From Hudson Golino
Speaker on 15 November, second slot

Papers (for cross-sectional data only):
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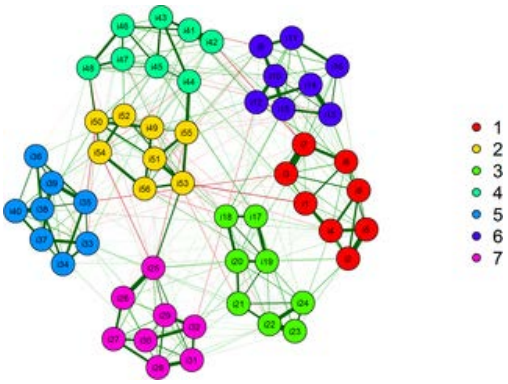

Exploratory graph analysis: A new approach for estimating the number of dimensions in psychological research

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The estimation of the correct number of dimensions is a long-standing problem in psychometrics. Several methods have been proposed, such as parallel analysis (PA), Kaiser-Guttman's eigenvalue-greater-than-one rule, multiple average partial procedure (MAP), the maximum-likelihood approaches that use fit indexes as BIC and EBIC and the less used and studied approach called very simple structure (VSS). In the present paper a new approach to estimate the number of dimensions will be introduced and compared via simulation to the traditional techniques pointed above. The approach proposed in the current paper is called exploratory graph analysis (EGA), since it is based on the graphical lasso with the regularization parameter specified using EBIC. The number of dimensions is verified using the walktrap, a random walk algorithm used to identify communities in networks. In total, 32,000 data sets were simulated to fit known factor structures, with the data sets varying across different criteria: number of factors (

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