Time Use Investment and Expenditures in Social Networks
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In this presentation I use Brofenbenner's Person-Process-Context-Time (PPCT) model and two-day time use diary data to first identify social network types based on reported activities, travel, and the types of persons with whom and for whom these activities and travel were completed. The data used are from a time use two-day diary of 1471 persons collected between November 2002 and May 2003 in Centre County, Pennsylvania. In their time use diaries respondents provided a detailed record of each activity they completed in each day, the persons with whom they completed each activity as well as for whom they participated in each activity. The social networks identified by the respondents include immediate family, relatives, friends, schoolmates, businessmates, clubmates (members of a society or church), and all other. Measures of investment and expenditures in social networks include the number of episodes in a day, and the amount of time allocated to activities per day. These two measures (episodes and amount of time allocated) are classified by the amount of time allocated to activities at home, work, school, and elsewhere to examine the "placial" nature of social network investments. They are also classified by the persons with whom these activities are conducted and for whom these activities are conducted offering additional insights. A third measure considered is an estimate of the social network size based on the number of persons that each respondent interacts with per day in each of the social networks defined above.

To illustrate major changes but also stability over a person's life and following a life course perspective, respondents are classified in 15 mutually exclusive groups that follow age graded stages and they also include groups of persons that may have experienced major turning points or other dramatic events inhibiting mobility. In this way we can study the possible evolution in activity engagement within social networks. One of the most important findings confirmed in this analysis are the role of **home** as the place (or critical node) where many of the social networks are accessed from and most activities can take place at. Also, persons at different life cycle stages are active in a multitude of social networks but with different time expenditures and mix of interactions that are a function of their social role. This is something we should expect to see in other situations such as online communication. Figure 1 displays an example of the analysis findings. In the presentation I will provide an overview of the findings emphasizing the spatio-temporal constraints for specific life cycle stages and discuss issues of network identification and classification, measurement of contacts and intensity of relations based on these time use data, and expand the discussion to include the use of telecommunication to access social networks.

Legend (top chart):
- Total activity time in day1 with unkown companion
- Total activity time with other(s) in day1
- Total activity time with clubmate(s) in day1
- Total activity time with schoolmate(s) in day1
- Total activity time with businessmate(s) in day1
- Total activity time with friend(s) in day1
- Total activity time with relative(s) in day1
- Total activity time with family in day1
- Total activity time alone in day1

Legend (bottom chart):
- Number of activities in day1 with unknown companion
- Number of activities with other(s) in day1
- Number of activities with clubmate(s) in day1
- Number of activities with schoolmate(s) in day1
- Number of activities with businessmate(s) in day1
- Number of activities with friend(s) in day1
- Number of activities with relative(s) in day1
- Number of activities with family in day1
- Number of activities alone in day1

