

Population data in casework

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WYRED Project: Data Sharing Satellite Event

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analysis

- combined auditory-acoustic analysis
- no ASR component
- compliant with current legal precedents in England and Wales

Fundamental frequency

- Mean: c. 95 Hz
- SD: c. 15 Hz

Articulation rate

- c. 6.0 syllables per second
- (phonological syllables)

Disfluency profiles

- c. 20 disfluencies per minute
- Predominantly prolonged hesitation markers; also repetitions (word- and phrase level)

Formants

- Mean F3 of c. 2.55 kHz
- Low F2 range for individual vowel distributions

Segmental patterns

- Monophthongal /eɪ/
- Monophthongal /əʊ/
- Dark /ɪ/ in onset position
- Examples of tapped /ɹ/
- Diphthongal /u:/
- Multiple bursts on labial plosives
- Intermittent affrication on /t/
- [ʔ] in liaison / hiatus

Voice quality

- Lax and lowered larynx
- Creaky voice
- Backed tongue body and pharyngeal constriction
- denasality

conclusions

- similarity and typicality
- verbal support statement

extremely strong support	<i>Inconclusive</i>	extremely strong support
very strong support		very strong support
strong support		strong support
moderately strong support		moderately strong support
moderate support		moderate support
limited support		limited support
For the view that the suspect <u>is</u> the speaker		For the view that the suspect <u>is not</u> the speaker

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expert a

expert b

population data

- realistic typicality judgements
- individual features
- ‘full’ descriptions of varieties

useful data

- empirical data
- descriptive findings

a note on ASRs...

- different population data needs

(van der Vloed – IAFPA)

- still questions on intra-speaker variation

(Kelly – IAFPA)

experts still better than lay
listeners

thanks!

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