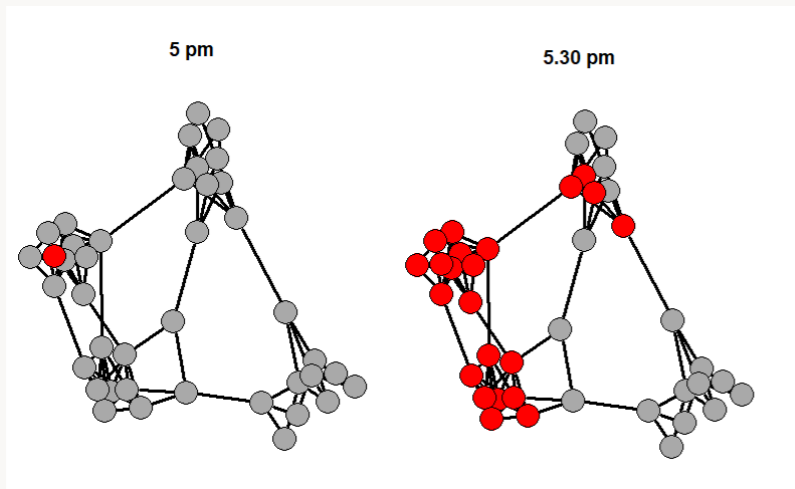
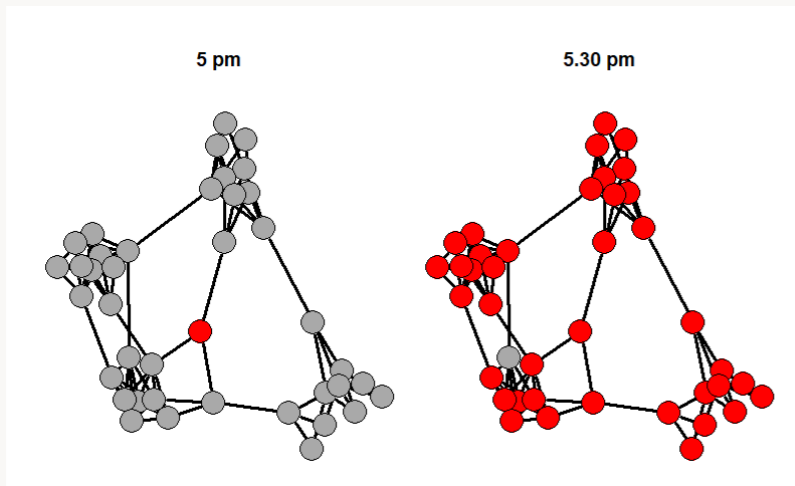


Network Footprints: An Experiment on Brokerage and Information Diffusion

Diffusion Starts from a Popular Agent



Diffusion Starts from a Broker

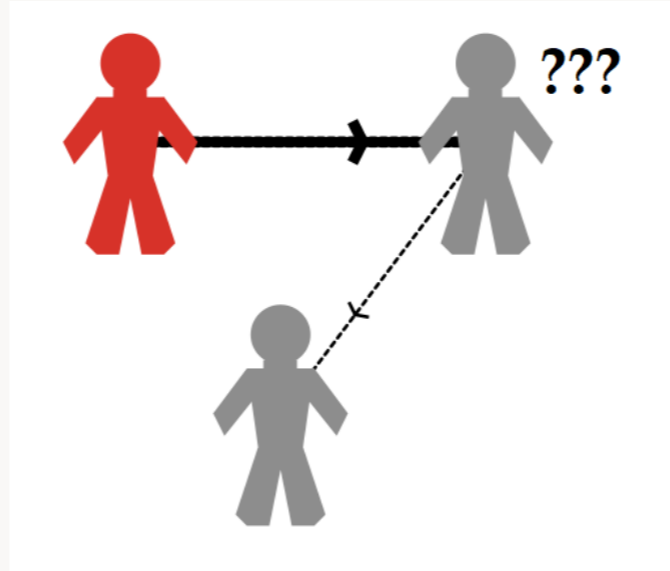


Underlying Assumption

- ▶ Infectious diseases analogy (Goffman and Newill, 1964; Centola and Macy, 2007): Info spreading mechanistically and without deliberate intent
- ▶ However, personal contact is a necessary but not sufficient for info to spread within groups

Information Spread is Intentional

First receive info, then **decide** to spread it; Why?



- ▶ Personality traits (e.g., extrovert V. introvert)
 - ▶ Various constraints (e.g., time)
- Brokers would still remain key nodes if:
- ▶ Everyone has same personality traits, faces the same constraints;
 - ▶ Brokers are more inclined to share information than others

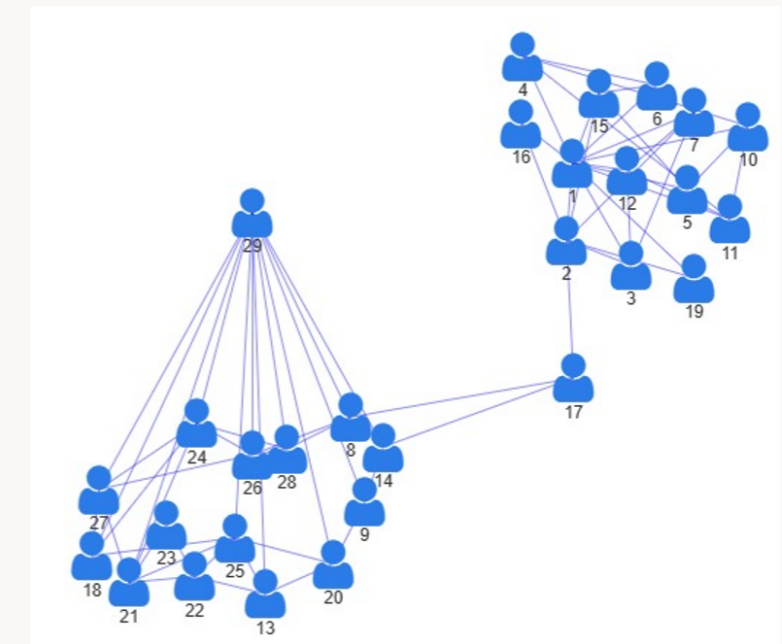
Research Question

Individuals learn from experience network patterns and relevance of such patterns for various tasks (e.g., Son et al., 2023)

Are brokers aware of their structural importance in facilitating information diffusion?

Experimental Design

- ▶ Sampling personal networks + 16-item questionnaire on brokerage behavior;
- ▶ Treatment (info), control (virus);
- ▶ **Info stimulus will activate brokerage experience**



Preliminary Findings

Overall $P(\text{selecting } 17) = 30\%$, no diff between treatment and control groups

In **control group**, brokers do actually select **less frequently** the broker than the popular agent; In **treatment group**, **no difference** between brokers and non-brokers

Caveat: Used only structural metrics to identify brokers (lower variance, maybe less informative than behavioral measures)

