Italian natives' judgments of French learners' Italian-L2 speech

Sonia d'Apolito

Department of Humanities, University of Salento, Italy

Abstract

The present study focuses on perception to observe how Italian listeners judge the singleton/geminate contrast produced by French learners in terms of intelligibility, interpretability, comprehensibility and learners' effort when producing native/non-native sounds. The important factors are the proficiency level (beginner vs advanced learners), the context, that is the production tasks (target word in isolation and within a phrase) in which also the amount of information available varies (co-text). Results show that advanced learners are more intelligible than the beginners who are perceived to produce the geminates with a lower accuracy and a greater effort. The co-text has a greater impact than the context as, in case of a low pronunciation accuracy, the richness of information helps listeners to understand learners' intention.

Keywords: L2-speech dimensions, perception, geminates, context and co-text

Introduction

An accurate L2 speech is important not only for the production, as it allows speakers to express their message without ambiguities, but also for the perception as the degree of accuracy can affect the intelligibility and, as a consequence, the comprehensibility. Intelligibility is recognized to be crucial for a successful communication and according to Smith and Nelson' s view (2006), the term intelligibility is an umbrella term which includes: i) intelligibility: word or utterance recognition; ii) comprehensibility: word or utterance meaning and iii) interpretability: the perception or understanding of the speaker's intentions or meaning beyond word or utterance.

Smith (1992) claims that the comprehensibility in a broad sense is not speaker- or listener-centered but rather it is a collaborative interaction between both parties (Rajadurai 2007). Thus, a successful communication depends on the abilities and effort of both speakers and listeners (Munro 2011). Indeed, according to the H&H theory (Lindblom 1990) speakers vary their speech according to the listeners' need along a continuum of hyperspeech, that is a clear pronunciation which requires a maximum articulatory effort and a low perceptual effort, and hypospeech, that is an inaccurate pronunciation which requires a minimum articulatory effort but a stronger perceptual effort as listeners have to retrieve the message from other information. However, speakers' and listeners' effort depend also on the context in which the

communication takes place. Akman and Bazzanella (2003) defines the context on two levels: the global context which includes the external components (participant's role, age, place, beliefs, culture etc.), and a local context which includes information and specific parameters which are activated and shared during a conversation. The local context also includes the co-text which refers to the linguistic environment of a word (Faber, Léon-Araúz 2016).

In this perceptual study, the Italian-L2 speech by French learners, especially for the production of singletons (native sound) and the geminates (non-native sound), will be judged by the Italian natives as for intelligibility, interpretability, listeners' effort in comprehending and speakers' effort in production, considering their proficiency level (advanced and beginner), the context (two different production tasks) and the amount of information available (poor and rich co-text). The hypotheses are that: a) the perception of the learners' production depends on the context and co-text, in line with H&H; b) the effort in learners' productions my depend on the proficiency level and so a greater effort for beginners is expected; c) greater effort in comprehension when the accuracy is low and, in this case, d) listeners may not be able to detect the intended word when the co-text is poor while its richness may help listeners to detect easier the intended word.

Method

11 Italian listeners were recruited at the University of Salento (10 females mean age 27.6 s.d. 3.13; a male, age 28). The perceptual test was performed online using Google Forms and the stimuli were selected from a previous acoustic study in which French learners of Italian produced the singletons and geminates in two different contexts: word-level, that is word in isolation; and phrase level, that is an appropriate phrase to the meaning of the target word. Also, the amount of information available varies as word in isolation does not contain information about the meaning which strictly depends on the pronunciation accuracy (poor co-text); while the phrase has additional linguistic elements which clarify the meaning of the target word and so the co-text is rich.

Listeners were asked to judge target words with the singleton or the geminate in order to: 1) transcribe orthographically the target word heard (intelligibility); 2) indicate the intended word, choosing one answer among three alternatives: a) geminate, b) singleton, c) I do not know, on the basis of cues about speakers' difficulty (as hesitation, repetition etc.) or according to the co-textual information (interpretability); and to judge on a 7-point scale (1= not difficult at all; 7= very difficult) 3) the learners' effort in producing the singleton/geminate contrast and 4) listeners' effort in comprehension. Results will be presented and discussed for the frequency distribution in percentage.

