Perceptual competence and persuasiveness: L1 and L2 compared

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Abstract

This research aims at analysing the perception of prosodic features in learners of L2 Italian, from a comparative perspective with L1 Italian. In particular, we chose spontaneous argumentative speech, which implies the perlocutionary act of convincing, in order to investigate the relationship between the degree of persuasiveness of a speaker and the prosodic features characterizing her/his speech, in relation to the perceptual competence of non-native learners. A corpus of argumentative speech in L1 and L2 Italian has been collected. For the corpus in L1, 8 Italians, divided into two groups, were asked to take part in a debate and argue for or against a specific topic. The aim was to convince an audience of 19 Italians, who evaluated the persuasiveness of each speaker, judging it as "positive" or "negative". For the corpus in L2 Italian, we carried out the same procedure with 10 Chinese learners of Italian, who argued (5 pros, 5 cons) in front of an audience made up of 8 Chinese people. The data obtained are significant because they show not only that there is a relationship between persuasiveness and prosodic features, but that this relationship is strongly influenced by the perceptual competence of the listeners.

Keywords: prosody; perception; second language acquisition; persuasiveness.

1. Introduction

The prosodic competence in a second language is the result of a complex of variables, such as the quantity and the quality of exposure to the second language, the way of using L1 and L2, the language learning pathways, and the individual differences in terms of motivation, attitude, affective filter and age. The last factor is probably one of the influential: the period in which an individual can develop the same skills of a native speaker is limited to the first years of life. After this phase, it is very difficult that a non-native speaker is able to acquire an L2 prosodic proficiency comparable to that of a native speaker (Birdsong, 1999).

To these variables it must be also added the influence of the L1 prosodic models on the L2 perception. Some studies have recently focused on the influence of the perceptual segmentation and the resulting phonetic and phonological identification of the acoustic elements on the rhythmic organization which characterize the speech production in the various languages (Flege, 1991; Best & Tyler, 2007). In the case of a foreign language acquisition, it seems that a high degree of typological similarity between the languages in contact may cause positive transfer for the learning of morphosyntax, vocabulary and pragmatics, while a negative impact of the L1 or of other known languages may occur with regards to L2 pronunciation. Flege (1987) notices that this influence is also active on the L2 perceptual competence, since learners have real difficulties in discriminating the L2 sounds, particularly if they are similar to those of the native language.

1.1 Perceptual competence of Chinese learners of L2 Italian

The Chinese is a tonal and isolating language, typologically distant from Italian. Therefore, when dealing with the study of the Italian language, Chinese learners spend a lot of time trying to understand a language which is completely different from their L1, unless they have previously learned another foreign language typologically close to Italian. In particular, from the point of view of oral comprehension, Costamagna (2011) states that Chinese learners access to speech understanding with great difficulty, because they are unable to perceive and segment the Italian speech chain. The development in comprehension is also influenced by the Italian morphological organization: in the early stages, Chinese learners try to grab the prominent elements that can facilitate the comprehension, as they perceive the linguistic message in L2 as an indistinct mass of sounds without distinguishing the discriminatory elements. In more advanced levels, they develop a greater awareness of the distance existing between the two languages, above all as regards the prosodic structure. The skill of using variations of intonation for pragmatic purposes can be seen only in advanced levels, since in the early stages, they generally recognize interrogative and exclamative sentences.

Therefore, what characterizes the perceptual competence in Chinese learners of L2 Italian is a little progression from one stage of interlanguage to the other one, as shown by De Meo & Pettorino (2011) in a study on the relationship between language proficiency and prosodic competence. A Chinese can achieve a C1 high level of language competence (C1 level of the Common European Framework of References - CEFR) and, at the same time, not adequately develop the ability to communicate effectively with Italian native speakers using the appropriate prosody and intonation. Oral comprehension is also delayed by the different Chinese and Italian pragmatic-communicative models and this often makes the oral interaction in L2 Italian difficult (Costamagna, 2011).

2. Material and method

The present research aims at analyzing the perception of rhythmic and prosodic features in Chinese learners of L2 Italian, in a comparative perspective with the Italian native speakers. Using the task of the debating the relationship between the degree of persuasiveness achieved by the speaker and the related rhythmic and prosodic features of her/his speech was investigated.

