DOI: 10.17469/O2101AISV000004

LORENZO FILIPPONIO, SONIA CAZZORLA[1]

The vowels of Bari. A comparison between local dialect and regional Italian

In the mid-70s, the stressed vowel system of Barese displayed 7 phonemes, with an endangered opposition between mid-high and mid-low vowels, which occurred only in open syllable in non-metaphonetic contexts. The corresponding regional Italian already had 5 phonemes, mid-high and mid-low vowels being allophones of /e/ und /o/ respectively in open and closed syllables. According to our analysis, based on data collected in 2014 and grouped by gender, age and residence (inhabitants of Bari vs. migrants), the opposition is now completely disappeared. Moreover, innovative speakers show a generalized lowering (higher F1 values) of regional Italian vowels. Young females, the group supposed to be more sensitive to innovation, exhibit the same pattern even in Barese.

1. *Stressed vowels in the dialect and in the Regional Italian of Bari*

The Pugliese dialect spoken in Bari (henceforth Barese), capital city of Apulia (327.000 inhabitants), belongs to the south-eastern Italo-Romance varieties, whose stressed vowel system – based on the so-called common-Romance system – displays a series of processes affecting vowels in open syllables (Loporcaro, 2011b: 136) which differentiate the vowel quality in open and closed syllables, like raising of lower-mid vowels or diphthongization[2]: for instance, the outcomes of common-Romance /e/ in open and closed syllable are [aj] and [e] in the dialect of Bisceglie (45 km east from Bari): **cre$do* > [ˈkrajtə] '(I) believe' vs. **stel$la* > [ˈsted:ə] 'star' (see Cocola, 1925; De Gregorio, 1939); [aj] and [ɛ] in the dialect of Altamura respectively (50 km southeast from Bari, henceforth Altamurano): **ve$de* > [vajt] '(he/she) sees' vs. **len$gua* > [lɛɲ:] 'tongue' (see Loporcaro, 1988: 33-34; 2011b: 136). According to Valente (1975: 15-17), urban Barese shows no longer diphthongization in open syllables, the diphthongs (which are nowadays still attested in the hinterland) having been monophthongized (see Stehl, 1988: 703). The only diphthongs remaining are due to metaphony on lower-mid vowels, whereas the higher-mid vowels raise in the same context.

[1] This paper has been written jointly by the two authors. For academic purposes, LF bears responsibility for §§ 1, 3.1, 4; SC for §§ 2, 3.2. While remaining solely responsible for any weaknesses or inaccuracies to be found here, both authors would like to thank Michele Loporcaro, Stephan Schmid and two anonymous reviewers for their helpful comments.

[2] Depending on the dialect, these processes can be sensitive to sentence-phonetics or applied at word level with restructuring of the underlying representation (Loporcaro, 2011b: 136).

Table 1 - *Stressed vowels system of Barese (Valente, 1975: 16)*

	-V#	ī > i	ē,ĭ > e	ĕ > ɛ	ă > a	ŏ > ɔ	ō,ŭ > o	ū > u
σ[	-a, -e, -o	i	ɛ	e	a	o	ɔ	u
	-ī, -ŭ	i	i	i(ə)	a	we, e	u	u
σ]	-a, -e, -o	i	ɛ	ɛ	a	ɔ	ɔ	u
	-ī, -ŭ	i	i	i(ə)	a	wɛ, ɛ	u	u

Moreover, Valente indicates that the oppositions /ɛ/ ~ /e/ and /ɔ/ ~ /o/, which occur only in open syllable in non-metaphonetic contexts, are going to be neutralized. This is supposedly due to a restrictive interpretation of the Italian patterns by the upper class (1975: 16). In any case, the interplay between local dialect and Regional Italian (henceforth RIt) has an important role in the evolution of Barese, and consequently in the other Pugliese dialects, due to Bari being the epicenter of linguistic innovations for Northern and Central Apulia (Stehl, 1988: 703).

According to Canepari (1983[2]: 173), Pugliese RIt has 5 vocalic phonemes: vowel trapezium is characterized by two stable high vowels [i] and [u] and three floating areas, two in the middle, front and back, on the high-low axis, and one central low, where fronted [æ] is the realization of /a/ in open syllable. This sound is according to Valente absent in the city of Bari (see Table 1 above), but quite common in the surrounding areas (1975: 42). As in the corresponding dialects, the different pronunciation (high and low) of RIt stressed mid vowels depends on syllable structure, as shown by Loporcaro (1988: 205-207) for the RIt of Altamura. The dialectal pattern ([+tense] stressed vowel in open syllable, [-tense] in closed syllable) has a clear substrate influence on RIt. However, the growing influence of RIt among younger speakers has caused a change in the vowel system of Altamurano: the set of the speakers of the young generation had yet at the end of the 80s only five phonemes /u o a e ɪ/, with [ɔ] and [ɛ] remaining only as allophones of /o/ and /e/ in closed syllables.

