P4.86 TEMPORAL RECALIBRATION OF AUDITORY-MOTOR SIMULTANEITY AFTER IMITATION OF OTHER'S MOVEMENT.

Tabata Atsushi, Ogawa Kenichiro, Ogata Taiki, Miyake Yoshihiro

LOCATION

Poster Area

+ Add to to-do list

Tabata Atsushi{1}, Ogawa Kenichiro{1}, Ogata Taiki{2}, Miyake Yoshihiro{1}
e-mail:tabata@myk.dis.titech.ac.jp

As seen in training of sports and dancing, people often move own body while observing and imitating other's movement. The observation of temporal lag between other people's movement and auditory feedback recalibrated subjective simultaneous points (PSSs) of own movement and auditory stimuli (Watanabe et al. 2011). However, the effect of the imitation of others including self-movement on the recalibration is still unclear. The aim of this paper was to investigate whether lag adaptation occurs after real-time imitation of other's movement followed by auditory stimuli with the lag. We hypothesized that the effect of lag adaptation is larger under the real-time imitation of other people's movement than under observation, due to gain feedback information of own movement. Our experiment was consisted of the adaptation and the test phase. In the adaptation phase, participants (N = 7) were exposed to time lags under three conditions: lags from self-movement (self-movement condition), other's movement without imitation of the movement (observation condition) or other's movement with the imitation (imitation condition) to auditory stimuli. The lag length was 50 or 150msec. In test phase, using temporal order judgment task in which people judged which auditory or tactile stimuli came first, we observed lag adaptations on the PSSs. By ANOVA, there were significant differences between both the adaptation conditions and the lag length conditions ($p < 0.05$ and $p < 0.01$ respectively). In addition, the imitation condition had a tendency to increase the effect of lag adaptation more than the observation condition.

AFFILIATION(S)
{1} Tokyo Institute of Technology - Kanagawa - Japan, {2} The Univ. of Tokyo -

Chiba - Japan

POSTER SESSIONS

Poster Session 4: Plasticity, Learning and Recalibration >