

Synchronizing to Learn and Like

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Background

Interpersonal synchrony is the occurrence of the same kind of behavior at (about) the same time (e.g., two people walking at the same pace). Research has shown that interpersonal synchrony can lead to better memory (i.e., learning), as well as more positive likeability ratings. Furthermore, social factors (e.g., rapport) appear to affect the occurrence or absence of interpersonal synchrony.

Research Questions

1. How do popularity and likeability affect the occurrence of interpersonal synchrony?
2. What effect does interpersonal synchrony have on learning and posttest ratings of the cooperation (i.e., posttest likeability)?

Method

Participants

- 340 children (166 boys, 174 girls)
- 170 dyads (83 boys, 87 girls)
- Mean age = 10.7 years

Materials

- Sociometrics questionnaire
- Tangram task (see Figure 1)
- Wii Balance Boards

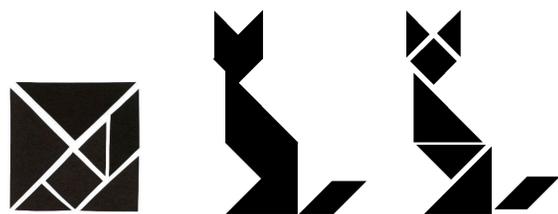


Figure 1. Tangram task

Procedure

Classroom

- Sociometrics questionnaire

Experiment (see Figure 2)

- Tangram task, three times:
 - 1) 10 minutes individually
 - 2) 10 minutes dyadic
 - 3) 10 minutes individually

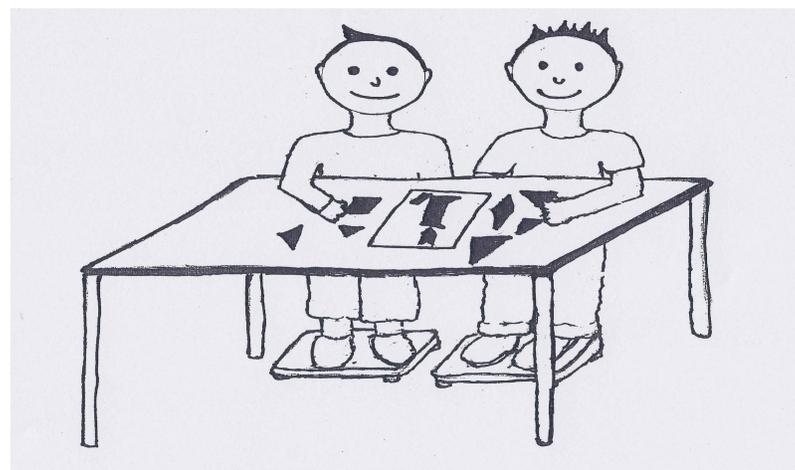


Figure 2. Cooperative task set-up

Analyses

Cross Recurrence Quantification Analysis (CRQA)

- Used to obtain measures of interpersonal synchrony within dyads during the cooperative part of the experiment (i.e., %REC, %DET, MEAN_LINE, MAX_LINE, & ENT)

Actor-Partner Interdependence Model (APIM)

- Used to examine actor and partner effects during the cooperative task

Results

Research Question 1

- No significant correlations between popularity or likeability and the CRQA measures
- No significantly different CRQA measures between dyads when looking at popularity or likeability difference scores
- No significant regression weights for the APIM models for either popularity or likeability

Research Question 2

- No significant correlations between the CRQA measures and either learning or posttest ratings

Conclusion

- No relation between popularity and interpersonal synchrony
- No relation between likeability and interpersonal synchrony
- No effect of interpersonal synchrony on learning or on posttest ratings

Future directions

- Analyze data for leader-follower behavior
- Take into account individual RQA measures, combined with CRQA measures, to examine what happens across experimental sessions
- Re-examine the balance board data, examine movement direction instead of position of postural sway

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