It should be clarified that the study was carried out with the awareness that the argumentation and a speaker's persuasiveness is the result of a series of elements: the content of the text, the way the speaker expresses her/his opinions, the body language. Given these variables, the prosodic component was isolated to verify its influence on the ability to persuade the audience, not only because, through the voice, the speaker can arouse emotion and, therefore, persuade, but also because the voice may be spectro-acoustically analysed, allowing measurable and comparable results.

2.1 The debating structure

The debating is not simply a discussion where speakers argue about a topic, but it is rather an interactive exchange of ideas, with a strict protocol of rules which imply the alternation of arguments for and against a given topic, imposing a time limit to respect and finally involving the audience judgment called upon to evaluate individual speakers on linguistic, paralinguistic and extralinguistic parameters. When the debating involves also foreigners who argue in L2, it becomes an intercultural interaction between natives and non-natives, who are characterized by different linguistic behaviours and cultural backgrounds. In this perspective, the features normally defining the debating become even more complex because of cognitive factors related to language learning processes, sociolinguistic and sociopragmatic factors. This type of arguing involves intercultural communication skills as well, i.e. proper skills to interact by negotiating meanings, values, symbols, ideas, on a "common ground" (Fetzer & Fischer, 2006) between natives and non-natives.

For this research, a debating was held between a team of Italians and a team of Chinese learners of Italian. The debating took place in two phases. In the first one, chaired by a moderator, members of each team alternatively argued on the topic, having a time limit of two minutes. In the second phase, both groups had a time limit of six minutes to discuss freely, without any moderator, in order to convince the audience.

2.2 The corpora

The corpus in L1 and L2 Italian was audio-recorded using Goldwave 5.58 and videotaped by a Sony handycam HDR-SR8E and then orthographically annotated on the basis of the indications given by the CLIPS project "Lexicons and Corpora of Written and Spoken Italian"

(Albano Leoni & Giordano, 2005). Here we will refer to the spectro-acoustic analysis conducted, using Wavesurfer 1.8.8, on the corpus recorded during the first phase of the debating, where each speaker talked without being interrupted.

For each speaker measures were performed in order to determine the number of speech chains, the number of syllables for each speech chain, the duration of each speech chain, the duration of silent pauses, the duration of non-silent pauses or disfluencies, the maximum and the minimum f_0 value for each speech chain. Furthermore, for each speaker the following calculation were carried out: articulation rate AR, i.e. the ratio between the number of syllables and the speech chain duration (syll/s), speech rate SR, i.e. the ratio between the number of syllables and the utterance time (syll/s), fluency (F), i.e. the ratio between the number of syllables and the number of speech chains (syll/SC), the percentage of silence duration, the mean duration of silent pauses (s), the percentage of disfluencies duration, the tonal range, i.e. the difference between the maximum and the minimum f_0 value in an utterance, measured in semitones (st) in order to compare data relating to different speakers.

2.3 The native and non-native participants

The Italian speakers were three female and one male university students, aged between 20 and 25, all coming from the Campania region (southern Italy). The Chinese participants, two male and two female students of Italian at the University of Tianjiin, aged between 20 and 25, who had been living in Naples for four months, had a language competence of Italian corresponding to B2 level of CEFR. Before the debating, rules were explained to both groups separately and some tips on how to practice for the discussion, both individually and in groups, were given. Moreover, a large part of this introductory phase was dedicated to comment on the parameters the speakers would have been judged on: persuasiveness, voice volume, speech rate, pauses, intonation, posture and gaze, gestures, language use and competence. Afterwards, several debating simulations were held. For the Chinese learners, a textbook aiming at development of the argumentative skills in L2 Italian was used (Barki & Diadori, 1994).

3. The perception of persuasiveness in the L1 corpus

The corpus in L1 Italian consists of a debating between native speakers (NS) in front of an audience of native listeners (NL) about the following topic: "It is better to live in a big city". The team in favor was made up of one man and three women, while the team against was formed by 4 women. The audience, consisting of 19 NLs, male and female, had to judge the persuasiveness of each speaker in terms of "positive" or "negative."