Results

Figure 1 below shows how Italian listeners transcribed the target words produced by French learners and natives in isolation and within the phrase paying attention on the realization of the singleton or geminate in order to get information about their pronunciation accuracy.

The singletons perceived in isolation (word-level in poor co-text) and produced by the French learners are correctly transcribed as such with a percentage over 65%, while for the geminates the percentages drop at 62% and 45% for the advanced and beginners respectively. This means that half of the stimuli produced by beginners are perceived to be produced as a singleton.

It is evident that the singletons produced by both learning groups within the phrase (phrase-level in rich co-text) are perceived to be less intelligible and the accuracy percentage drops at 53%. As for geminates, advanced learners' results are in line with word in isolation, while beginners' productions are perceived with a slightly greater accuracy with a percentage at 60%. Natives' productions are always correctly transcribed in both contexts and co-texts.
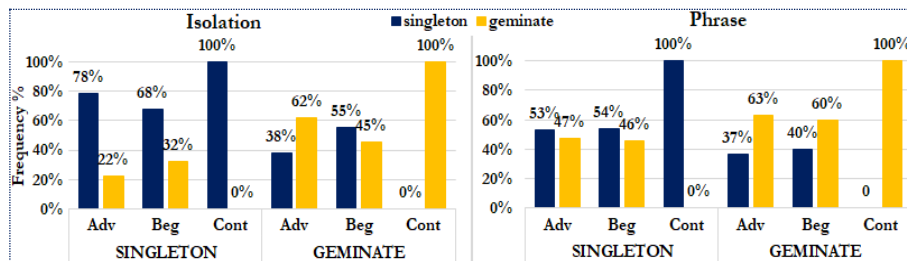

Figure 1. Bar graph for the intelligibility for singleton and geminate in isolation (left) and in phrase (right) for Advanced, Beginner learners and Controls.

The singletons, in both contexts and co-texts, are perceived to be produced without difficulties by both learning groups and easily comprehended and interpreted. The same is true for the geminates produced by the advanced learners but not for the beginners whose realizations are perceived to be produced with some difficulties as listeners' ratings are distributed across the scale from a low degree of difficulty (70-75% for categories 1-3) to a higher difficulty (20-25% for categories 5-7). However, listeners do not report difficulties in understanding/interpreting the intended target words.

As for the perceived degemination (geminate -> singleton) and gemination (singleton -> geminate) cases, listeners' ratings for the effort in production are distributed across the scale: the majority of their ratings fall within the categories 1-3 (low degree of difficulty) but for the beginners' productions greater difficulties are found too (categories 5-7: 25% for gemination cases in isolation and in phrase and for degemination cases in isolation; 43% for degemination cases in phrase).

Gemination cases in isolation are interpreted as geminate (and not as singleton) at 67% for the advanced learners while the beginners' productions are interpreted as follows: 21% as singleton, 30% as geminate and 43% as "I don't know". Further, the advanced learners' productions are easily comprehended, while some difficulties arise with the beginners' productions (36% for the categories 5-7). On the contrary, the gemination cases produced in phrase are correctly interpreted as singleton with a percentage over 80% and they are easily comprehended (difficulty for the beginners' production is 17%).

Finally, as for the degemination cases, half of the target words in isolation are interpreted as singleton (and not as geminate) and the listeners only find some difficulties for the beginners' productions (25% category 7). On the contrary, target words within the phrase are interpreted as geminate with a percentage over 80% for both learning groups and the comprehension occurs without too much effort.

Discussion and conclusions

Results confirm the hypotheses. As for the proficiency level, advanced learners are more intelligible and comprehensible than the beginners whose realizations are perceived to be produced with a lower accuracy and greater effort above all for geminates. As for the impact of the context and co-text, the co-text plays a major role for the interpretability in case of a lower accuracy. Indeed, listeners are not able to detect correctly the intended target words in isolation as both the interpretation and the comprehension strictly rely on the quality of the pronunciation; on the contrary, listeners are able to overcome the low degree of accuracy and to retrieve the intended target words from the richness of the co-textual information.

To conclude, both the pronunciation accuracy and the co-text play both an important role for coding and decoding the linguistic message without ambiguities and too much effort.

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