Thus, the process shown for Barese in the 70s was completed in Altamurano about ten years later.

The goal of this study is to give an account of Barese stressed vowel system 40 years after Valente's description, in order to verify whether the tendencies presented in his work (without considering here his typical mid-70s sociolinguistic statement) led to a complete neutralization of the unstable oppositions, as in Altamurano. Here, we carried out a phonetic analysis based on new data, being aware that while the AVIS and CLIPS corpora provide data for the experimental analysis of many Italo-Romance dialects (see Clemente et al., 2006), there is still a significant lack of experimental research on Barese.

2. *Materials and methods*

We have chosen 2 groups, each composed of 4 Barese native speakers belonging to the working class. The first group is formed by speakers who have never left Bari (henceforth: resident group), the second one is formed by migrants who left Bari for Germany and the German-speaking part of Switzerland in the late 80s/early 90s. The two groups

have a homogeneous composition, both represented by two adult speakers and two young speakers, male and female respectively[3]. This configuration enables us to sort the speakers by residence (residents vs. migrants) and by age (adult vs. young), whereas the results are always kept separated by gender because of the differences in phonation between females and males due to physiological reasons (Peterson, Barney, 1952; Ferrero et al., 1995). The low number of informants makes this analysis strictly qualitative. A broader empirical basis is a purpose for further research.

We have recorded two different kinds of corpora: For RIt, each informant had to read a list of 70 words, 10 per each stressed vowel of Standard Italian (/i e ɛ a ɔ o u/), which allows lower-mid and higher-mid stressed vowels both in open and in closed syllable (e.g. /ˈbɛne/ 'well, good (adverb)', /ˈsɛtːe/ 'seven', /ˈrete/ 'net', /ˈstelːa/ 'star'); for Barese, each informant had to translate from Italian into dialect a list of 80 words containing all Protoromance stressed vowels in open and closed syllable in different contexts (paroxyones, proparoxytones, metaphonetic, non-metaphonetic, etc.).

Digital recordings were made using a Zoom H4N portable recorder. The instrumental analysis was carried out using the Praat software: all the stressed vowels were selected and their F1 and F2 values – measured on the mid-point – were extracted with the script *Vokalanalyse* by means of a textgrid file. The results are displayed by ellipse plots created by the script *Ellipsenplotter*.

3. *Results*

3.1 Preliminary remarks about Barese

For the sake of simplicity, we have left out of our experimental analysis of Barese data all the stressed vowels affected by metaphony and all proparoxytones, which are briefly discussed in the next paragraphs. For the experimental analysis, 52 words (at least 6 per vowel) remained.

3.1.1 Metaphony

Metaphony due to final -ī and -ŭ is no longer an allophonic rule, since every final unstressed vowel has been weakened to *-ə* (see below §3.1.2). Thus, stem alternations in nouns deriving from Latin third class (**-e/*-i*, sg./plur.: non-metaphonetic (sg.)/metaph. (pl.) context) or in adjectival paradigms (**-e/*-i* and **-u/*-i/*-a/*-e*, m.sg./m.pl./f.sg./f. pl.: metaphonetic (m.)/non-metaph. (f.) context) can only be analyzed synchronically in terms of lexicalized allomorphy. Some uncertainties are shown by resident speakers: for instance, three of them seem to be unable to process the allomorphy for gender distinction in the adjectival paradigm of *CŎCT-U/-I/-A/-E ('cooked m.sg./m.pl./f.sg./f. pl.'), accepting [ˈkɔtːə] as generalized form, perhaps under the influence of Italian *còtto/-i/-a/-e*. The adult male speaker, which can be considered the most conservative of the

[3] In the resident group, males are 55 and 30 years old and females 54 and 25; in the migrants group, males are 49 and 28 years old and females 46 and 19 respectively: that means that the migrant young speakers have been partially or totally schooled in German.

group according to age and gender criteria (see Labov, 1990: 205), is the only able to provide the expected outcomes [ˈkwɛtːə] for m.sg. and m.pl. (metaphonetic context) and [ˈkɔtːə] for f.sg. and f.pl. (non-metaphonetic context, see Table 1 above). In the migrants group, the young female speaker, which should be the most innovative by the same parameters, overgeneralizes the diphthong (which means that the diphthong is still present in her variety)[4]. It is noteworthy that migrant speakers, with the partial exception of the young female, display always the expected dialectal forms[5]: living abroad has probably preserved their dialect from the innovations due to the daily contact with the RIt spoken nowadays in Bari (see §3.2.2).

