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Maria Grazia Busà, Antonio Stella

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THE ROLE OF PROSODY IN PRONUNCIATION TEACHING: A GROWING APPRECIATION

Maria Grazia Busà

Università degli Studi di Padova
mariagrazia.busa@unipd.it

ABSTRACT

This paper provides an overview of current issues in L2 prosody acquisition research and teaching. In particular, it discusses how L2 prosody contributes to the perception and production of foreign accent and may give rise to intelligibility problems. In the last session, it discusses the results of an exploratory study, which was aimed at getting an insight on the differences in English prosody, as produced by native speakers of Southern Standard British English and North-East Italian.

Keywords: Pronunciation teaching, L2 prosody, intelligibility, Italian L1, English L2

1. INTRODUCTION

Experimental studies in second-language speech and acquisition have shown that non-native prosody may contribute greatly to foreign accent as well as impact on L2 comprehensibility. For example, the perception of L2 fluency and speech seems to be affected by differences in stress, speech rate and timing, pitch and intonation [10, 17, 21, 30].

It is also possible that, in second language speech, the use of non-native prosodic patterns may convey meaning that is non-intended by the L2 speaker, and cause distraction or annoyance, or project an image of the speaker of which the latter is unaware. For example, Mennen reports that the low pitch of Northern Standard German speakers tends to be associated with lack of speaker's liveliness by Southern Standard British English speakers, while these sound overexcited to the former, due to the greater variation in pitch used [20]. Thus, it is possible that non-native prosody may be socially stigmatized and contribute to the negative stereotyping of L2 speakers, increasing the odds of social or professional discrimination [11].

Anecdotal evidence suggests that, even though prosody represents the basic step in first language acquisition, some prosodic aspects of the L2, such as intonation, may be extremely hard for second language learners to acquire. This may be due to the fact that speakers have little awareness of prosody in speech –even in their L1, and may have difficulties hearing, recognizing or labeling different prosodic patterns, even though speakers are generally able to use and interpret them successfully in their everyday communication [4].

Learning prosody may also be hindered by inadequate teaching methods and materials that do not enhance the comprehension of the differences between the L1 and L2 prosodic systems. In fact, prosody has traditionally been given little relevance in pronunciation teaching classes, which, instead, have focused on the discrimination and articulation of sounds, through drilling, minimal pair exercises, etc. [9].

In the past ten years or so, a new impulse to teaching L2 prosody has come from technology, and particularly from speech technology. At the present stage, the use of technology for pronunciation teaching is still largely experimental in nature, but there are indications that new methods and frameworks may be developing that will be beneficial to the study and acquisition of L2 suprasegmentals. A new method for teaching prosody is being developed by Pettorino and Vitale [23], following previous work by Pettorino, De Meo and collaborators [24]. This method, called prosodic transplantation, involves the transfer of one or more acoustic parameters (pitch, intensity, articulation rate, frequency and duration of silent pauses) from a native speaker (the "donor") to a non-native speaker (the "receiver"), without altering the segmental sequence and the identity of the synthesized voice. Though this technique has been implemented only experimentally, it appears to have a significant effect in improving the communicative effectiveness and reducing foreign accent.

As with all aspects of pronunciation, teaching L2 suprasegmentals requires some knowledge of the L1 and the L2 prosodic systems, to understand which features may be transferred from the L1 to the L2 and to develop appropriate teaching models.

However, thorough descriptions of the L1 and the L2 involved are often missing. For Italian, for example, prosody seems to vary consistently depending on the variety under consideration, with many varieties having not yet been thoroughly investigated. For example, little is known about the prosody of the Northern Italian varieties [see 7 for a review]. Thus, when teaching L2 prosody to Italians, it is hard to know what features should be emphasized.

Nevertheless, there is a growing appreciation for the study of L2 prosody, as is shown by the number of papers that are starting to appear on this topic, and by the interest with which the ML2P conference was received. Research on L2 prosody will further our understanding on cross-cultural communication as well provide essential data for language teachers to improve their teaching methods and materials, and to enhance learners' communication skills.

This paper provides an overview of some of the problems connected with foreign accent, in particular in relation to L2 prosody, and reviews an exploratory study, which was aimed at getting an insight on the differences in English prosody as produced by native speakers of Southern Standard British English and North-East Italian.

2. ABOUT ITALIAN PROSODY IN ENGLISH

Unlike previous approaches that were aimed at the attainment of a 'native-like' accent, today, pronunciation teaching is aimed at increasing learners' *intelligibility*, that is, at improving those linguistic features in the L2 that affect the listeners' ability to comprehend the message and are thus detrimental to communication [26, 28].

However, while it is easy to agree upon the idea that L2 speech should be intelligible, defining *what* contributes to intelligibility, and *how*, is still an open issue [25].

