

Supplementary file 1: Analysis for the diary data collected during April-October 2015

We launched a second wave of data collection with the same incentives to promote the participation in April 2015. To verify the findings from the data collected in the seven months of 2014, we retrieved seven-month contact diaries from April 1 to October 31, 2015. During this second study period, 130 participants completed at least 30 days of contact diaries with at least 30 persons. Note that 54 of them had participated in the May-November 2014 study as well. Very similar to the data collected in the previous study period, these diary keepers recorded 156,892 contacts with 13,539 persons in 2015. The contact lists among the 130 participants averaged 104 persons, with a minimum, median, and maximum of 30, 57 and 1,372, respectively. Diary keepers recorded about 9 contacts per day in 2015, with a minimum of 3, a median of 7, and a maximum of 64. On average, the persons on the contact lists appeared 11 times during the 7 months, ranging from 1 to 211, with a median of 3 times. During this second study period, 8,680 contacts were missing mood scores. As a result, 365 persons were excluded for having no average mood scores. We also excluded network members whom the diary keepers did not know (12%), and the number of contacted persons was reduced to 11,604 with 145,813 contacts for modeling mood variation. Diary keepers confirmed nearly all (99.69%) of the ties between any two persons on the contact lists. The aggregated data showed that about 80.9% of the pairs did not know each other, 9.6% of them knew each other well, and 9.5% just knew each other. For a comparison with the diary data collected during 2014, we listed the model estimates of the 2015 data in Table S1.