Question intonation of Greek-American simultaneous bilinguals

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Abstract

This study examines the influence of American English language on the tonal characteristics of Greek polar and wh-questions. Three Greek-American simultaneous bilinguals and three Greek monolinguals participated in a production experiment. The results indicate that Greek polar questions are not radically affected by American English tonal patterns, except for the span and alignment of the boundary tone. The tonal influence of American English is more apparent in wh-questions, which present a different boundary tone. Our findings suggest that simultaneous bilinguals may use tonal features of both languages, which are not however consistent in all question types.

Key words: bilingualism, intonation, questions, Greek, American English

Introduction

The present study focuses on the influence of American English language in the tonal characteristics of Greek polar (yes/no) and wh-questions produced by Greek-American simultaneous bilinguals. Since intonation is one of the most essential communication constituents, carrying both linguistic and paralinguistic features (Botinis et al. 2001), the investigation of the under-examined issue of L1-L2 tonal interference, especially with regards to Greek language, may reveal important aspects for both communication research and language acquisition.

Bilinguals are considered as individuals who have acquired the knowledge and the use of two languages. However, the degree of bilingual proficiency, the context of language acquisition, the age of acquisition, the circumstances under which the languages are used (i.e. domains of use) and, the social orientation, constitute the 5 most important variables related to bilingualism (Baker 2011). Focus has been given on the cross-linguistic interference in several languages (e.g. German-English, Turkish-German, German-Spanish), in order to detect the degree of the influence of both languages in simultaneous bilinguals' linguistic competence (Döpke 2000; Gut 2000). It is evident that bilinguals' intonation patterns in one language have been affected by the other language to some extent (Queen 2001; Lleó & Rakow 2011).

Method

Three Greek-American simultaneous bilingual and three monolingual of Standard (Athenian) Greek female speakers, within the age range of 50-65

years, participated in a production experiment. All bilinguals were born in the US and lived there on average of 13,6 years, have been exposed to both languages from their birth until 3 years of age, and have received education (preschool, elementary, middle and high school) in English, while Athens has been their permanent residence for 42,3 years on average.

The experimental material consisted of 2 simple SVO sentences. The sentences were produced in 3 renditions: neutral statement, polar question and wh-question, without focus, and without any lexical or morphosyntactic alteration, apart from the necessary addition of the word /ʝaˈti/ (why) for the production of the wh-question (Table 1). The final corpus included 72 utterances (3 speakers X 2 sentences X 3 renditions X 2 repetitions).

Table 1: The speech material of target sentences and their context.

Sentence Type	Context	Target Sentence
Statement	ti ˈʝinete? (What is going on?)	i ˈvana ɣaˈzoni maˈdiʎa (Vana is sewing handkerchiefs)
		i ˈmina miˈrazi baˈloɲa (Mina is distributing balloons)
Polar question	ti me ˈrotises? (What did you ask me?)	i ˈvana ɣaˈzoni maˈdiʎa? (Is Vana sewing handkerchiefs?)
		i ˈmina miˈrazi baˈloɲa? (Is Mina distributing balloons?)
Wh-question	ti me ˈrotises? (What did you ask me?)	ʝaˈti i ˈvana ɣaˈzoni maˈdiʎa? (Why is Vana sewing handkerchiefs?)
		ʝaˈti i ˈmina miˈrazi baˈloɲa? (Why is Mina distributing balloons?)

Results

The results show that polar questions follow a similar tonal structure in both monolingual and bilingual productions, except for the span and alignment of the boundary tone. In bilingual productions, a rise-fall movement covers the 2 last syllables of the utterance, while the peak of the boundary tone is aligned with the end of the stressed vowel of the penultimate syllable. In monolingual productions a distinct and sharper rise-tonal fall forms the boundary tone, which only covers the ultimate syllable of the utterance (Figure 1). This tonal difference of the 2 last syllables of bilingual and monolingual polar questions is significant ($F(1,142) = 22.255$, $p<0.05$).

