

A stop manner opposition in three Australian languages: Duration and voicing as phonetic parameters

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In this talk we present preliminary results of phonetic investigations of stop contrasts in three Australian languages, showing that duration and voicing are the primary phonetic correlates with duration being the primary phonological distinction and voicing being derivable.

Stop contrasts in Australian languages are rare (Round 2023). There is a concentration in the northern part of Northern Australia (“Top End”), including Burarra (Butcher 2004), Bininj Gunwok (Stoakes 2013), Ngalakgan (Baker 2008), Murrinh-Patha (Mansfield 2019) and Jawoyn (Evans & Merlan 2004) and in Central Australia, Warumungu and Warlmanpa have been described as having contrastive stops (Browne 2024; Simpson 2017). Historically, there has been discussion about the phonetic feature differentiating stops in these languages with terms such as ‘fortis and lenis’ being used as well as ‘long and short’. Phonetic analyses on these languages have shown that languages may differ with respect to what constitutes the dominant differentiating phonetic feature, e.g. length in Bininj-Gunwok (Stoakes 2013) and VOT in Murrinh-Patha (Mansfield 2019).

In this talk we consider data from Warumungu, Warlmanpa, and Kamu. These languages have been described as having a stop contrast but the phonetic correlates have been unclear.

We show that in all three languages there is a phonetic distinction between two groups of stops in terms of duration and voicing, but that the primary contrast is between long and short stops with voicing being a dependent property. The main argument for assuming a primary length contrast is that there is far less overlap between stop modes in terms of duration when compared to voicing. That is, duration shows a much more consistent difference for stop modes and is thus able to predict the mode of a stop much more reliably than voicing. Kamu is the only language in our sample where duration and voicing are equally clear in separating stop modes.

More fine-grained research remains to be done in all languages with respect to other acoustic properties, but these data suggest the direction of travel in phonological terms and thus contribute to an enhanced understanding of the phonetics and phonology in Australian languages.

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