To investigate the perceptual level, the persuasiveness degree of each speaker was related to the prosodic features of her/his speech, in order not only to verify the existence of a link between persuasiveness and prosody. The most significant relationships were found

between persuasiveness and AR (Figure 1), fluency (Figure 2), mean duration of silent pauses (Figure 3), disfluencies (Figure 4).
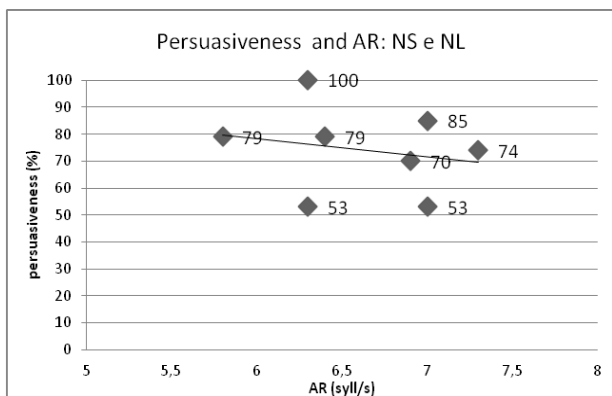

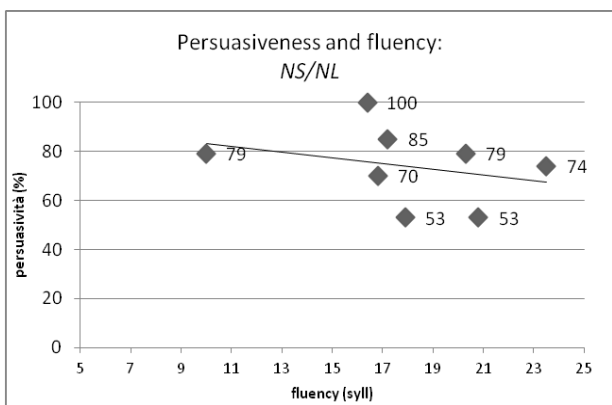
Figure 1: Articulation rate and persuasiveness
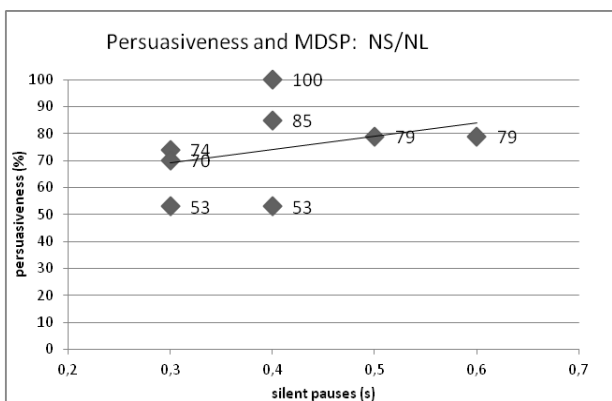

Figure 2: Fluency and persuasiveness

Figure 3: Mean duration of silent pauses and persuasiveness

The graphs show that the Italian listeners tend to accept an argumentation pronounced with a greater articulatory accuracy and many medium-long silent pauses, which may give them time to think about what they have just listened: the more the Italian speaker produces long silences, the more the native listener

perceives him/her as more persuasive. Instead, persuasiveness decreases if disfluencies increase, as if the native listener perceives those silent pauses, which are used to fill the spaces between sentences, as disturbing elements.

In conclusion, from the results it is possible to assume that a native listener tends to perceive an hyper-articulated speech with many long silent pauses and few disfluencies as more persuasive. Furthermore there are not significant relationships among persuasiveness, speech rate and tonal range.
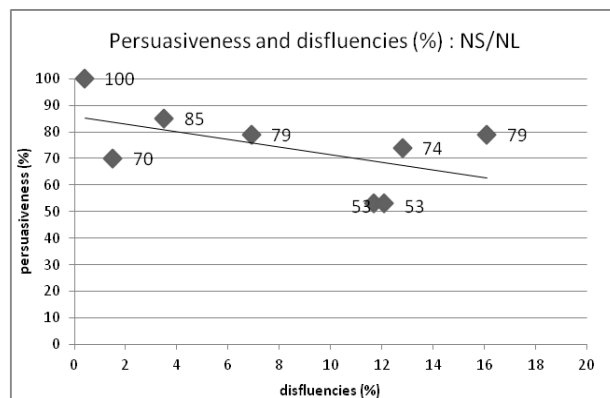

Figure 4: Disfluecies and persuasiveness

4. The perception of persuasiveness in the L2 corpus

The corpus in L2 Italian consists of the debating between two groups of non-native speakers (NNS) in front of non-native listeners (NNL). The team in favour consisted of four female and one male Chinese students, while the team against was made up of three male and two female Chinese students. In order to eliminate, as far as possible, the text variable, the assigned topic was the same as the one used in the previous L1 debating.

