

## The dialectal and social perception of voice onset time in Singapore English

This project investigates the usefulness and salience of voice onset time (VOT) as a perceptual cue in dialect identification. The study focuses on the variation of VOT in Singapore English (SgE), which includes Standard Singapore English (SSE) and Singlish (or Colloquial Singapore English). SSE and Singlish are traditionally characterized as part of a continuum (Platt 1975) or diglossia (Gupta 1989), where SSE is typically used in formal situations and Singlish in informal situations. More importantly, SSE and Singlish are indexically linked to sociolinguistic productions of global and local Singaporean identities (Leimgruber 2012).

A previous production study (Liu 2011, n.p.) found that Singaporeans accommodated to American as well as Singaporean interlocutors through *sub-categorical* VOT shifts. Speakers produced lower VOT ranges when speaking to Singaporeans contrasted to higher VOT ranges with Americans. These results suggest that VOT is a variable available for manipulation in projecting global (with Americans) or local (with Singaporeans) sociolinguistic identities. Thus, this study examines the role of VOT and speakers' social identities in dialectal perception. Furthermore, does intra-speaker range of dialectal fluency – most influenced by level of education – affect dialect identification (Sumner and Samuel 2009)?

53 Singaporeans were recruited from the National University of Singapore (N=25), a top ranking university, and various polytechnics (N=28), similar to vocational schools. These groups reflect education levels that affect intra-speaker variation in inter-dialectal fluency and fluidity. Three forced choice task experiments were conducted and featured VOT continua varying in surrounding context: 1) Klatt synthesized /ba-/pa/, for baseline categorical perception, 2) word-level /baθ-/paθ/, and 3) /baθ-/paθ/ embedded into dialectal carrier phrases (e.g., *He walked the road not the **path** (SSE); Wah lau! Why we take this **path** ah! (Singlish)*). Carrier phrases were designed to test the effect of explicit dialectal context on categorical boundaries (in comparison to word-level stimuli). The latter two continua were recorded by a native Singaporean female speaker.

The analyses show that polytechnic students are perceiving /p/ earlier than university students on the /ba-/pa/ continuum, consistent with VOT production values of Singlish. However, the effect is flipped for the /baθ-/paθ/ continuum, suggesting that when given any sort of dialectal context – recorded by a Singaporean – university students shift their categorical boundaries to perceptually accommodate the “Singaporeanness” of the stimuli. Further analysis shows that *only* university students are sensitive to this dialectal information; polytechnic students did not show any shifts between dialectally-neutral Klatt-synthesized stimuli versus Singaporean-spoken word-level stimuli.

These results also support the hypothesis that level of education, and indirectly, intra-speaker variation and dialectal fluency, play a role in speakers' categorical boundaries. Lastly, Experiment 3 shows that when given sentence-level context, other more robust dialectal cues (i.e., discourse particles, lexical semantics, sentence intonation) outweigh the usefulness of VOT as a perceptual cue for dialectal interpretation. This study has implications for research done on both speech production and perception. It also shows that certain variables can become (de)activated when co-occurring with other variables useful for making and interpreting social meaning.

