

Prosodic accommodation in ensemble music and speech conversation

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Joint (interpersonal) music-making and conversational speaking create sensorimotor demands on each person. In a musical ensemble, prosodic cues produced by oneself must be identified and integrated with simultaneously produced cues from other group members. Conversational speech makes similar demands on the integration of prosodic cues among speakers in turn-taking. We examined how musicians accommodated to their partners as we measured body movement and tone onsets in duet vocalists' temporal coordination. Experienced vocalists sang a familiar melody in Solo and Duet conditions. The vocalists sang duets in Unison (simultaneously producing identical pitches) and Round conditions (one vocalist, the Follower, produced the same pitch sequence at an 8-tone delay from their partner, the Leader) while facing Inward (full visual cues) and Outward (reduced visual cues). The relationship between the singers' parts (Unison / Round) and the presence of visual cues from singers' head movements influenced the duet partners' temporal coordination. I will describe a study of turn-taking in speech that also demonstrates temporal accommodation, in the durations of speakers' turns. These studies suggest that joint music-making and turn-taking in speech entail temporal entrainment between individuals through accommodation of segmental durations and body movement in response to sound.