In part, intelligibility rests on non-linguistic factors, such as listeners' degree of exposure or familiarity with a certain variety of the L2, as well as listeners' attitude towards second language speakers. This is because the degree to which speakers and listeners are willing to cooperate in an exchange is fundamental to the successful outcome of any communicative event [2, 13, 22, 25].

Linguistic factors play an important role, too. In fact, accented pronunciation in the L2 is typically characterized by the absence of allophonic variation and the hypo-differentiation of functional contrasts. These affect intelligibility in communication because of the type and number of co-occurring linguistic deviations, which listeners do not expect to hear in the language [14, 16].

Previous studies have shown that Italian accent in English is correlated with the production of vowels and particularly with the lack of vowel reduction [5, 15]. Little is known about the characteristics and effects of the Italian intonation in English.

A basic distinction between Italian and English relates to the way in which the two languages use intonation vs. word order to mark focus in an utterance. Italian has more inflections and a more flexible word order than English, and so provides its speakers with the option of giving prominence to some information by rearranging words in the sentence [18]. English has few inflections and a relatively fixed word order, and it relies heavily on intonation to convey grammatical information or focus elements in the sentence. In addition, English uses intonational accent (or extra stress) to mark grammatically salient elements (for example, new or emphatic information) as prominent, while given or old information is de-accented. Typically, focus accent in English is found on the last major word of the sentence, but can come earlier to emphasize one of the earlier words or to contrast it with something else. In Italian, prosody is not used to distinguish between new and given information, that is, giveness is not prosodically marked by deaccenting elements carrying given information or by using a particular type of pitch accent; rather, prominence is given to elements that are in focus [1, 3].

Given the differences in the Italian and English prosodic systems, it is conceivable that, by transferring prosodic features of the L1 to the L2, Italian speakers of English will be unable to mark salient information in discourse. This may have a relevant impact on communication, as it may make Italian speakers of English sound inconclusive, or not effective. To test this hypothesis, investigations are currently under way [7, 27, 29]. The present paper reports some exploratory work that was carried out to get an insight on the production characteristics of Italian intonation in English [6].

3. EXPLORING NORTH-EAST ITALIANS' INTONATION IN ENGLISH

To get some exploratory data on how the prosody of (North-East) Italian speakers of English differs from that of native English speakers, speech data were collected from a group of Italian learners of English L2 (B2 level) during a course in English phonetics and pronunciation at the University of Padova. In particular, the study collected the data produced by 8 native North-East Italian (NNS)

speakers and by 2 native speakers of Southern Standard British English (NS) for comparison. The subjects were asked to read aloud short dialogues which were recorded and digitized using the speech analysis software *Praat*. Out of the whole corpus, some phrases were extracted and analyzed for the present research. The study was designed to obtain preliminary data on the differences in prosody and intonation patterns of three sentence types: open questions, yes-no questions, and salutations.

Figures 1-6 exemplify the type of patterns found in the data, as they are visualized with *Praat*.

Figures 1 and 2 show the realization of the open question: 'What are you doing this evening?', as it is produced by a NS and a NNS respectively. It can be observed that the NS has a clearly falling intonation, with a prominence peak around the word 'you'. By contrast, in Fig. 2, the NNS shows a pitch contour with three prominence peaks, not as marked as the one by the NS, and a final rising intonation. The final rising intonation is a typical characteristic of the variety of Italian spoken in the North-East [8, 12, 19], and is used in both declarative sentences and questions. Note however, that in English, a final rise in a statement or Wh-question would be interpreted as an expression of doubt, uncertainty [4]. Consequently, this NNS' intonation pattern could be a potential cause of miscommunication.

Figures 3-4 show the productions of the yes-no question 'Are you going?' by a NS (Fig. 3) and a NNS (Fig. 4). Here, again there is a clear difference in the intonation patterns produced by the NS and the NNS: while the NS (Fig. 3) shows a marked rising-falling contour, with a pitch peak on the word 'gOing', the NNS utterance (Fig. 4) shows an intonation pattern which is characterized by a relatively level contour, and a less prominent pitch peak than the NS, placed in a different position in the utterance (at the onset of the vowel in 'gOing'). Because, in English, level intonation is associated with boredom and detachment, the productions of the Italians could trigger native speakers to give a wrong paralinguistic interpretation of the sentences produced with this kind of intonation pattern. In addition, the presence of a pitch peak having such different characteristics than that of the NS could be interpreted by the English-native listeners as a failure to mark focus in the sentence. This could also have an impact on L2 communication.

