

Co-evolution of Conversation and Advice Networks in a Japanese University Class

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Abstract

This paper examines the co-evolution of conversation and advice networks in a Japanese university class. The network data were collected in the spring and fall semesters in 2013 and 2014, in which there were 36, 25, 24, and 21 students, respectively. Using stochastic actor-oriented models (Snijders et al. 2013; Snijders 2001), the factors affecting network dynamics are estimated empirically. The results are as follows: First, at the beginning of the communication, there were dyadic competence and relatedness effects, which are related to self-determination theory (Deci and Ryan 2002). Second, in the study conversation network, there are standard network effects (reciprocity and transitivity) for all periods even if controlling for co-evolution effects. Finally, in the study advice network, asymmetrical properties were found.

Keywords: co-evolution, conversation and advice networks, stochastic actor-oriented models, self-determination theory