Birds and babies : a comparison of the early development in vocal learners

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Appendix I - Definitions

conspecific: of the same species

coronal: frontal place of articulation (see appendix II) in Dutch: /t/,/d/,/s/,/z/ and /n/ (and for some accents /r/) are coronal consonants and /i/ and /e/ are front vowels.

experience dependent: this thesis, when I refer to **experience dependent** processes I generally mean the processes influenced by the learner's exposure to adult language, or adult birdsong in the case of birds.

heterospecific: of a different species.

markedness: The notion of **markedness** is often used to describe the observed asymmetry; unmarked sounds are defined as more "universal" (i.e. more common across languages) and are acquired early in development, whereas marked sounds are defined as less common and acquired later.

motif: a sequence of birdsong elements or syllables, which can be repeated within a bout.

phoneme: the smallest unit in speech. Phonemes are contrastive: interchanging phonemes in a word changes the meaning of the word.

phonotactic patterns: combinations of phonemes.

phonological processes: the change of one phoneme or structure into another under certain linguistic circumstances/context. For instance, in Dutch the pronunciation of the 'n' in the word 'inpakken' changes into the labial /m/ because it is followed by a labial /p/

phonological typology: the study of phonemes and their distribution across languages and dialects

phonological syntax: a term used mainly in songbird literature to describe patterns in the order of song elements or syllables and thus a 'syntax' in terms of structure rather than meaning.

predisposition: In this thesis: a (biological) perceptual sensitivity to sounds not heard before.

tutoring: In this thesis: Auditory presentation sound to a juvenile bird providing input for song learning.

tutorsong: the song that a juvenile bird listens to and uses as a model to copy song.

tape-tutoring: an experimental method of exposing a juvenile bird to a song through a speaker (originally a tape recording, these days usually sound files) in order for the bird to copy the song.

s ongbout: a motif or series of motifs repeated directly after each other. Different bouts are separated by relatively long silent intervals (+- >0.5ms).

sonorant: sounds that are produced with a continuous airflow in the vocal tract. In Dutch: /m/,/n/, /ŋ/,/w/,/j/,/l/ and al vowels.

suprasegmental: on a level larger than the phoneme.

syllable:

Linguistic: a speech unit comprised of a vowel or a combination of consonants and a vowel, forming (part of a) word.

Birdsong: an element or combination of elements separated by relatively short (+- < 0.1ms) adjacent silent intervals .

syntax: the structure of a language, in terms of the order of words in a sentence, which is related to the meaning of the sentence.

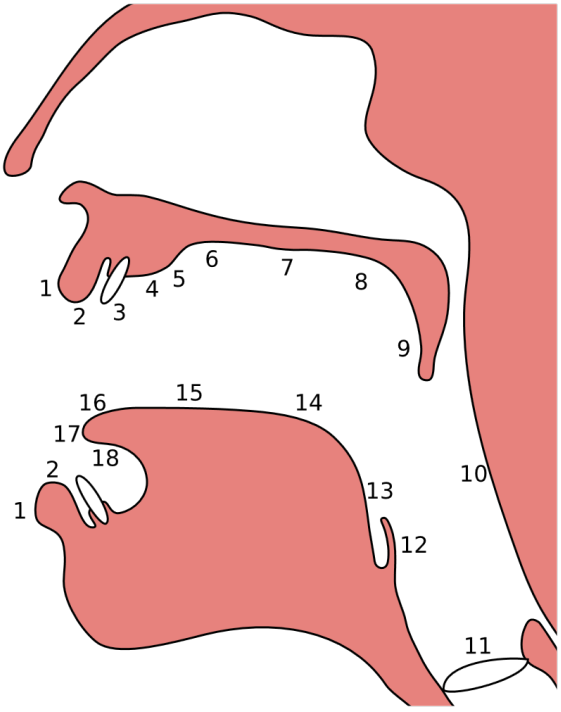
vocal learning: the process of learning to use vocal communication sounds, by being exposure to the auditory signal produced by adults.

Appendix II - Places of articulation
(active and passive)

Labial:
Exo-labial (outer part of lip)
Endo-labial (inner part of lip)

Coronal:
Dental (teeth)
Alveolar (front part of alveolar ridge)
Post-alveolar (rear part of alveolar ridge & slightly behind it)

Dorsal:
Pre-palatal (front part of hard palate that arches upward)
Palatal (hard palate)
Velar (soft palate)
Uvular (a.k.a. *Post-velar*; uvula)
Pharyngeal (pharyngeal wall)
Glottal (a.k.a. *Laryngeal*; vocal folds)
Epiglottal (epiglottis)
Radical (tongue root)
Postero-dorsal (back of tongue body)
Antero-dorsal (front of tongue body)
Laminal (tongue blade)
Apical (apex or tongue tip)
Sub-laminal (a.k.a. *Sub-apical*; underside of tongue)



source: https://en.wikipedia.org/wiki/Place_of_articulation