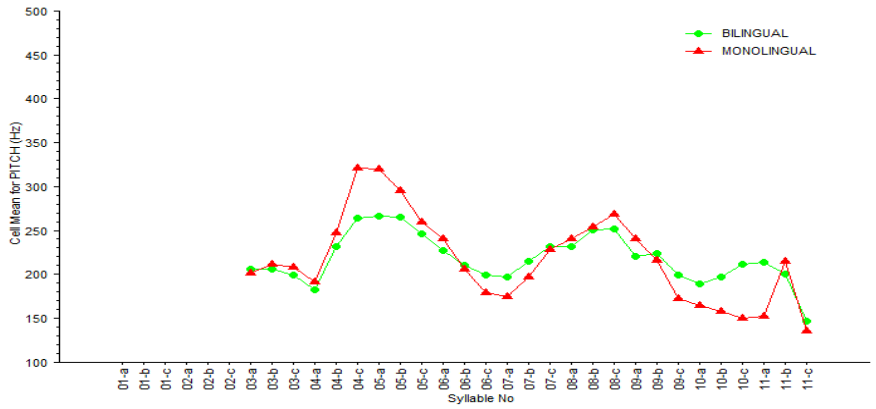

Figure 1: Tonal structures (mean values in Hz) of polar questions of monolingual and bilingual speakers.

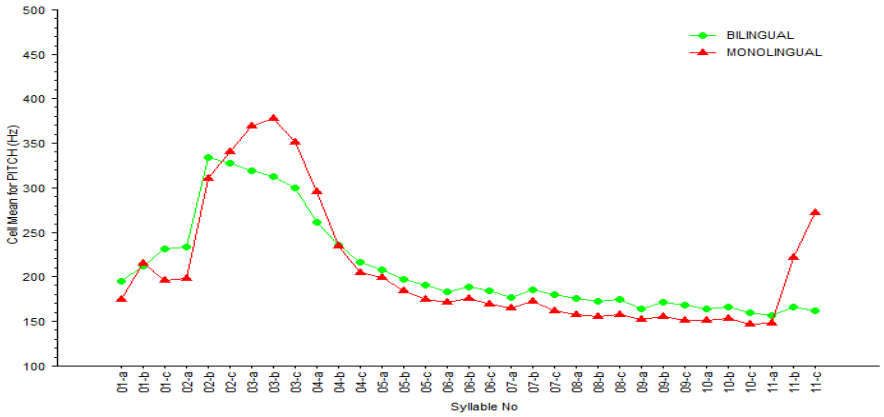

Figure 2: Tonal structures (mean values in Hz) of wh-questions of monolingual and bilingual speakers.

A more noticeable difference is observed in wh-questions. Although in both cases there is a distinct focal accent covering the wh-word and the 2 following syllables, in bilinguals' productions the tonal peak is aligned with the beginning of the stressed syllable (2nd) of the wh-word, while in monolinguals' productions the tonal peak is sharper and slightly moved to the right, aligning with the vowel of the 3rd syllable. Moreover, a different boundary tone is noted. In monolinguals' productions the boundary tone is a typical tonal rise at the last syllable, while in bilinguals' productions a low plateau beginning from 5th syllable covers the whole utterance until the end (Figure 2). This tonal

difference of the 2 last syllables of bilingual and monolingual wh-questions is significant ($F(1,142) = 5.487$, $p<0.05$).

Conclusion

In accordance with the results of this study, American-English does not radically affect the intonation patterns of Greek-American bilinguals in Greek polar questions, since bilinguals' productions followed a similar pattern with the monolinguals' ones. However, there is a noticeable American English interference in the case of Greek wh-question productions by bilinguals, since their boundary tone resembles the falling boundary tone pattern of American English wh-questions (Hedberg et al. 2010; Kainada & Lengeris 2013), rather than the typical rising pattern of Greek wh-questions (Botinis 2011; Chaida 2010).

Our findings suggest that simultaneous bilinguals of Greek and American English may use tonal features of both languages, which are not however consistent and global in all sentence types.

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