
PhD (G1)
PhD (G4)
Associate (G1)
Postdoc (G4)
Professor (G7)
PhD (G5)
Postdoc (G7)
Postdoc (G5)
PhD (G7)
Professor (G5)
Associate (G6)
PhD (G6)
coauthor
facebook
leisure
lunch
work

✓ M_1 and M_2

- tendency for within and between vertex category edges (homophily/heterophily)

✓ R_0 and R_1

- R_0: tendency for isolated vertices (network diffusion)
- R_1: simple occupancy of edges

✓ M_1 and R_1

- single ties within vertex category (isolation)

✓ M_2 and R_2

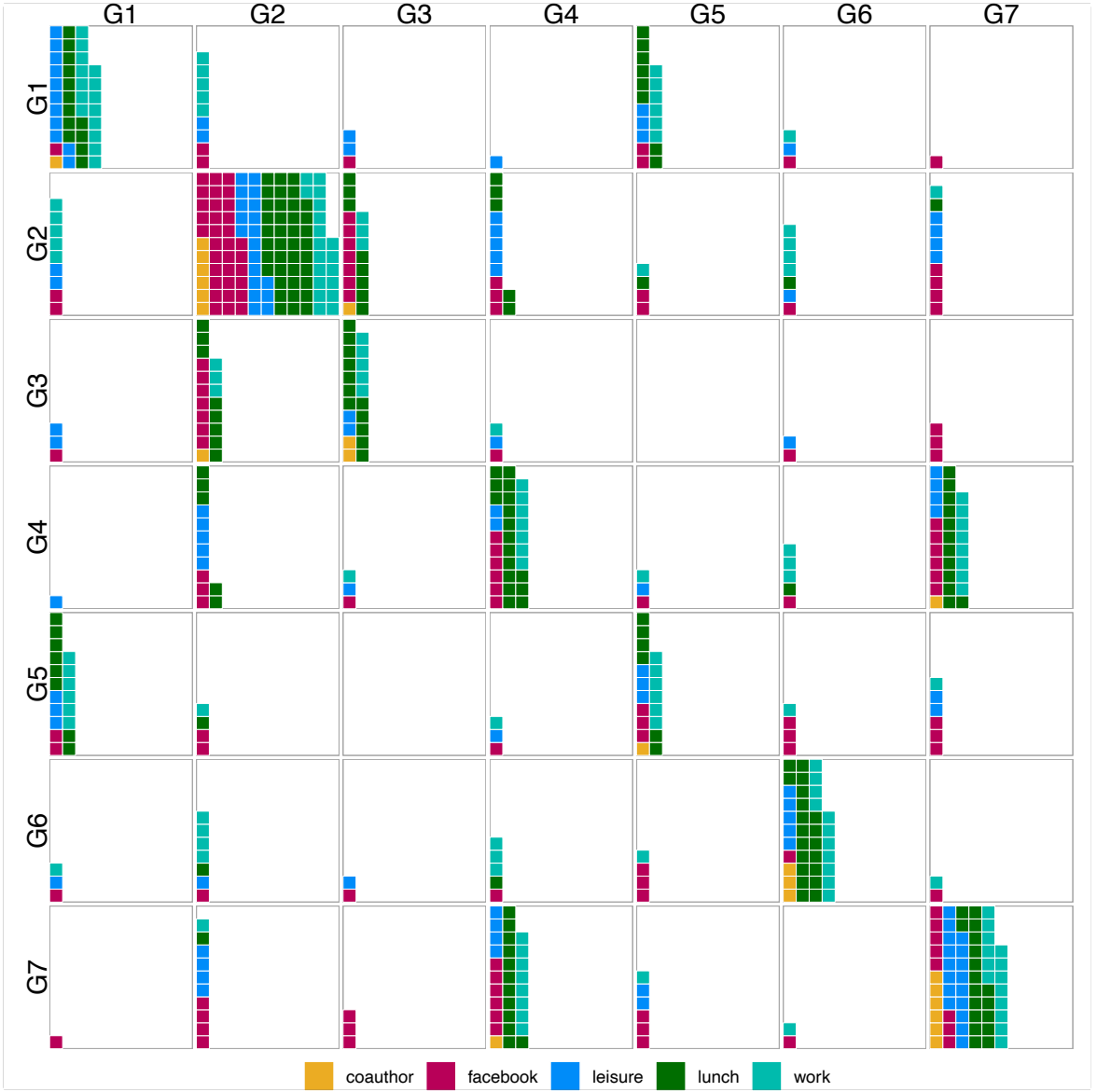
- simplicity statistics
- single ties within vertex category (isolation)