3.1.2 Proparoxytones (and rhythm pattern)

Our results confirm that stressed vowels in proparoxytones are treated in the same way as those in closed syllable, as pointed out by Carosella (2005: 69-79) and Loporcaro (2011b: 136 [note 44]) for southern Italo-Romance dialects: for instance, DOMĪNĪCA > [dəˈmɛnəkə] 'Sunday' (It. *doménica*); PĔCŎRA > [ˈpɛkərə]/[ˈpɛgərə] 'sheep' (It. *pècora*). This could be interpreted as a collateral effect of a compensative rhythm pattern (in sense of Bertinetto, Bertini, 2010; see Filipponio, 2012: 298-307): the stressed syllable gets stronger and attracts the weakened unstressed syllables causing by compression the shortening of the stressed vowel and a close contact with the following consonant, which skips to the coda position of the stressed syllable[6]. One can also observe that both the reduction of the unstressed vowels (which is common to the whole Mid-Southern Italoromance area influenced by Naples, with some lateral remnants of older conditions) and the stressed vowel quality distinction in open and closed syllables are conform to the same rhythm pattern. Thus, Barese, like other modern Southern Italo-Romance dialects (e.g. Neapolitan), should be classified as a variety with an at least partially compensated rhythmical structure.

---

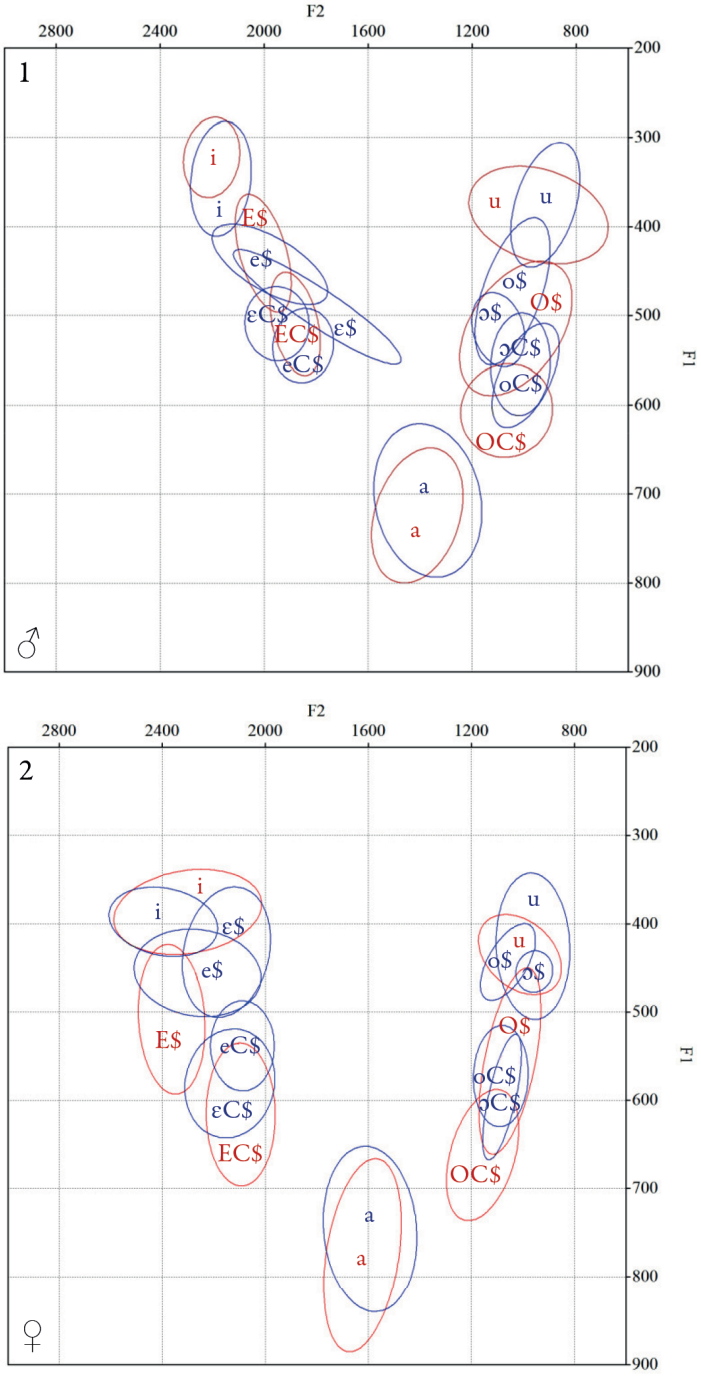
[4] According to Valente (1975: 17), in Barese [we] and [wɛ] are reduced to [e], [ɛ] except after [k] and labial consonants, whereas the stronger tendency is to reduce the metaphonetic outcomes of Protoromance *ȯ o u* to [u] (testified in our data by the gender distinction [ˈbuːnə] (m.)/[ˈboːnə] (f.) displayed by migrant speakers as result of the paradigm *BŎN-U/-I/-A/-E 'good'; even in this case, resident speakers provided incoherent answers, see below Note 5).

