



ESM Fig. 2: The Yule-Simon process on social grooming strategies (Fig. a-g are adapted from [9]). These figures show probability p of social grooming on days after each strength of social relationship d . The data periods were from the first thirty days. This indicates that the power law distributions were generated by the Yule-Simon process because the p of Fig. a-d was proportional to d , and these strategies subsequently generated the power law distributions. We did not observe the similar trends in the other data-sets due to insufficient data. However, Fig. e-k also show increasing trends. Therefore, they seem to obey the same process, because the generated distributions of all data-sets show the same distributions, i.e. power law distributions (black points in Fig. 9). These results were similar in a previous study [31].