✓ $R_0 + R_1$ compared to $R_3 + \cdots + R_k$

- tendency for strengthening ties (multiplexity)

✓ interval estimates for R_k

- if overlapping for multiple edge types ⇒ multiplexity


G1
G2
G3
G4
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G6
G7
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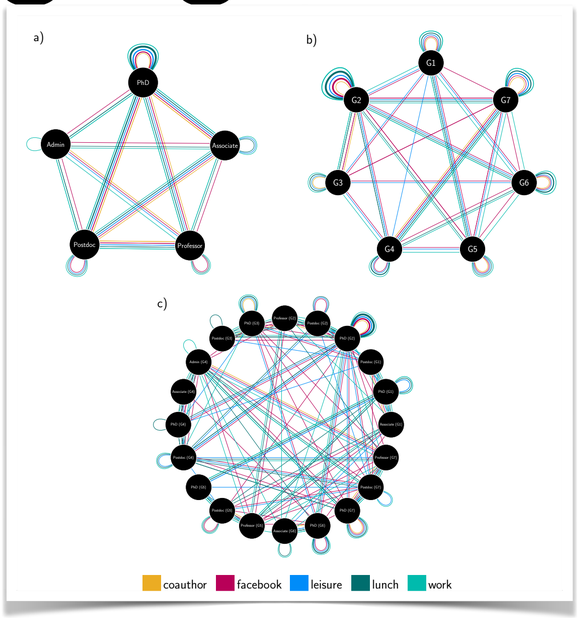

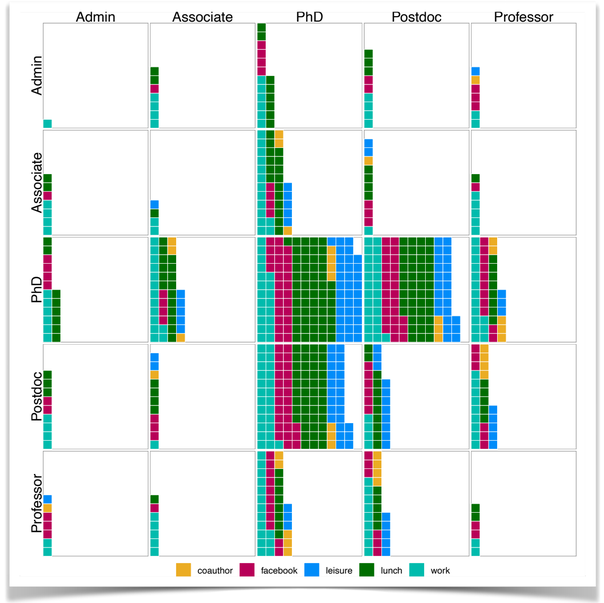

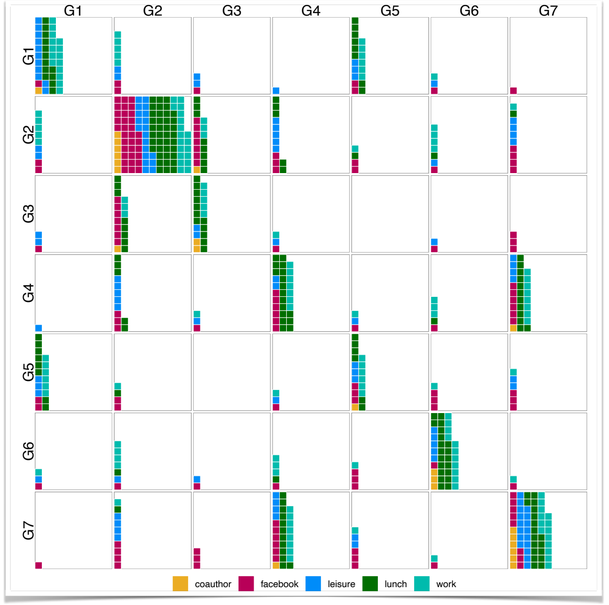

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observed edge multiplicities