The History of English /r/: implications from a survey of cross-linguistic variability in trills
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The Problem

“The one thing about /r/ of which we can be certain is that [the pronunciation in Old English] was quite different from that of [Present-Day English]. It is probably impossible, at this distance, to attempt accuracy. Perhaps a sound in the range between an alveolar trill and a flap would be most appropriate. Finally, and before consonants, it may well have had a retroflex or velarised component.” Hogg (2002: 10)

2 reasons for uncertainty:
1) Range of realisations in Modern English
2) Synchronic processes in Old English

1) /r/ in varieties of Modern English (MnE): [r, ɻ, ɹ, ɾ, ʍ, ʍ, ɾ]
Old English (OE) /r/ was source for these, but range means that source could be any. Alevolar trill (trill) usual source, others by ‘weakening’ (e.g. Erickson 2002).

2) range of processes in OE (Lass 1983) diphthongisation (breaking), retraction, raising, lowering, rounding.
Trill cannot do all this – ‘molar’ /r/ instead.

The Solution?
Paleophony – present phonetic knowledge.

Trill survey
Data from JIPA and IPA Handbook.
Acoustic analysis of recordings.
Two sets of data (usually 1 speaker):
a) word-list – isolated words
b) narrative – read text
Non-spontaneous, a) more formal than b).
15 languages for word-list, 11 narrative.
All said to have trill as realisation of /r/.

Amharic
Arabic
Bulgarian
Croatian
Gayo (Sumatra)
Georgian
Hasselt Flemish
Hungarian
Irish
Italian
Kunama (Eritrea)
Persian
Slovene
Tamambo (Vanuatu)
Thai
Zurich German

Analysis
Used spectrograms and waveform.
Praat and SpeechStation (Sensimetrics).
Looked at incidence of types: trill, tap, fricative, approximant (415 tokens).
number and strength of trill contacts (Fig 1).
Looked at tap types (Figs 2 and 3).
Looked at formant transitions into /r/, especially F3 and F4 important for approximant /r/ (Fig 3).
Results

Types across whole sample, both list and narrative (n=415) in Figure 4:

Figure 4: Trill variability in whole sample

More taps and fewer trills in less formal narrative = hypospeech.

Figure 5: Trill types across samples

Trills in narrative have fewer contacts.

Figure 6: Trill contacts across samples

Trills in narrative have fewer contacts.

Figure 7: Tap types across samples

More weak taps in narrative.

Results summary

Trills relatively rare across sample, only 31% of all /r/ even in formal word-list.

Taps show range of stronger and weaker (more approximant-like) realisations.

Approximants do occur, as do changes in F3 and F4.

Word-list versus narrative differences suggest that trills even less likely, and taps even more approximant-like, in casual spontaneous speech.

Implications

In present-day ‘trill languages’ phonetic trills are rare, so same for OE.

Range of realisations present in formal speech could be seeds for MnE diversity.

Lass right: phonetic trill need not be trigger for OE synchronic processes.

Lass wrong: this does not mean OE /r/ was not a trill.

A trill is not a trill, is a trill.

References