[5] Other examples: *PĬLU 'hair', resident female speakers [ˈpeːlə] (It. *pélo*), all other speakers [ˈpiːlə] (expected metaphonetic form); *TĒCTU 'roof', resident speakers (with exception of the young male) [ˈtɛtːə] (It. *tétto*, RIt. *tètto*, see above §1), all other speakers [ˈtitːə] (expected metaphonetic form).

[6] This explanation can be considered as an application at the word-level of Vennemann's law of *attractiveness of rhyme* (1988: 61). The same law is maybe responsible for the coda position of plosives in *muta cum liquida* clusters, testified by the fact that stressed vowels before this cluster display the same quality of those in closed syllable, like in the dialect of Bisceglie (see above §1) *PA$LU > [ˈpɔːlə] 'pole, post' vs. *PLAT$JA > [ˈcatːsə] 'square' and LA$TRO > [ˈlatrə] 'thief'. Given this picture, Loporcaro (2011a: 104) maintains that south-eastern Italo-Romance varieties have kept the Late Latin heterosyllabicity of *muta cum liquida* clusters (see Filipponio, 2014 for a discussion) and that proparoxytones in this dialects never underwent open syllable lengthening (2011b: 136 [note 44]), typical for the Romance central area. Theoretically, the closing of stressed syllables before *muta cum liquida* clusters and in proparoxytones as well as the changes of stressed vowels quality could have took place *after* a more recent change in rhythm pattern, which could have become again similar to the Late Latin one: but there are no proofs for such an explanation, and the continuity hypothesis remains more economical.

3.2 Barese vs. RIt

Figures 1-2 - *Ellipses of Barese (blue) vs. RIt (red) stressed vowels formant values of all informants: males (above) and females (below)*



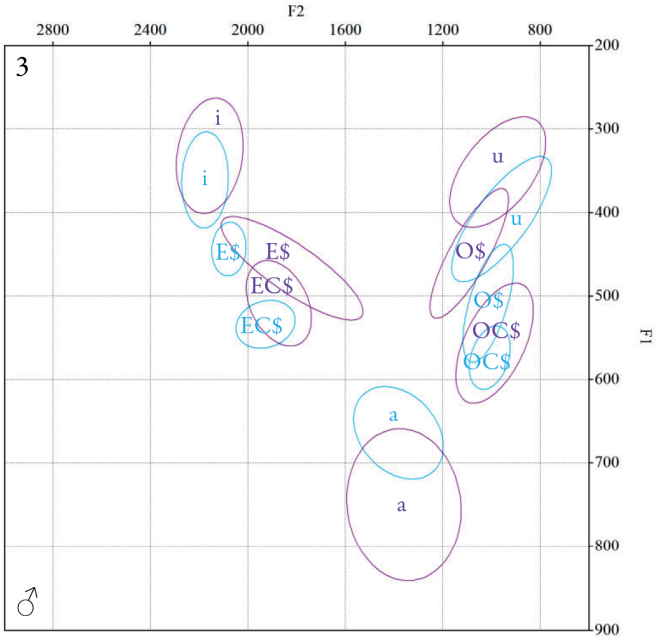
The first diagrams (Figs. 1-2) show the ellipse plots of the stressed vowels pronounced by male and female speakers both in Barese and in RIt. The formant values of Barese outcomes of Protoromance mid vowels are kept separate according to the syllable structure[7]. It is clear that the oppositions /ɛ/ ~ /e/ and /ɔ/ ~ /o/ found by Valente (even though endangered) are generally suppressed. The syllable structure is the only parameter differentiating the low/high degree of mid stressed vowels, as shown by Loporcaro for the youngest generation of Altamurano speakers in the late 80s. This allows us to keep the Protoromance ancestors of mid vowels unspecified in the next figures, and to relate only to the syllable structure, as shown in Figs. 1-2 for RIt[8].

There are also two remarkable differences between male and female speakers. Females overlap the higher-mid and high Barese vowels and lower the articulation of RIt mid and low vowels in comparison to Barese, as displayed by higher F1 values. Males show a similar tendency only in back vowels, and only in a slighter way.

Let us consider next the data grouped by age and residence. Each parameter is presented by two pairs of graphs, the first ones showing the Barese data, and the second ones the RIt data each for male and female speakers.

