Psychometrika

CALL FOR PAPERS

Special issue on: Network Psychometrics in Action - Applications and Case Studies

The idea that properties measured by psychological tests are best seen as complex systems in which specific emotions, thoughts, and behaviors interact with one another has inspired the network approach in psychometrics. Graphical models, or networks, have become a popular alternative to classic psychometric approaches using latent variables. This popularity is partly due to the development of new methods and new software that have made it easy for researchers to estimate graphical models based on psychological data, visualize the estimated structures, and conduct psychometric analyses of the estimated networks. These tools have made the network approach highly accessible, and thus facilitated a flourishing literature on applied network approaches to, among others, psychopathology, intelligence, personality, and political attitudes.

But the available suite of tools for the empirical analysis of networks remains limited. As a result, there are many applications of network psychometrics in which key analyses cannot be conducted and important questions are left unanswered. An important example can be found in psychopathology research—the primary application of network psychometrics—which lacks a proper way to handle the non-ignorable missing data patterns that are introduced by questionnaires with a skip structure. In addition, expanding the network approach to other substantive areas will reveal unique methodological challenges. Important examples include the assumed invariance of network structures across age and ability groups in intelligence research, and the problem that variables covary at different levels—e.g., individuals, schools—in educational surveys. These and many other applications of network psychometrics await methodological innovations to answer fundamental research questions. Be it a new analysis approach, test or model, or an extension of existing methods. We believe that the best way to move the field forward is to propose innovative solutions that are inspired by the substantive problems in psychological science.

The aim of the special issue is to showcase how methodological innovations in the network approach that are inspired by real data can be used to answer important substantive questions in psychological and educational research. With the network approach we refer here to the analysis of psychological and educational data using graphical models, which precludes the exclusive use of random graph models that are used in social network analyses, for example. The special issue will be part of the section Application Reviews & Case Studies,
and will not comprise of pure Theory and Methods type papers. We are particularly interested in papers that:

- offer a comprehensive analysis of real data from psychological or educational research using graphical models that is statistically innovative or novel in application, and that answers important substantive questions;
- provide a methodological innovation for the network approach that is clearly motivated by a relevant application or that addresses a broadly encountered issue, and which furthermore demonstrates that these innovations solve an important problem with non-trivial data from psychological or educational research.

Interested authors should submit a short proposal to the guest editors of the special issue by November 1st (see link below), and the deadline for the full, submitted manuscripts will be March 1st, 2020. The proposal should include a brief summary (max. 500 words) of the intended project, and an explanation of how the intended project will fit in with the special issue. The guest editors will decide on the fit of the proposed project based on the proposal and get back to those who submitted proposals by November 15th, 2019. The guest editors may also offer suggestions on the intended projects to ensure a good fit to the special issue. All manuscripts that are submitted to the special issue will go through the regular peer-review process. Young academics are especially encouraged to submit their projects.

Any questions regarding the special issue should be directed to the guest editors listed below.

Submission Guidelines

The proposal can be submitted at https://forms.gle/LNZf5Nf5iGJNZ9CW7. Paper submissions must conform to the Psychometrika format guidelines available at https://www.springer.com/psychology/journal/11336. Manuscripts must be submitted to the editorial manager submission system at https://www.editorialmanager.com/pmet/ and the authors should select the special issue “Network Psychometrics in Action - Applications and Case Studies” during the submission process. Submissions must represent original material that has neither been submitted to, nor published in, any other journal.

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