In this section, the relationship between the prosodic features characterizing the speech of NNSs and their ability to persuade a non-native audience will be analysed. Data were used to evaluate if the L1 and the L2 debating share the same characteristics, and to determine how NNLs perceive their peers speaking in a foreign language. In literature there are very few studies which deal with these questions and they mainly relate to foreign languages others than Italian.

Results show that the 84% of NNLs judged in a very positive way all the speakers, regardless of prosodic features. However it is worth reflecting upon how the relationship between persuasion and prosody is related to the perceptual ability of the listener. Indeed, a comparison between NLs evaluation (in the L1 debating) and that of the NNLs (in the L2 debating) points out that, while the NSs perceive a clear relationship between persuasiveness and the related prosodic features, the Chinese learners competence does not seem enough to detect a significant connection between prosody and persuasiveness. With regards to this difference, it can be assumed that there are

two co-existing causes. On the one hand, the assignment of a judgment on persuasiveness involves a four-step process: listening to speech, understanding the acoustic message, comparing it with one own opinions, and finally giving the judgment. It seems that the non-native learner pays more attention to single words rather than to the argument as a whole, unlike the NL, who has the tools to reach the next phases of the comprehension process. The speech perception in L2, indeed, is strongly influenced by the mother tongue prosodic structure, which may affect the learner's oral comprehension ability. Chinese learners, who have a native language characterized by rhythmic and intonation structures very different from Italian language, access to speech perception with great difficulty, because they are unable to perceive and segment the speech chain effectively.

On the other hand, there are idiosyncratic sociolinguistic and cultural mechanisms in the NNSs: from this perspective, the Chinese students positively evaluate their peers to reward the effort and the commitment they face dealing with another language. The development of the L2 perceptual competence, therefore, slows down because of the different pragmatic-communicative patterns of the learners.

The combination of these two elements - one cognitive, the other one socio-linguistic - leads the NNSs to identify with difficulty the suprasegmental components and their pragmatic value. This is even more interesting when we consider that the CEFR, with reference to the listening comprehension skills of B2 learners, indicates that s/he is able to understand the main ideas of a complex text on both concrete and abstract topics, including technical discussions in their field of specialization.

Considering the results obtained by this research, it can be added that an L2 Italian learner, with the so-called autonomy level of a language knowledge, is able to perceive and decode complex messages, but s/he is less able to evaluate them in terms of persuasiveness. The data shed new light on the studies regarding perceptual competence from an acquisitional point of view and on the ability of oral understanding. They also reveal a certain lack of attention to the prosodic dimension of L2 communication, both in acquisition and teaching, and finally, in the assessment field, because of the absence of any reference to language suprasegmental aspects in the CEFR descriptors.

5. Conclusion

The task of the present study was to analyze the perception of rhythmic-prosodic features in Chinese learners of L2 Italian in argumentative speech, from a comparative perspective with L1 Italian. To this purpose,. a relationship between prosody and persuasiveness was outlined: it emerged that Italian listeners find most persuasive a well structured L1 speech, with many long silent pauses and few disfluencies. These data about spontaneous speech confirm the research carried out by De Meo *et al*. (2011) on read speech.

Instead, with regard to the non-native speakers, for spontaneous argumentative speech, there is no significant relationship between persuasiveness and prosody, since the Chinese students have always attributed highly positive evaluations, which do not allow detecting a trendline that can link the above variables. Regarding this issue, this study proposes two exlanations, one cognitive and the other cultural-pragmatic.

Further research could have repercussions in the field of language teaching, since the oral texts administered to learners should be constructed, adapted and chosen not only on the basis of morphosyntactic structures and language functions, but also according to the various levels of perceptual competence that the L2 learners develop. Finally, it is interesting not only to extend the investigation to the relationship between persuasiveness and textual/kinesic variables, but also to study the link existing with the prosody by the technique of low-filtering, in order to eliminate other variables.

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