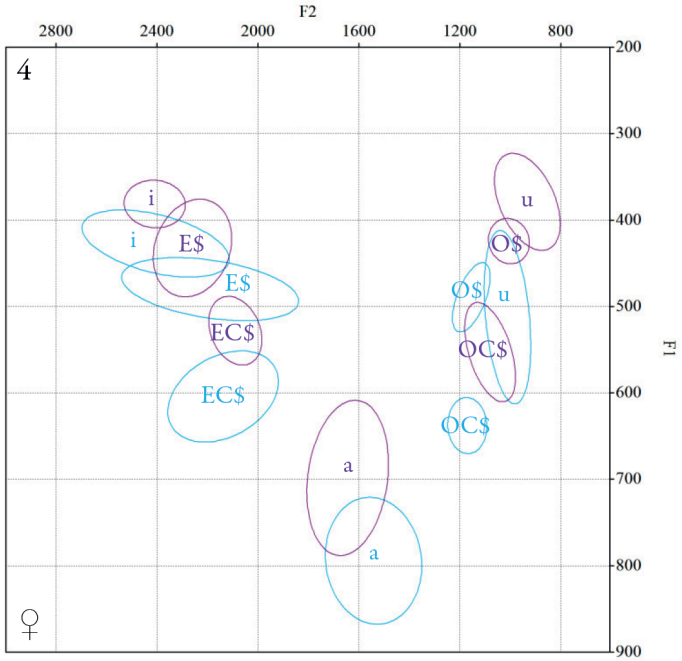
3.2.1 Age

Figures 3-4 - *Formant values of young (turquoise) vs. adult (purple) Barese speakers: males and females (next page)*

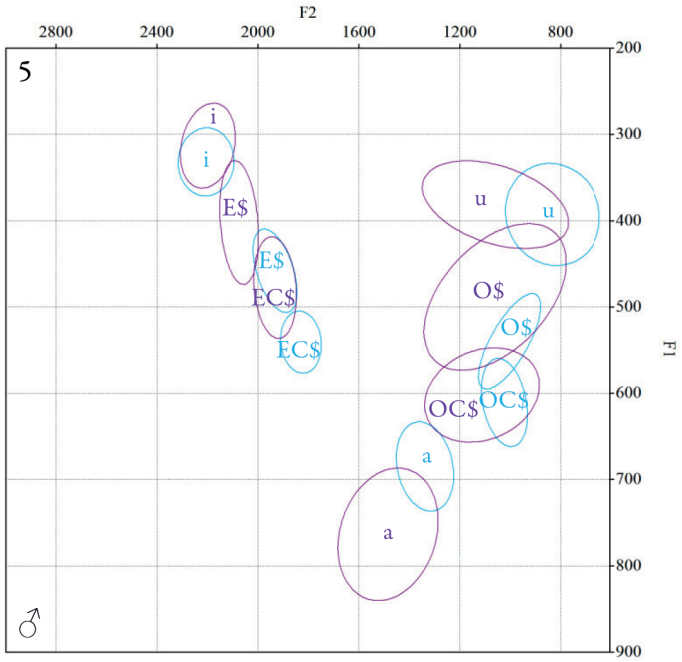


[7] e$/o$ = Protoromance higher-mid vowel in open syllable; eC$/oC$ = Protoromance higher-mid vowel in closed syllable; ɛ$/ɔ$ = Protoromance lower-mid vowel in open syllable; ɛC$/ɔC$ = Protoromance lower-mid vowel in closed syllable.

[8] E$/O$ = mid vowel in open syllable; EC$/OC$ = mid vowel in closed syllable.