X-axis categories (both charts):
Child at Home, Child at Preschool, Child at K-6, Child at 7-12 Grade, College/University, Looking for a Job, Homeduties No Children, Homeduties With Children, Partime < 40 hrs No Children, Partime < 40 hrs With Children, Fulltime >= 40 hrs No Children, Fulltime >= 40 hrs With Children, Retired, Disabled, Other
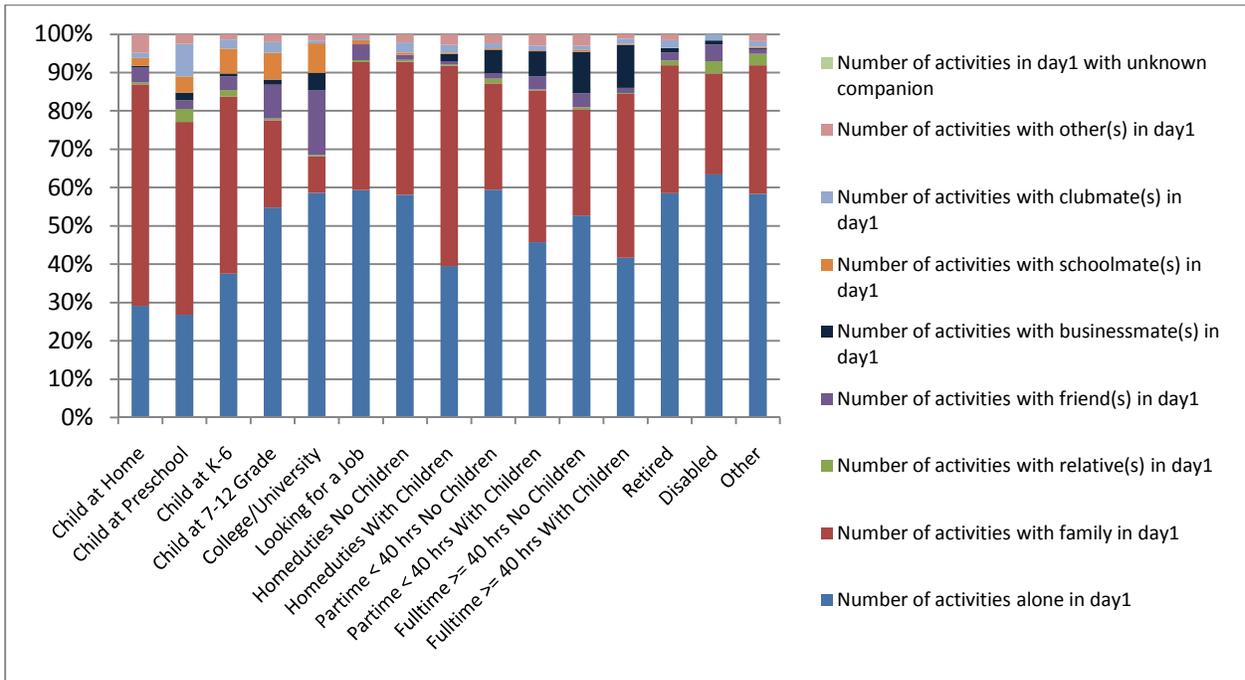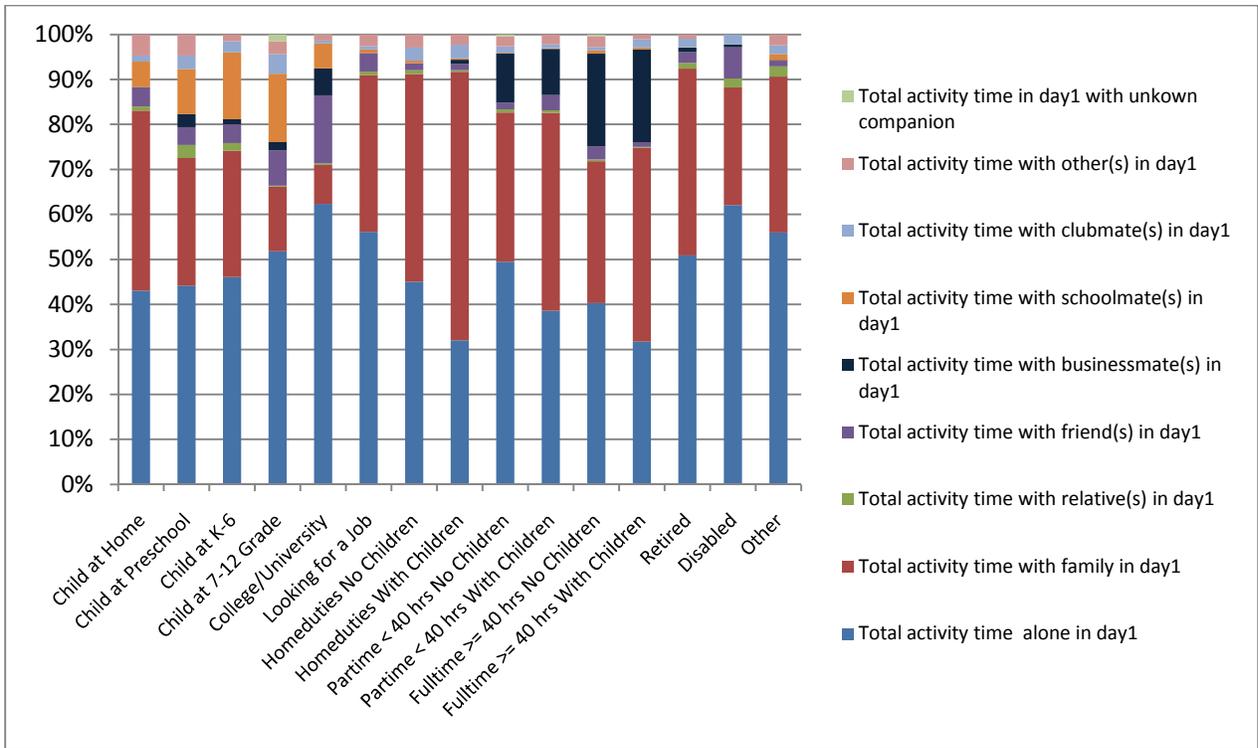
Figure 1. Amount of Time and Episodes Per Day by (Expanded) Lifecycle Stage