

## **Growth mechanisms in continuously-observed networks: Communication in a Facebook-like community**

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Most network studies rely on static data, which creates methodological issues when predicting tie creation. Although there has been a surge in continuously-observed datasets (i.e., non-static), few methods exist to study these. This paper proposes a framework for assessing multiple growth mechanisms (e.g., homophily, focus constraints, reinforcement, reciprocity, triadic closure, and preferential attachment) in such datasets, and applies it to communication within a Facebook-like community. While some mechanisms are significant independently, they are insignificant in multivariate analyses. This finding exemplifies that descriptive measures, such as the clustering coefficient, cannot be relied upon for studying mechanisms of tie generation.

See arXiv:1010.2141 (<http://arxiv.org/abs/1010.2141>) for paper.