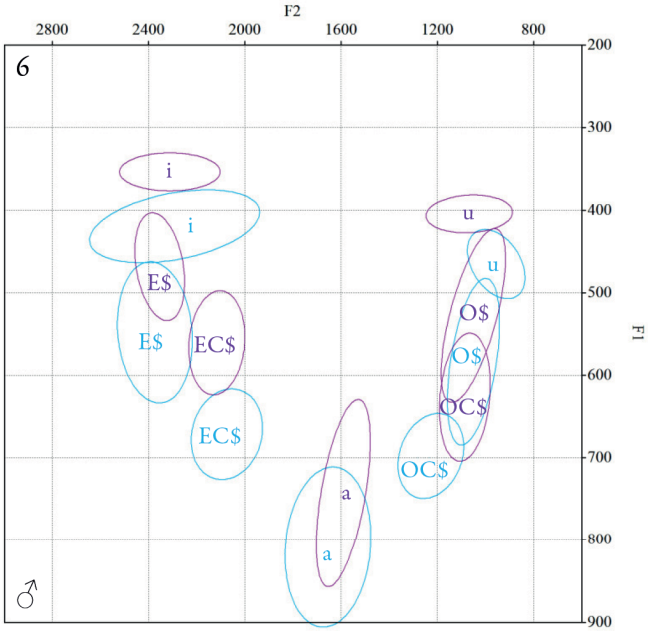


Figures 5-6 - *The same as Figures 3-4 (see previous page) for RIt speakers*



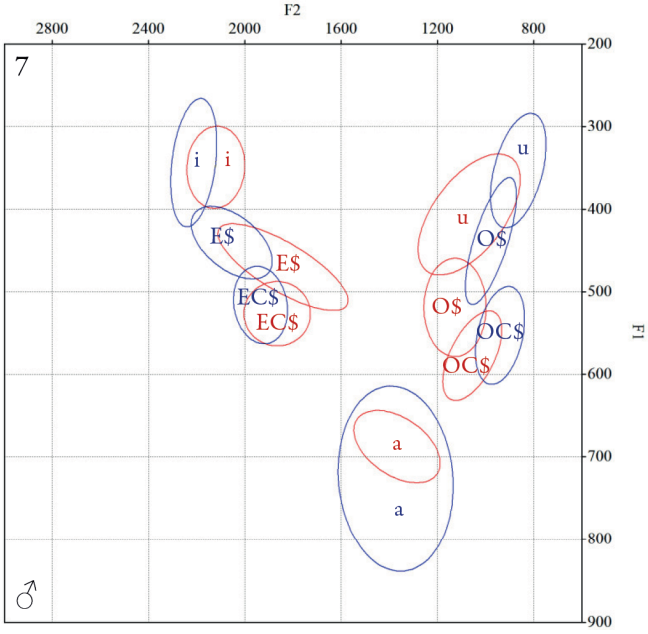
Young female speakers show higher F1 values, i.e. a generalized lowering of all vowels both in Barese and in RIt. Young male speakers display the same pattern only for

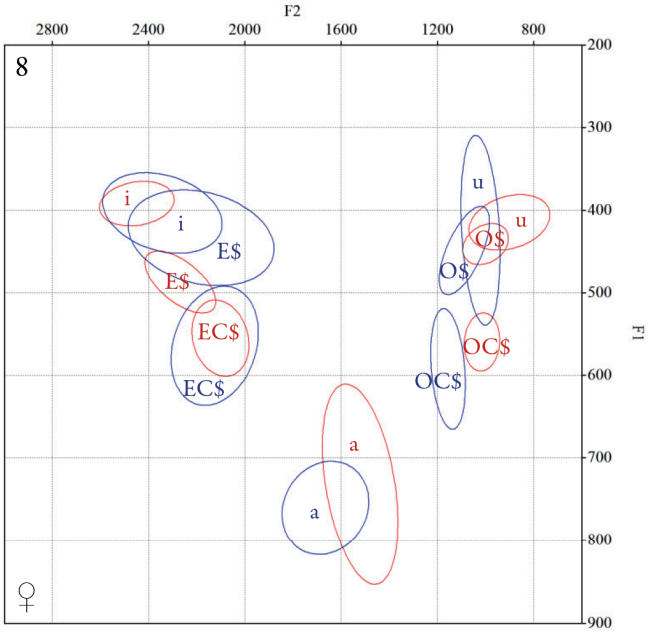
Barese [u] and [o] and for RIt [e], [ɛ] and [o], whereas F1 values of [a] are lower than those of adult speakers.



