

## General Comments

Summary: You're introducing Hoffs model which you build off for your own time-varying LSM. You then discuss the MH algorithm that you use to fit the model.

For the first paragraph, you might want to move the motivation: reciprocity and transitivity to the top so I know why this model should be the way it is. Also, maybe a quick description of reciprocity and transitivity would be helpful even if you defer the details to Hoff.

You might want to make a paragraph/section about dealing with  $Y$ 's from different distributions. Discussing how your model is flexible enough to capture these different types of relationships.

Maybe subsections would be helpful for the reader. You can clearly delineate between Hoff's model and then yours starting at 208. This accounts for some of my difficulty in determining what exactly is new and what is old. I assume that you made the model in Equation (3), but the structure of the paper doesn't make me 100% confident of that.

The technical details were very clear.

The proof was very clear.

## Specific Comments

- 148: capitalize latent space network model?
- 149/149: you cite Hoff et al twice in succession
- 153: what is interdistance? (cognitive load)
- 155: Make the i. and ii. into a list? (expectations)
- 175: Start a new paragraph with "We will use  $Z$ " (paragraphs should do one thing)
- Equation 1: you should use  $d(Z_i, Z_j)$  to refer to distance here (consistent vocab)
- Equation 2: use  $\exp$
- Equation 3: use  $\mathbb{P}$
- 246: You cite equation 4 right before talking about it (expectations)

- 272: "lets look" is a bit informal (tone)
- 299: too much vertical space
- 301: What is the  $i$ th eigenvalue?
- 308: "the" before Likelihood (grammar)
- 319: you cite theorem 3.1 right before talking about it (expectations)
- 351: why the -'s around "-arbitrary-"