

FORM 2C - EVALUATION FORM RESEARCH MASTER'S THESIS RESEARCH PROPOSAL

Title of research project: Assessing the performance of Occam's window for Bayesian model averaging _____

Student name: David Coba _____

Student ID card number: 12439665 _____

Reviewer name: Julia Haaf _____

Role: Thesis committee member _____

Status (1st version or 1st version revision): _____

Please indicate your overall evaluation below, based on your evaluation of the specific points on the following pages. If your overall evaluation is 'not assessable' then the proposal is not approved and you can circle '0'.

Overall evaluation:	2 Approved (i.e., the research master's thesis project can continue; start data collection/analysis). <i>The student responds in a response letter point-by-point to the comments and submits this at CANVAS.</i>
	1 Conditionally approved (i.e., the proposal has some deficits that need to be revised before the research master's thesis project can continue). <i>The student revises the research proposal and writes a response letter with a point-by-point response how the comments are handles, and submits the revised proposal with the response letter at CANVAS.</i>
	0 Not approved (i.e., the research master's thesis proposal has severe deficits that need to be revised before the research master's thesis project can continue). <i>The student revises the research proposal and writes a response letter with a point-by-point response how the comments are handles, and submits the revised proposal with the response letter at CANVAS.</i>

When completed with the evaluation, please upload your evaluation in CANVAS, using the Speedgrader in Modules - 'Submit research proposal' and attach the completed evaluation form. The assigned thesis committee member will compose a decision letter based on her/his evaluation and the second assessor's evaluation.

Please state your judgment on each specific item on this form using the denotation stated below (2, 1, 0, X), together with a (short) explanation. Obviously students are best served with concrete, concise and constructive feedback.

Your evaluation (per item, as well as the overall evaluation) can be either of the following:

2 – Approved

1 – Conditionally approved

0 – Not approved

X – Not assessable (Not clear enough / not enough information to be able to make a proper judgment)

A RESEARCH PROPOSAL

1. PROJECT DESCRIPTION

3.1 Prior research

- *Is the problem/research question described in a clear and concise manner?*
- *Is previous literature leading up to the research question adequately described?*
- *Is it clear what the contribution of the proposed research is in light of previous literature?*
- *Is the discussion of the previous literature well-structured and ordered?*
- *Is the theoretical background clear?*
- *Does the proposal in general have a clear structure and flow?*

Evaluation (2, 1, 0, X) : 2

Explanation and any suggestions for improvements:

The problem and research question were clearly described. My only quarrel is that a lot of space went to concepts that were not necessarily needed to understand the problem, and therefore other aspects were not sufficiently explained. For example, I was waiting for model stacking to be relevant, but I think this entire paragraph was essentially irrelevant to understand the project. On the other hand, BDMCMC and BAS are only mentioned in the methods section, even though it makes sense to explain them in more detail if they are used as benchmark.

3.2 Research question and hypotheses

- *Does the research question follow logically from the theoretical background?*
- *Does the research question translate into specific, clear and testable research model/ expectations/ hypotheses?*
- *Are the research model/ expectations/ hypotheses well-founded and logically related to underlying psychological mechanisms?*

Evaluation (2, 1, 0, X) : 2

Explanation and any suggestions for improvements:

Given the exploratory nature of the project, I think the research question and approach are clear.

2. PROCEDURE

- *Are the research model/ expectations/ hypotheses operationalized in a clear and correct manner in an experimental design?*
- *Are the proposed measures and DVs properly described and justified (incl. validity and reliability; are proposed interventions adequate)?*
- *Is the suggested sample (category, control groups, sample size) properly justified?*
- *In case new or adjusted instruments or measures (e.g., questionnaires) are used, is the new instrument first validated before use in the main experiment? If not, is there a proper justification and indication on how the data from this measure can be interpreted?*
- *Is the choice of statistical techniques (per hypothesis) properly justified and explained?*
- *Is there room for modification of the intended procedure, or is there ample motivation why not?*

Evaluation (2, 1, 0, X) : 1

Explanation and any suggestions for improvements:

It's fine if a project is exploratory and therefore develops further. But I think there are some aspects of the project that could be described better at this point. For example, if I understand correctly, Occam's window is used to generate a set of candidate models. However, for the data analysis you want to compare posterior probabilities of including specific edges. To me, there is a step missing there, namely using BMA for the candidate models to estimate those posterior probabilities. How do you plan to perform the BMA? Likewise, once you have obtained the posterior probabilities, how exactly will you assess the success of the different algorithms? You write that BAS and BDMCMC are benchmarks, so how much better or worse should Occam's window perform to be successful? And, how will you aggregate the algorithms' performances across edges?

B ADDITIONAL INFORMATION RESEARCH PROPOSAL

3. INTENDED RESULTS

- *Are the intended results clearly formulated?*
- *Are the intended results related to the specific and more general research questions?*
- *Is there a clear reflection on alternative interpretations in case results turn out differently?*
- *Is it clear what results will lead to falsification of theory and research model/ expectations/ hypotheses?*

- *What is the innovative value of the research in scientific and / or practical and societal terms?*

Evaluation (2, 1, 0, X) : 2

Explanation and any suggestions for improvements:

I am ok with this.

4. WORKPLAN AND FEASIBILITY

- *Is the proposed planning realistic and expedient?*
- *Is the proposed research feasible and sensible in terms of size and investment in terms of time?*
- *Is the proposed research realistic in terms of recruitment of participants?*
- *Is the proposed research realistic in terms of infrastructural needs (e.g., place of execution, used materials)?*

Evaluation (2, 1, 0, X) : 2

Explanation and any suggestions for improvements:

Sure, it's doable.

C LEARNING AIM / EFFECT AND OVERALL JUDGMENT

5. LEARNING AIM / EFFECT

- *At the end of this research project, is it your judgment that the student will be able to independently think of a research question, and set up / run an empirical study to test research model/ expectations/ hypotheses derived from the research question?*

Evaluation (2, 1, 0, X) : 2

Explanation and any suggestions for improvements:

I think if you do this project properly, you will learn a lot!

6. FINAL JUDGMENT

- *Are the previous sections generally positively evaluated?*
- *Are the previous sections in balance with each other?*
- *What is the quality of the proposal as a whole?*
- *What is your judgment on the structure, readability, and length of the proposal?*

Evaluation (2, 1, 0, X) : 1-2

Explanation and any suggestions for improvements:

I am fine with the exploratory nature of the project. But I think you can think a bit more about the general setup and make some preliminary decisions on your approach without hindering exploration.