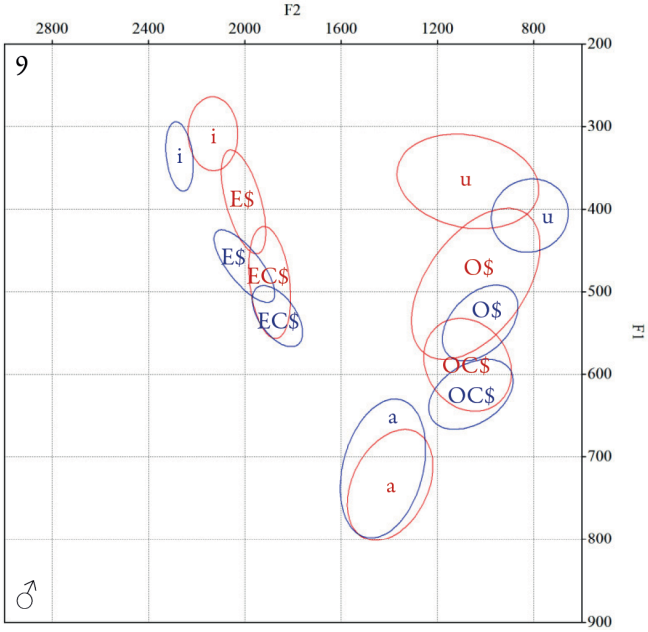
3.2.2 Residence

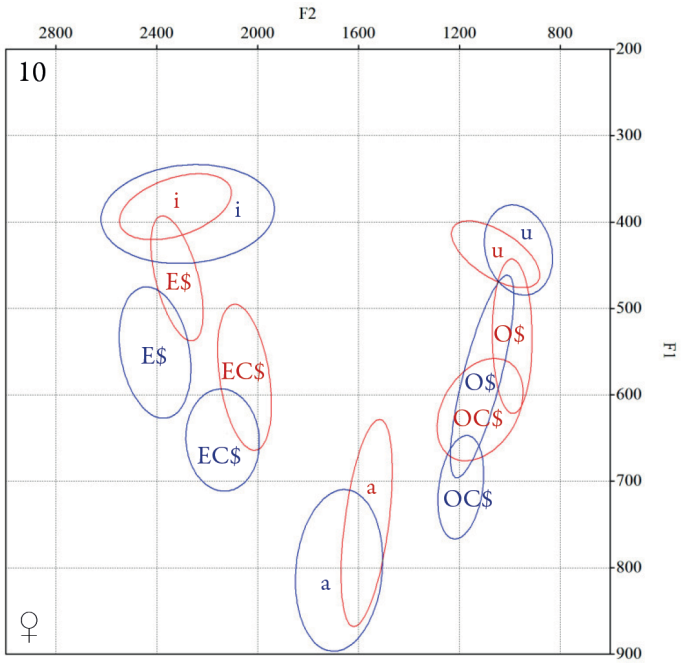
Figures 7-8 - *Formant values of resident (red) vs. migrant (blue) Barese speakers: males and females (next page)*





Figures 9-10 - *The same as Figures 7-8 (see previous page) for RIt speakers*





Place of residence seems to be a stronger factor in RIt than in Barese. In the latter case (Figs. 7-8), male migrants display a centralized trapezium in comparison to residents, with remarkable differences of the F1 values of [e], [u] and [o], whereas females show a more homogeneous picture, except for the absence of overlap between [i] and [e] of migrant speakers. In the case of RIt (Figs. 9-10), all migrant speakers display generalized higher F1 values of mid vowels. Furthermore, females of this group show higher F2 values of front mid vowels and of [a].

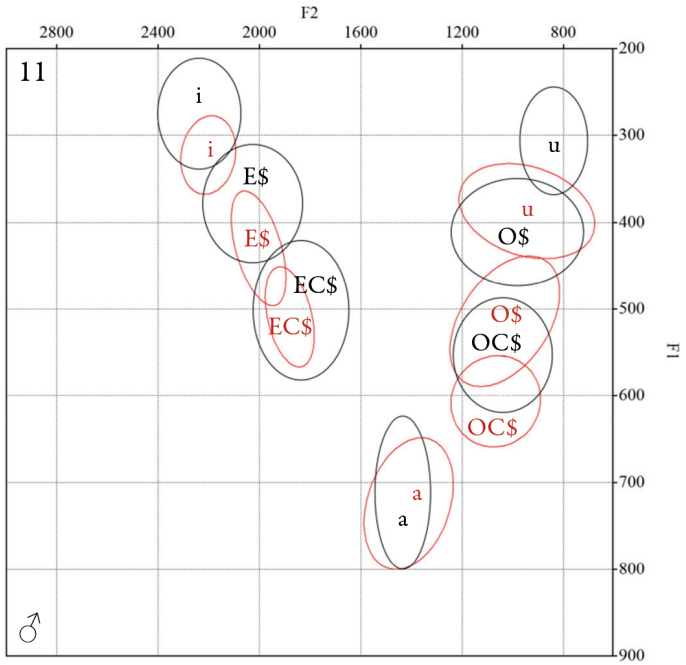
4. *Conclusions*

As we have seen in §3.2, the deletion process of the oppositions /ɛ/ ~ /e/ and /ɔ/ ~ /o/ is completed. Young and adult Barese speakers display a system which is similar to the one of young Altamurano speakers in the 80s. Given the asymmetric structure of Barese stressed vowels system in the 70s (see Table 1), there would be no need to ascribe this process to the influence of RIt. However, at least a conspiracy of internal (structural) and external (growing influence of RIt, which has strengthened the tendency) factors seems to be plausible.

A slight fronting of [a] appears in migrant females RIt (see §3.2.2, Figure 10) as well as in adult males RIt (Figure 5) and in migrant females Barese (Figure 8). This haphazard situation could be due to the low number of informants: nonetheless, dividing Barese F2 values of [a] into two sets based on the syllable structure leads to discover an unexpected (given the data in Table 1) palatalization in open syllable common to all migrant speakers. The phenomenon is more relevant in male

(medians of F2 values of /a/: 1632Hz in open syllable, 1174Hz in closed syllable) than in female speakers (F2: 1845Hz in open syllable, 1583 in closed syllable). By crossing the blue ellipses displayed in Figures 7 and 9 (males) and 8 and 10 (females) one could notice that Barese and RIt stressed vowel system of migrant speakers are generally different: this may be due to the fact that speakers living abroad are less exposed to regional varieties of their native tongue which may cause interferences with their dialect, as proposed for the explanation of the stability of allomorphy in noun and adjectival paradigms (see above §3.1.1).

