



DUNCAN CLARK <duncanclark@g.ucla.edu>

Journal of the Royal Statistical Society - Decision on Manuscript ID JRSS-SA-Nov-20-02518 messages

Jouni Kuha <onbehalf@manuscriptcentral.com>

Wed, Apr 7, 2021 at 9:39 PM

Reply-To: j.kuha@lse.ac.uk

To: duncanclark@ucla.edu

08-Apr-2021

Dear Mr. Clark

Thank you for submitting your manuscript ID JRSS-SA-Nov-20-0251 entitled 'Comparing the Real-World Performance of Exponential-family Random Graph Models and Latent Order Logistic Models' to Journal of the Royal Statistical Society Series A.

The paper has now been reviewed. You can find comments from two referees and Associate Editor below and in an attached file. Another attachment contains some further comments from me.

The reviewers have recommended some major revisions to your manuscript. Therefore, I am inviting you to respond to their comments and to resubmit your manuscript accordingly.

To resubmit your revised manuscript, log into <https://mc.manuscriptcentral.com/jrss> and enter your Author Centre, where you will find your manuscript title listed under 'Manuscripts with Decisions'. Under 'Actions', click on 'Create a Revision'. Your manuscript number will now show a suffix to denote a revision. Please DO NOT upload your revised manuscripts as a new submission.

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Once the revised manuscript has been completed, you can upload it and submit it through your Author Centre.

When submitting your revised manuscript, you will be able to respond to the comments made by the referees in the space provided. You can use this space to document any changes you make to the original manuscript. To expedite the processing of the revised manuscript, please be as specific as possible in your response to the referees.

IMPORTANT: Your original files will be available to you to reuse when you upload your revised manuscript. Please therefore delete any redundant files before completing the submission.

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For timely publication of manuscripts submitted to the Journal of the Royal Statistical Society, your revised manuscript should be uploaded as soon as possible. If it is not possible for you to submit your revision within 6 months, we may have to consider your paper as a new submission. If you feel that you will be unable to submit your revision within the time allowed please contact me to discuss the possibility of extending the revision time.

Once again, thank you for submitting your manuscript to the Journal of the Royal Statistical Society and I look forward to receiving your revision.

Yours sincerely,

Jouni Kuha

Joint Editor, Journal of the Royal Statistical Society Series A

j.kuha@lse.ac.uk

Reviewers' Comments to Author:

Associate Editor

Comments to the Author:

This paper performs a comparative analysis between the more commonly used ERGM models and the LOGLOG models on a large set of networks. While the objective is formulated well and the study clearly justified, the structure and the writing of the paper should be significantly improved by:

- Correcting the many many typos, unusual formulations and wrong inclusion of references in the text (many instances needing \citep rather than \cite)
- Making a careful selection of the results: many tables and figures are included and not really commented on or thoroughly explained. Make sure that the captions of the selected tables and figures are informative.
- Table 9: I personally could not follow the results presented in this table. I would also like to see more quantitative summaries of the overall results on the ensemble to see whether there is support for the claims put forward by the authors in the comparison between the methods.
- Generally clarifying, and where possible *quantifying*, the comparison between the two methods based on the evidence gathered from the empirical analysis. If needed here, perhaps as a final section, you could also include additional examples – not included in your ensemble, but adding insight into the comparison between the two methods - such as those mentioned by one of the reviewers

Referee: 1

Comments to the Author

Because my comments are quite long, I have attached them as a text file. But in summary, there is really only one point that I think needs addressing: a potential misinterpretation of GWDEG parameter in the discussion of the models for the Sailer & McCulloh networks, as described in the attachment.

The other points raised in my "general comments" section may (or may not) be of interest to the authors and inform a revision (if any is felt necessary). And the "minor points" section at the end is just a few typographical errors etc. which I noticed while reading the manuscript.

Referee: 2

Comments to the Author

The authors compare the fitting of a new latent order logistic (lolog) generative graph model with the fitting of the established ERGM on the data sets from the articles published in the journal Social Networks. Even though the new model has its benefits and the goal of the study is well justified, I find the results not convincing and not well presented.

1. In column 6 of Table 9, a large majority of marks is represented by 'Yes'. However, in Section 5.2 the authors write "we note that the LOLOG model did not seem to help improve the fit for any of the networks in question" and in Section 7 "Goodness of fit of LOLOG models also compare favourably with the ERGMs, with little drop in quality".

