Auditory feedback important mechanism in speech production [1]

Procedure
• A bird flying over one of the pictures cued the participant to say the intended word.
• Length F1 raised 25%; F2 lowered 12.5%.
• Stimuli: CVC words /be:r/ (bear), /ve:r/ (feather), /pe:r/ (pear).

Analysis
• First Formant
• Second Formant

Results of F1 and F2 productions

Experiment debriefing
• “Did you hear something odd when listening to your own voice?”
• No, but recalled possible changes after pointing out vowel manipulations
• Yes, noticed manipulations during experiment
• Yes, noticed manipulations, and acted on it during experiment

Compensation and adaptation across groups
• Stronger effect of compensation for the group of children suggests auditory-motor properties are less ingrained compared to adult speakers.
• Presence of adaptation effects of F1 during ramp and stay phase lengths are adequate even during the shorter program for children.
• Stronger/slower adaptation in F1 for children suggests that adults revert faster to the ingrained original representation of the speech sound.
• Absence of adaptation in F2 for children is possibly due to a high within-group variance.

Developmental effects
• Absence of age-related effects for children may be due to several reasons: lack of data, large within-group variability, or...