Figure 1: Acoustic waveform and pitch contour of the sentence 'What are you doing this evening?', as produced by a native English speaker

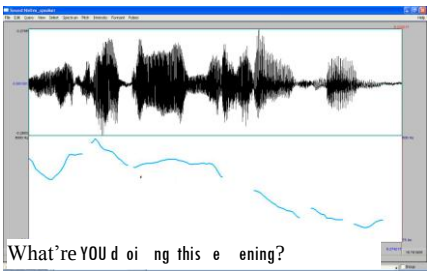


Figure 2: Acoustic waveform and pitch contour of the sentence 'What are you doing this evening?', as produced by a native Italian speaker

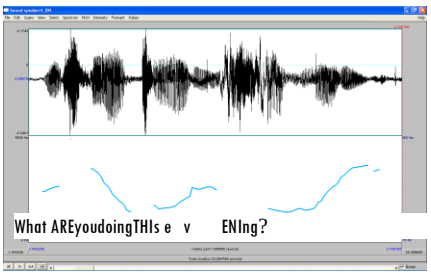


Figure 3: Acoustic waveform and pitch contour of the sentence 'What are going?', as produced by a native English speaker

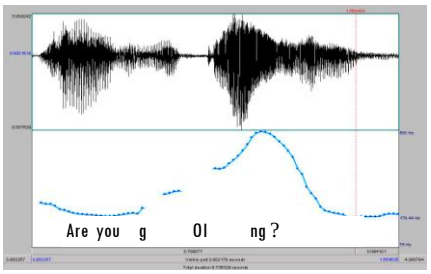
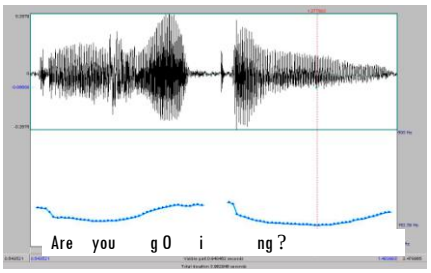


Figure 4: Acoustic waveform and pitch contour of the sentence 'What are going?', as produced by a native Italian speaker



Finally, Figures 5-6 show the visualizations of the utterance 'Bye!'. The NS' intonation contour (Fig. 5) is first rising and then level on a vowel segment that is 704 ms long. In comparison, the NNS's utterance represented in Fig. 6 has an intonation pattern that is much more 'flat', i.e., with no clear contour or pitch peak, and has a much shorter duration than the NS', that is, 250 ms. This is probably due to the fact that the NS producing this utterance is emphasizing her salutation by stretching the duration of the diphthong in 'Bye!', a strategy that is not normally used in Italian or by Italian learners of English. This difference in duration suggests that, in addition to intonation, rhythmic factors also should be studied to determine the communicative impact of NNS' productions.

Figure 5: Acoustic waveform and pitch contour of the sentence 'Bye!', as produced by a native English speaker

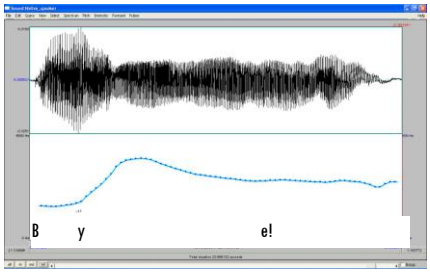
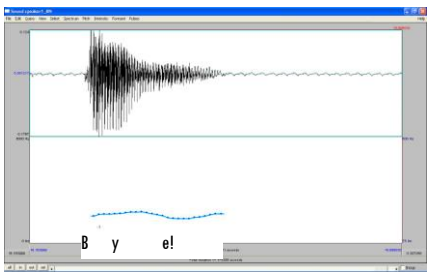


Figure 6: Acoustic waveform and pitch contour of the sentence 'Bye!', as produced by a native Italian speaker



4. DISCUSSION AND CONCLUSION

Second-language pronunciation classes emphasize the importance of intelligibility in communication. L2 prosody contributes greatly to the production and perception of foreign accent and may have a strong impact on intelligibility as well. In addition, it may convey non-intended meaning when speakers use it in a way that does not meet the native listeners' expectations in given communicative situations.

The growing interest in L2 prosody opens exciting perspectives for pronunciation teaching and learning, as L2 prosody is becoming more accessible to the non expert, with concrete benefits for the learners. With an increased understanding of how prosody works for the L1 and the L2 speakers, teachers can help students to sound natural, to improve their social acceptance, and contribute to their success in personal communication and to their efficiency in professional exchanges.

An exploratory comparison of prosodic patterns in English L1 and L2 suggests that Italian speakers' utterances differ from English native speakers' in a number of features, which may significantly impair the intelligibility of Italians' speakers of English, as well as convey paralinguistic information that the speakers are unaware of. The observed differences provide a basis to create a more systematic investigation of English prosody, as produced by North-East Italians. The results of future studies will both contribute to our knowledge of second-language acquisition processes and provide the data to develop methods and material for teaching prosody in the language classroom.

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