recognition of speech structure in the auditory cortex and interference with auditory processing of phonetic stimuli, acquired by training. In the phonetic task, the left inferior frontal gyrus was specifically activated implicating this area in phonetic processing.

**Ipsc11. Perceptual metathesis of obstruct clusters.** Matthew J. Makashay (Dept. of Linguistics, Ohio State Univ., 222 Oxley Hall, 1712 Neil Ave, Columbus, OH 43210, makashay@ling.osu.edu)

This study examined acoustic and perceptual cues of obstruct clusters in order to test the hypothesis that metathesis can be a process that maintains identification of the consonants involved. In an auditory lexical decision task, there were effects of both optimality of cues, and lexical frequency of clusters. Nonword targets were created by metathesizing mediod obstruct clusters in English words (e.g., *nekpt n* for *napkin*). For the clear listening level group, there was a slow rejection of nonword targets with optimal clusters that occur with higher frequency in the lexicon. For the speech reception threshold group, nonword targets with optimal clusters were more likely to be perceptually metathesized and realigned as words than words targets with nonoptimal clusters were, presumably because subjects are more likely to hear both consonants in optimal clusters. Clusters with fricatives and stops were less likely to be perceptually metathesized than clusters containing only stops, since the continuity of manner features in a stop cluster hinders perception of consonant order. Whether some listeners are more prone or prone to the ordering of temporal acoustic events will be investigated as well. [This material is based upon work supported under a National Science Foundation Graduate Fellowship.]

**Ipsc12. Flexibility of acoustic cues weighting in children's speech perception.** Catherine Mayo, Alice Turk (Dept. of Theoretical & Appl. Linguist., Univ. of Edinburgh, Edinburgh EH8 9LL, UK), and Jocelyne Watson (Univ. of Edinburgh, Edinburgh EH9 3JW, UK)

Nitrouer and colleagues [Nitrouer, J. Phonetics. 20, 1-32 (1992); Nitrouer and Miller, J Acoust. Soc. Am. 101, 2283-2286 (1997); Nitrouer et al., Percept. Psychophys. 62 (2000)] have found that in identifying certain syllable contrasts, young children make more use of syllable-to-internal formant transitions (relative to other available acoustic cues) than do older children and adults. The evidence for this change in the degree to which listeners weight, or use, certain cues comes predominantly from studies of accented contrasts (e.g., *hn>*[n], *hn>*[n], *hn>*[n], *hn>*[n]). The current study tests the flexibility of children's weighting of acoustic cues by examining cue weighting across a wider range of phonetic contexts. In particular, this study attempts to determine whether children's focus of perceptual attention can be led away from transitions in contexts where such cues are relatively less salient. Additionally, the study tests children's ability to identify pronouns in an extreme situation, in the complete absence of transitional information. [Work supported by Wellcome Trust.]

**Ipsc13. Backward masking in speech perception by children and adults.** Jeen Sassman and Elizabeth Lacer (Dept. of CDS, Univ. at Buffalo, 105 Cary Hall, 5435 Main St, Buffalo, NY 14214, jtesman@acsu.buffalo.edu)

The current investigation measured discrimination and identification of tone-noise and [b] stimuli by adults, children with normally developing language, and children with language impairment. The children were aged 4-6 years. These tasks were chosen instead of the more traditional two-alternative forced choice (2AFC) technique because it was believed possible that task difficulty influenced previous results (e.g., Wright et al., 1997). The stimuli in the current set of experiments had longer tones (40 ms) than prior studies but used higher masker levels (82 dB spectrum level). However, results showed that all the participants discriminated the stimuli containing the tone or [b] signal significantly above chance, contrary to previous findings. More difficulty was found in the identification task, similar to prior backward masking results. [Supported by an Individual Development Award NYSUUP.]