Figure 11 - *Formant values of RIt male speakers from Bari (red) compared with Standard Italian male speakers (black) analyzed by Albano Leoni and Maturi*



Concerning other sociophonetic factors, we have seen that young females tend to lower the articulation of all stressed vowels (higher F1 values, see Figures 4 and 6) both in Barese and RIt, and that females have generally lower vowels in RIt than in Barese (Figure 2). If we consider [+female] and [+young] as sociophonetic features which are more sensitive to innovation, lowering could be seen as an innovative articulatory pattern. By taking into account all informants, RIt has generally lower vowels than Barese (see Figures 1-2)[9] and even male speakers show RIt lower vowels if compared with the masculine formant values based on the analysis of 12 regional news anchors from Northern, Central and Southern Italy provided by Albano

[9] Maybe a confirmation of our sociolinguistic hypothesis, if we assume that innovation is actually produced in RIt more than in Barese.

Leoni and Maturi (2002[3]: 106), as shown in Figure 11. The lowering of RIt vowels by migrant speakers (in a higher fashion than residents, see Figures 7-10) could suggest that this tendency is active since at least 30 years ago[10].

In summary, our data show that the structural changes in progress 40 years ago are now completed. Moreover, the innovative speakers display now a new articulatory pattern in RIt that is affecting the Barese vowels of younger female speakers.

Bibliography

Albano Leoni, F., Maturi, P. (2002[3]). *Manuale di fonetica*. Roma: Carocci.

Bertinetto, P.M., Bertini, C. (2010). Towards a unified predictive model of natural language rhythm. In Russo, M. (Ed.), *Prosodic Universals. Comparative studies in rhythmic modeling and rhythm typology*. Roma: Aracne, 43-77.

Canepari, L. (1983[2]). *Italiano standard e pronunce regionali*. Padova: CLEUP.

Carosella, M. (2005). *Sistemi vocalici tonici nell'area garganica settentrionale fra tensioni diatopiche e dinamiche variazionali*. Roma: Edizioni Nuova Cultura.

Clemente, G., Savy, R. & Calamai, S. (2006). Sistemi vocalici in diatopia. In Savy, R., Crocco, C. (Eds.). *Analisi prosodica. Teorie, modelli e sistemi di annotazione. Atti del II Congresso Nazionale AISV (Salerno, 30 novembre - 2 dicembre 2005)*. Torriana: EDK, 439-460.

Cocola, F. (1925). *Vocabolario dialettale biscegliese-italiano*. Bisceglie: Carmastro.

De Gregorio, I. (1939). Contributo alla conoscenza del dialetto di Bisceglie (Bari). In *L'Italia Dialettale*, 15, 31-52.

Ferrero, F., Magno Caldognetto, E. & Cosi, P. (1995). Le vocali al femminile. In Marcato, G. (Ed.), *Donna e linguaggio*. Padova: CLEUP, 413-436.

Filipponio, L. (2012). *La struttura di parola dei dialetti della valle del Reno. Profilo storico e analisi sperimentale*. Sala Bolognese: Forni.

Filipponio, L. (2014). Il dibattito sull'eterosillabismo di alcuni nessi consonantici in latino tardo e le sue implicazioni strutturali. In Molinelli, P., Cuzzolin, P. & Fedriani, C. (Eds.), *Latin Vulgaire – Latin Tardif X. Actes du Xe colloque international sur le latin vulgaire et tardif (Bergamo, 5-9 settembre 2012)*, vol. I. Bergamo: Sestante Edizioni, 45-62.

Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. In *Language Variation and Change*, 2, 205-254.

Loporcaro, M. (1988). *Grammatica storica del dialetto di Altamura*. Pisa: Giardini.

Loporcaro, M. (2011a). Syllable, segment and prosody. In Maiden, M., Smith, J.C. & Ledgeway, A. (Eds.), *The Cambridge History of Romance Languages, vol. 1: Structures*. Cambridge: CUP, 51-108.

Loporcaro, M. (2011b). Phonological processes. In Maiden, M., Smith, J.C. & Ledgeway, A. (Eds.), *The Cambridge History of Romance Languages, vol. 1: Structures*. Cambridge: CUP, 109-154.

[10] And/or perhaps not limited to RIt of Bari: in order to verify that, further investigations about other RIt varieties are obviously needed.

Peterson, G.E., Barney, H.L. (1952). Control methods used in a study of the vowels. In *Journal of the Acoustical Society of America*, 24 (2), 175-184.

Stehl, Th. (1988). Italienisch: Areallinguistik XI. Apulien und Salento. In Holtus, G., Metzeltin, M. & Schmitt, Ch. (Eds.), *Lexikon der Romanistischen Linguistik. Band IV: Italienisch, Korsisch, Sardisch*. Tübingen: Niemeyer, 695-716.

Valente, V. (1975). *Profilo dei dialetti italiani. Puglia*. Pisa: Pacini.

Vennemann, Th. (1988). *Preference laws for syllable structure and the explanation of sound change*. Berlin/New York/Amsterdam: Mouton de Gruyter.