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Vocal Fry & Upspeak

## Effects of Glottal Fry and Upspeak on Speech Perception

A person's voice is a defining characteristic of one's social self. Personality, physical and emotional states, age, and confidence can be judged by listening to someone's voice. Most individuals rely on their voice to help them succeed within their profession. Two ways that people can vary their voice is *glottal fry* and *upspeak*.

Upspeak, also known as "high rise terminal," can be defined as when a speaker raises one's vocal intonation, (i.e., pitch) at the end of a declarative statement rather than an interrogative (i.e., question, Warren, 2016). Upspeak typically occurs on the last few words of a statement, and can create confusion for a listener (Tomlinson & Fox Tree, 2011). Traditionally, upspeak has been negatively stigmatized as "Valley Girl Speak," a term used to portray images of young, affluent, white females from California (Tyler, 2015).

Glottal fry, also known as "vocal fry," is classified as a phonational register that lies below the typical frequency, (i.e., pitch) produced during conversational speech (Hollien & Michel, 1968). Glottal fry is often perceived as having a "harsh" quality. However, glottal fry is not considered a vocal pathology as speakers typically have the ability to switch volitionally between vocal registers (Wolk, Abdelli-Beruh, & Slavin, 2012). As with upspeak, glottal fry occurs most frequently at the end of an utterance.

The use of glottal fry and upspeak during speech can influence the listener's perception and judgment of the speaker. Previous research has made comparisons between speakers of different ethnicities, regions, ages, and gender who use glottal fry and upspeak. According to Yuasa (2010), American females used glottal fry twice as often as Japanese females. However, Ritchart and Arvaniti (2014) found no variability between ethnicity, socioeconomic status, or language background during the use of upspeak. Age is also a contributing factor for perception and use of both vocal patterns. Tomlinson and Fox Tree (2011) found no difference between the use of upspeak and age. Young women and adult women also demonstrated similar patterns in the occurrence of glottal fry (Oliveira, Davidson, Holcezer, Kaplan, & Paretzky, 2016). However, older women perceived glottal fry more negatively than younger women (Anderson, Klostad, Mayew, & Venkatachalam, 2014). Another study conducted by Ritchart and Arvaniti (2014) found that female participants used upspeak twice as often as their male counterparts. Similarly, females used glottal fry more than twice as often as males (Yuasa, 2010).

Finally, the aforementioned studies also explored the listener's perceptions on specified qualities of the speaker. When speakers used either glottal fry or upspeak, listeners made judgments regarding trust, competence, education, and attractiveness (Anderson et al., 2014; Tyler, 2015). Listeners generally had negative perceptions of the speakers when these vocal patterns were present (Anderson et al., 2014; Tyler, 2015).

Future research is necessary to determine the effects of glottal fry and upspeak on listener judgments. Consistent use of these vocal patterns may have an impact on the way a listener perceives one's intelligence, professionalism, confidence, and affability, among other character attributes.

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