

Ejectives in English: elicitation und analysis

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Ejectives make up a regular part of the phonological system of about 15–20% of the world's languages [1, 2]. Ejectives in English are not part of this statistic because they do not represent a regular part of the phonology, but rather belong to the complex patterns of sociophonetic variation. Nevertheless, there is a growing body of evidence that the prevalence of ejectives in different varieties of English is on the increase [3, 4], representing an exciting opportunity to observe language change in progress. However, despite the increase in prevalence, as well as knowing that ejectives are chiefly a correlate of final fortis plosives [5], it is often not easy to predict whether a particular speaker will produce ejectives in a particular linguistic activity, making elicitation of sufficient tokens for systematic analysis difficult.

The present study grew out of a lab recording session of a single speaker of Suffolk English reading sentences that happened to have final fortis plosives. She produced ca. 30% of final plosives as ejectives. As part of a larger study comparing the production mechanisms of linguistic ejectives in Georgian and epiphenomenal ejectives in German [6], both of which can be systematically and predictably elicited from speakers of both languages, we suspected that English ejectives could be elicited from the formal situation created in a lab recording.

We present the first results of multi-channel recordings of five young female British English speakers from a range of regional backgrounds. Besides the regular sound wave, intraoral air pressure was captured, as were two further signals using a dual-channel electroglottograph reflecting vocal fold activity and vertical larynx movement [7]. Elicitation materials comprised sentences and a short text containing word-final fortis and lenis plosives in utterance-final and non-final contexts. Subjects were also instructed to read a subset of the sentences “as clearly as possible”. The realisation of each plosive was described impressionistically.

Due to a delay of over two years caused by the corona pandemic between making impressions for the acrylic plate holding the tube to the pressure sensor and the recordings themselves, less than half of the original speaker sample could be recorded. Despite this, the elicitation materials and the formality of the lab context proved successful. At the same time, there was a large interspeaker variability, with two speakers producing no ejectives in either the normal nor the clear sentence conditions. In the three remaining speakers, 41% of the fortis plosives were produced as ejectives. Ejectives were produced most frequently (53%) in a clause-final position preceding “even though...”. Initial analysis of the acoustic, IOP and larynx signals indicate interesting differences between many of the non-final, often weakly released, ejectives and utterance-final ejectives. This suggests that many non-final ejectives are epiphenomenal, arising from a word-final oral stop closure being released after glottal closure has been made (Fig. 1, left). By contrast, the stronger release of many utterance-final ejectives suggests an active participation of the larynx to increase intraoral air pressure (Fig. 1, centre).

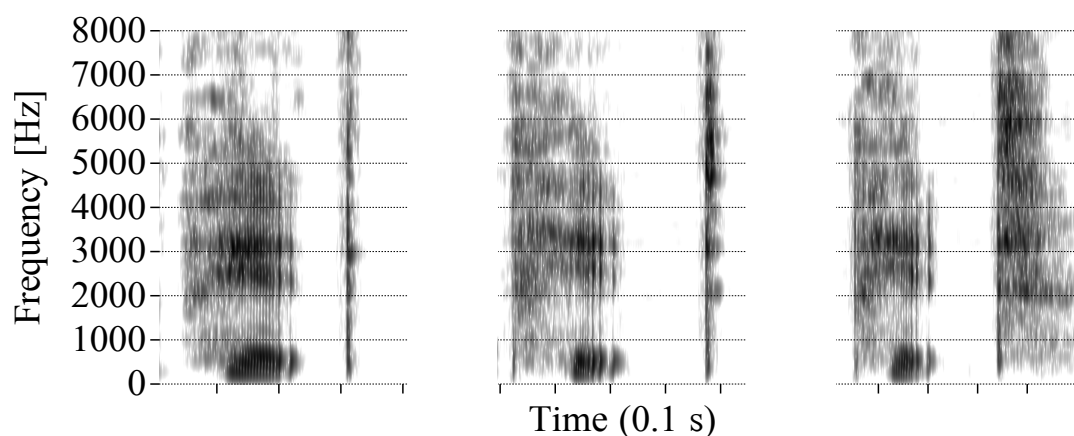


Figure 1: Ejective (left, centre) and pulmonic (right) tokens of “pit”: non-final before “even though...” (left); final (centre, right).

References

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