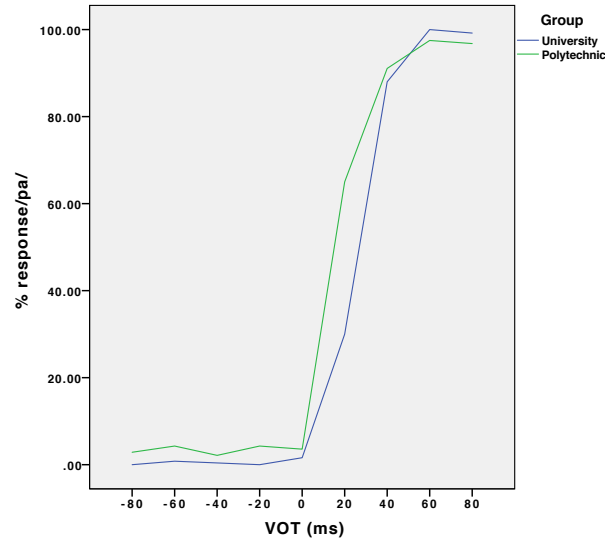


Figure 1: Experiment 1 – baseline categorical perception of /ba/-/pa/

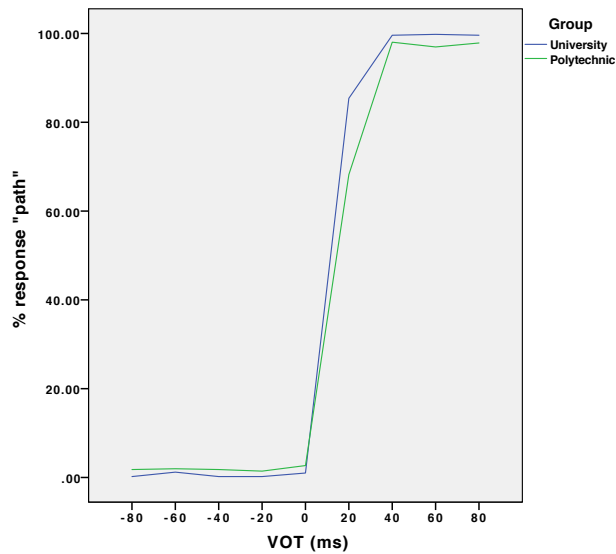


Figure 2: Experiment 2 - perception of /baθ/-/paθ/

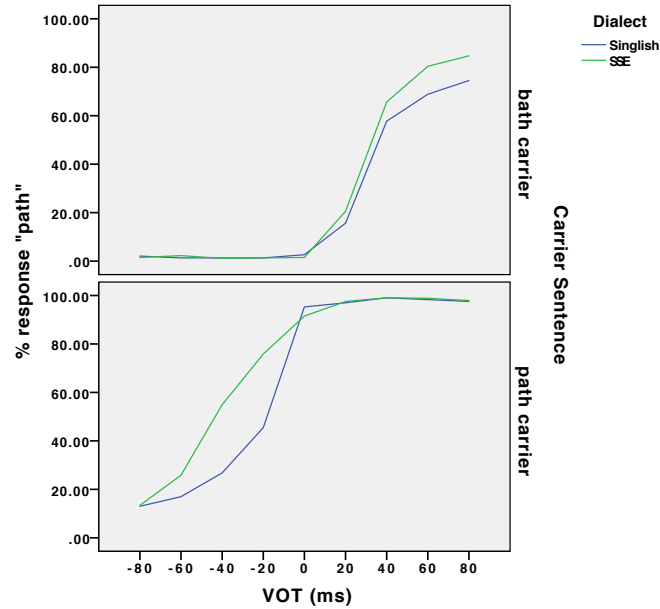


Figure 3: Experiment 3 - dialectal perception collapsed over groups

Keywords:

Sociophonetics, voice onset time, speech perception, Singapore English

References:

- Gupta, Anthea. 1989. Singapore Colloquial English and Standard English. *Singapore Journal of Education* 10(2): 33-39.
- Leimgruber, Jakob. 2012. Singapore English: An indexical approach. *World Englishes* 31(1): 1-14.
- Liu, Priscilla. 2011. Linguistic accommodation and production of voice onset time in Singapore English. Unpublished master's thesis, University of Arizona. Tucson, Arizona.
- Platt, John T. 1975. The Singapore English Speech Continuum and Its Basilect "Singlish" as a "Creoloid." *Anthropological Linguistics* 17(7): 363-374.
- Sumner, Meghan and Arthur G. Samuel. 2009. The effect of experience on the perception and representation of dialect variants. *Journal of Memory and Language* 60(4): 487-501.