

Multilevel Models for Dyadic Data

Fiona Steele, The London School of Economics and Political Science

Abstract:

Dyadic data allow the study of relationships between pairs of individuals, or other units such as organisations and countries. In their simplest form, individuals belong to only one dyad and each dyad contributes a bivariate response, for example measures of each individual's health or perception of their relationship. However dyadic data often have a more complex structure: individuals may belong to multiple dyads, the data on each individual may be multivariate or longitudinal, and individuals or dyads may be clustered. Multilevel models offer a flexible way of analysing complex dyadic data. In this talk, I consider random effects models for longitudinal, multivariate and clustered dyadic data. Some recent developments are described with two applications to dyadic data on families. The first example is a study of exchanges of support between parents and adult children where we allow the correlation between giving and receiving help (reciprocity) to depend on covariates. The second example uses intensive longitudinal data from a round-robin design to study the dynamics of interactions between pairs of family members as they work together on a task.