Course: Social & Cultural Dynamics of Cognition, Supervisor: Riccardo Fusaroli

# **Appendix B: Plots & figures**

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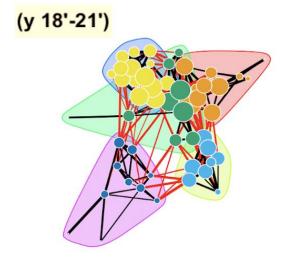
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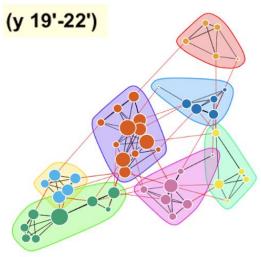
## **Plots & figures: Networks**

#### **Network 1 & 2:**

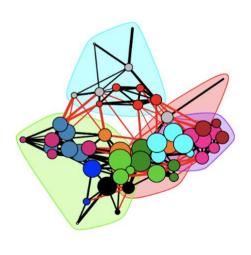
Nodes' colorcode: Social clusters

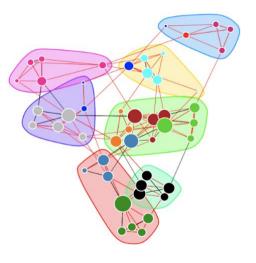
## Nodes' colorcode: Studygroups





Network 1: Visualization of networks for C18 (top) and C19 (bottom) colored by social clusters. The visualization steps can be found in "SNA PreprocessingandViz.rmd"





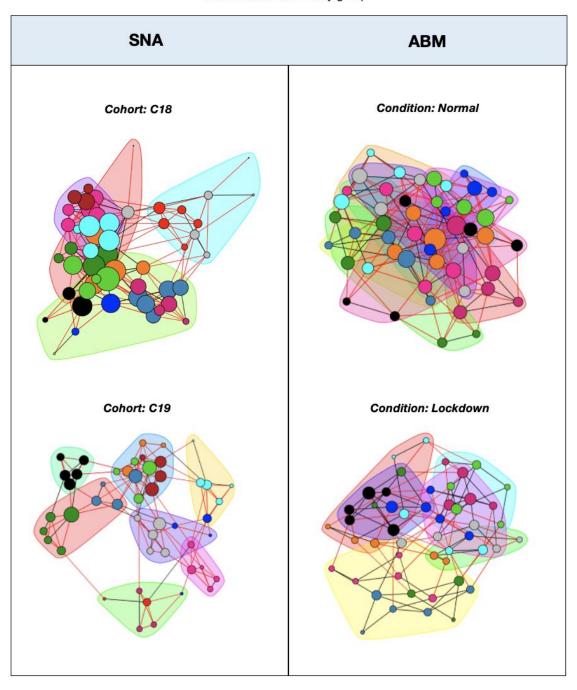
Network 2: Visualization of networks for C18 (top) and C19 (bottom) with nodes colored by studygroup and shades representing social clusters. It can be seen that for both networks, study group members tend to lie close in the network, however, C18 seem much more connected out of study groups than C19. This is well supported by the results of the analysis. The visualization steps can be found in "SNA\_PreprocessingandViz.rmd".

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## Social network plots – both real, and ABM simulated

#### Comparative visualization of networks for simulated and real data

Color code clusters: Social clusters
Color code nodes: Study group



Network 3 & 4: Comparative plot of visualizations of social networks colored by study group and shaded by social cluster. **3,** Left: Visualization of real-world network data from university students. **4,** Right: Visualizations of simulated networks using an ABM

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## Distributions of in-, out- all degrees between C18 and C19

