

Experience with phonemic clicks affects listeners' detection of paralinguistic clicks

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Phonemic click consonants occur in only a small number of languages, yet paralinguistic clicks, which convey pragmatic and discursive functions, are widespread. English listeners have been found to be mostly unaware of the presence of such clicks [1]. We examined if the detection of paralinguistic clicks is influenced by experience with phonemic clicks.

For an on-line experiment, we recruited on Prolific 118 monolingual English speakers from the United States and 54 native speakers (the highest number we managed to reach) of at least one language with phonemic clicks, all proficient in English as well, from South Africa. We used the stimuli from [1], consisting of eight 9-10 sec. pairs of video clips taken from a scientific presentation given by a native speaker of English (Figure 1). In half of the pairs, the two videos were identical and contained no click, in the other half, they only differed in the presence vs. absence of a click (the click had been silenced). For each pair, participants were asked whether they perceived a difference between the two videos' oral expression, and if so, to report at what timestamp the difference occurred (the time elapsed was shown prominently on the bottom of each video while it played), and to describe the difference.

The results are shown in Figure 2. Overall the percentage of click detections was small in both groups. Yet, participants correctly perceived numerically more differences in target than in distractor pairs, and they correctly mentioned the presence vs absence of click or click-like sounds only in response to target pairs. Thus, both groups showed evidence of a weak click detection capacity. A two sample test of proportions revealed that the participants who speak a language with phonemic clicks outperformed the native English participants in terms of timely detections, i.e. correct detections of a difference reported to fall within one second before or after the occurrence of the click ($z = 2.80$, $p = .005$).

Thus, speakers of languages with phonemic clicks showed a slightly better ability than English speakers at detecting non-phonemic clicks. This reveals that the presence of phonemic clicks in one's native language(s) yields an advantage in the detection of non-linguistic clicks, at least when listening to an L2 that has no phonemic clicks. The effect we find is small, but it was detected despite an adversarial online test setting and with relatively long stimuli.

Reference

[1] Vigil, Donny & Derrin Pinto. 2020. An Experimental Study on the Detection of Clicks in English. *Pragmatics & Cognition* 27(2). 457-473..

Figure 1: Still from one of the stimuli

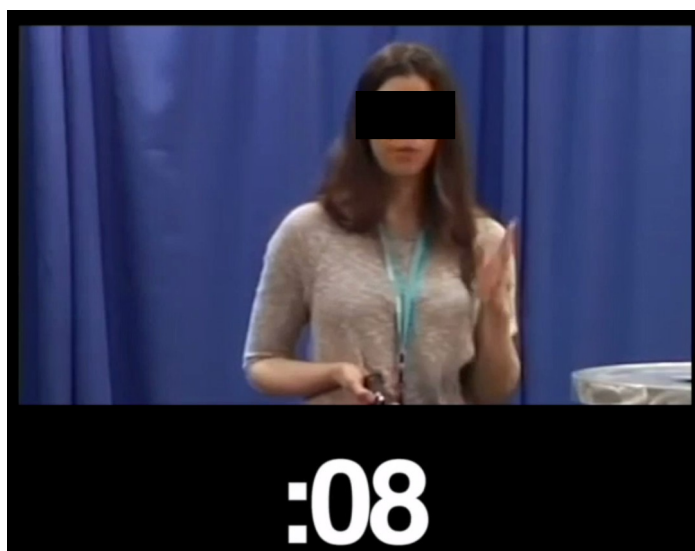


Figure 2: Perceived differences (any report of a difference, including in the control condition in which there was no difference), click mentions (any report of a difference that additionally mentions the presence vs. absence of a click or click-like sound), and timely detections (correct detections of a difference reported to fall within one sec. before or after the occurrence of the click) in L1 English listeners and L1 listeners of a click-consonant using (CU) language.