2. The shades of the boxes in Figs. 1-6 are the same, so I was not able to understand the implications of these figures and had to rely only on the text.

3. There are too many typos. I'll give some example but there are many more. A paper should be prepared much more carefully for a high profile journal such as JRSS.

p.1, l.45 "a social network a collection of fixed nodes" ->

"a social networks represented by a collection of fixed nodes"?

BTW, why nodes need to be fixed, in particular, if we consider dynamic or growing networks?

p.2,l.49 "inverse problem' -> "inverse problem"

p.5,l.16 Newton Raphson approach -> Newton-Raphson approach

p.6,l.15 "the the MCMC" -> "the MCMC"

p.6,l.19 "an dyad ordering" -> "a dyad ordering"

p.6,l.45 Social network journal -> {\it Social Networks} journal

p.9,l.24 "form a single published paper" -> "from a single published paper"?

2 attachments

JRSS-SA-Nov-20-0251-JEcomments.pdf
151K



LOLOG_ERGM_manuscript_review.pdf
480K

DUNCAN CLARK <duncanclark@ucla.edu>
To: Mark Handcock <handcock@stat.ucla.edu>

Wed, Apr 7, 2021 at 10:09 PM

Hi Mark,

I haven't read through all this in detail yet, but it seems a very positive development. I'm guessing you received this email also?

Could we meet to discuss on Friday?

Best

Duncan

[Quoted text hidden]

2 attachments

JRSS-SA-Nov-20-0251-JEcomments.pdf
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LOLOG_ERGM_manuscript_review.pdf
480K

Mark S. Handcock <handcock@stat.ucla.edu>
Reply-To: handcock@stat.ucla.edu
To: DUNCAN CLARK <duncanclark@ucla.edu>

Thu, Apr 8, 2021 at 9:13 AM

Hi Duncan,

I have scanned them as well. There is one substantive issue: The interpretation of the GWDEG term in Sailer & McCulloh and a *lot* reworking. However, the latter is worth doing as it will improve the paper. Note that no major reanalysis is asked for. Overall, the editor says: "rewrite it a lot more and it will be accepted". Congratulations!

Mark

[Quoted text hidden]

DUNCAN CLARK <duncanclark@ucla.edu>
To: Mark Handcock <handcock@stat.ucla.edu>

Thu, Apr 8, 2021 at 10:08 AM

Hi Mark,

Thank you!

I need to look into the GWDEG term, I wasn't aware that in statnet positive GWDEG is interpreted as a tendency "against" centralisation.

In general, I thought the reviews comments were very helpful, though I don't know how this compares to how reviews usually are. In particular it seems like the reviewer that gave the long review, found the paper a compelling case for LOLOG and even experimented on their own, hopefully if accepted it may help Ian towards getting some recognition for his invention.

I also wanted to say thank you for helping me so much with this. In hindsight, I should have done a much closer proofread - as noted by all the reviewers, and will make sure it is perfect for re submission. I'm glad this didn't seem to effect the acceptance chance, and hope the messiness noted by the editor doesn't reflect badly on you.

Duncan

[Quoted text hidden]

Mark S. Handcock <handcock@stat.ucla.edu>
Reply-To: handcock@stat.ucla.edu
To: DUNCAN CLARK <duncanclark@ucla.edu>

Fri, Apr 9, 2021 at 11:32 AM

Hi Duncan,

Did you want to meet today or schedule something for early next week?

Best,

Mark

[Quoted text hidden]

DUNCAN CLARK <duncanclark@ucla.edu>
To: Mark Handcock <handcock@stat.ucla.edu>

Fri, Apr 9, 2021 at 1:36 PM

Hi Mark,

Yes it would be great to talk today if you have time, does 3pm or 4pm work for you?

Duncan

[Quoted text hidden]

Mark S. Handcock <handcock@stat.ucla.edu>
Reply-To: handcock@stat.ucla.edu
To: DUNCAN CLARK <duncanclark@ucla.edu>

Fri, Apr 9, 2021 at 1:52 PM

we try 4pm?

[Quoted text hidden]

Mark S. Handcock <handcock@stat.ucla.edu>
Reply-To: handcock@stat.ucla.edu
To: DUNCAN CLARK <duncanclark@ucla.edu>

Fri, Apr 9, 2021 at 1:53 PM

Hi Duncan,

Can we try 4pm?

Best,

Mark

[Quoted text hidden]