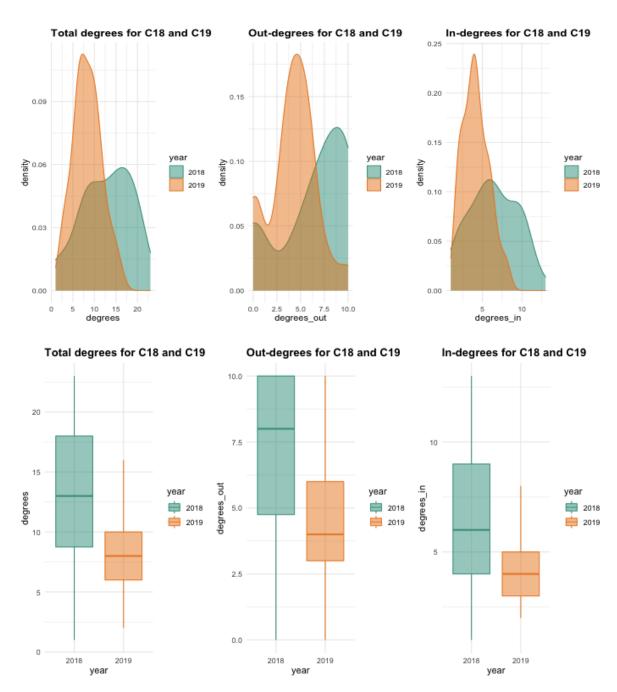


Figure 1: Comparing distributions w. density plots and boxplots of total, out- and in-degrees. All three panels show similar tendencies across the two cohorts. For out-degrees, which is essentially "giving" friendship, C18 has more people nominating 8-10 friends, compared to C19, where more people nominated 3-6 friends. For indegrees, which is essentially "receiving" friendship, C18 has a more even distribution, whereas for C19, most people are nominated by below 5-6 people. Both these patterns are also reflected in the plots for total degrees.

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## Splitting total degrees in study group / non-studygroup

#### Studygroup (in) vs. non-studygroup (out) connections per student for each cohort

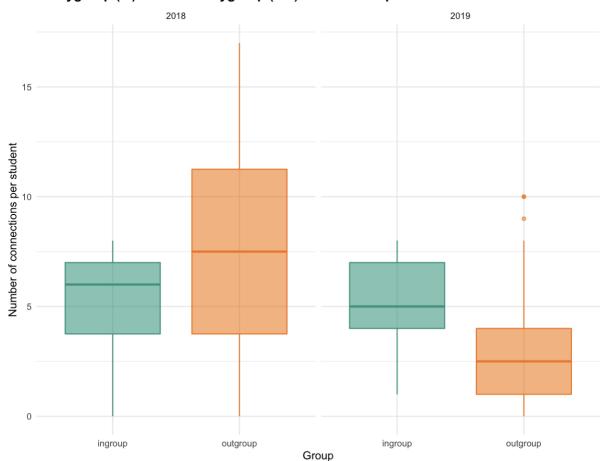


Figure 2: Distribution of studygroup vs. non-studygroup connections per student for each cohort. The plot shows a similar distribution of in-studygroup connections for both cohorts. In contrast, a visible difference between cohorts can be seen in the distribution of outgroup connections: Where cohort 2019 has fewer outgroup than ingroup connections, the 2018 cohort is much more dispersed, but generally showing the opposite trend

### **Data collection overview**

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## **COVID-19 and data collection: A Timeline**

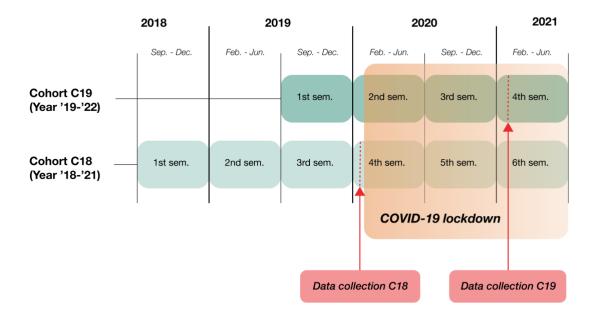


Figure 3. Overview of timing of data collection for the two cohorts relative to the COVID-19 lockdown.