

## Sociolinguistic interpretation needs geography (and dialectology): final unstressed vowels in some southern Campanian dialects

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### Abstract

Some dialects of Vallo di Diano, in southern Campania (Italy), display variation in final unstressed position between four full final vowels [-i e a o] and a single centralized final vowel [-ə]. In this paper we will discuss experimental data from three varieties of that area, those of Polla, S. Pietro al Tanagro and Sanza, and argue that variation in the quality of final unstressed vowels is best interpreted in terms of an interaction between a basilectal, Tuscan-like final vowel system -/i e a o/ and the Neapolitan-based koine variety in which all final unstressed vowels merged to -/ə/. The choice of this interpretation over conceivable alternatives, as we will show, is favoured by a combination of system-internal reconstructive considerations, cross-dialectal comparisons, and evaluation of the sociolinguistic and geolinguistic dynamics of the area.

### 1. Introduction

Tuscan-based standard Italian contrasts in final unstressed position the four phonemes /i e a o/, with -/o/ arisen from the merger of Proto-Romance -o and -u.

Neapolitan, as well as most Italo-Romance varieties spoken in the Upper South (the dialect area centering around Naples), has merged all final vowels into -/ə/. In this article, we will take a closer look at the Campanian dialects spoken south-east of Naples, in the area of Vallo di Diano (province of Salerno), by investigating the vowel system of the three varieties of Polla, S. Pietro al Tanagro and Sanza (see Figure 1).

When listening to spontaneous speech from those dialects, the first auditory impression is that a merger of the Neapolitan kind has taken place here too. Thus, in the dialect of Polla, for instance, connected speech displays a prevalence of final [-ə], as in Neapolitan:

- (1) a. [və'net:əɾə / so b:ə'nu:tə 'lɔ:rə]  
'they came/have come'  
(Standard Italian: 'vennero/sono venuti loro')
- b. [sta fa'ti:ʒə a 'a:mə fə'nu:tə]  
'we have finished this job'  
(Standard Italian: 'questa fatica l'abbiamo finita')

However, one can also come across instances of non-centralized final vowels, especially in prepausal position, as shown by the data in (2):

- (2) a. [ve'net:əɾo]  
'they came'  
(Standard Italian: 'vennero')
- b. [fə'nu:tə/a]  
'ended.F.SG'  
(Standard Italian: 'finita')

The questions we will address in this paper concern: (i) the origin of the 4-vowel system found in final position in Polla as well as in the other Valdianese dialects (examples in (2)); (ii) the interpretation of the variation between full final vowels and schwa of the kind exemplified in (1-2).

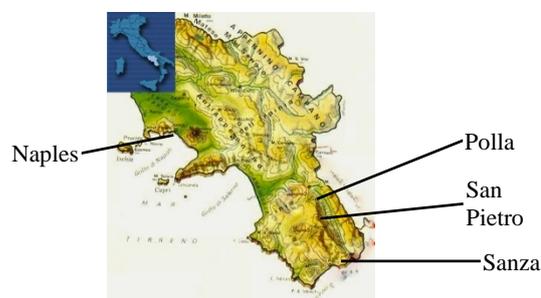


Figure 1: Campania and Vallo di Diano.

In § 2 we briefly discuss the diachronic origin of the final 4-vowel system; in § 3 we turn to the synchronic analysis of the variation between full vowels and schwa comparing two different interpretations of this variation and pointing to the external (sociolinguistic and geolinguistic) factors which may prove relevant for deciding between the two. The results of experimental analyses performed on the three Valdianese dialects under investigation – Polla, Sanza, San Pietro al Tanagro – will be reported and discussed in § 4, before turning to the conclusive remarks in § 5.

### 2. Tuscan-like final vowel system in the dialects of Vallo di Diano

It is well known that, while Neapolitan has merged into -/ə/ all final unstressed vowels, some Campanian varieties preserve at least some contrasts. Previous studies identified several conservative systems characterized by a two-way contrast -/ə/ (< -o, -u, -i, -e) vs -/a/ (< -a), as in the dialects spoken at the border with Lazio (cf. [1], [2]) as well as in some other Valdianese dialects (cf. Monte San Giacomo, [3]), or by a three-way contrast like the one found in Sicilian -/i a u/, as described for some varieties of Lower Cilento [4], [5].

Occurrence of non-centralized final [-o] and [-e] has traditionally been ascribed either to recent systemic change under the pressure of Standard Italian, with contact-induced restructuring of the phonological system [5] – or to code-mixing involving basilectal Campanian schwas and acrolectal Standard Italian full final vowels ([6]) (see § 3.1 below).

On the other hand, a recent study of the northern Vesuvian dialect area, in the province of Naples [7], has reported

pervasive occurrence of unreduced unstressed vowels in spontaneous speech for the dialects of Ottaviano and, to a lesser extent, San Giuseppe Vesuviano, arguing that those unreduced vowels witness to a conservative vowel system which has resisted the merger observed in urban Neapolitan. Similarly, the same conclusion has been reached in some recent studies on the southern Campanian dialects under investigation here ([8], [9]), pointing to the fact that a) the distribution of the qualities of unreduced final vowels is largely in keeping with what can be expected given their Proto-Romance diachronic sources, and b) while there is variation between each etymological vowel and schwa, there is no generalized vacillation in the quality of unreduced vowels for each specific word (form). Thus, in Polla, 'they came' may be realized as shown in (1a) and (2a) but not, say, \*[və'net:əra] or \*[və'net:əri]. On the contrary, Campanian dialects that have been argued to have reintroduced a Tuscan-like final 4-vowel system via contact with standard Italian show several cases of counter-etymological reconstructions of final vowels (see the argument developed for the dialect of Cicerale, province of Salerno, in [10], p. 632). In this respect, the Valdianese evidence appears more straightforward than that from the northern Vesuvian area, as in spontaneous speech from the dialect of Ottaviano non-etymological unreduced vowels occur abundantly: e.g. [ni'f:uno 'kanto 'k:ju] 'nobody sings anymore', [ri'tfevo 'patəmə] 'my father said', ['stet:ə 'b:wonə] 'he was fine', etc. ([7], pp. 325-326). Here, alongside the regular final vowel in [ni'f:uno], one also finds final -[o] instead of etymological -[a] or -[e], while -[a] and -[e] do surface too, in other occurrences of the same inflections, which boils down to a pretty generalized instability in the quality of final vowels. Summing up, for our Valdianese dialects we have concluded in [8], [9] that these varieties display a conservative Tuscan-like final vowel system -/a e i o/ which, until proof to the contrary, may well have arisen through regular sound change, thus representing the most conservative stage of evolution from Proto-Romance in this area. Schematically, this corresponds to option (i) in Figure 2.

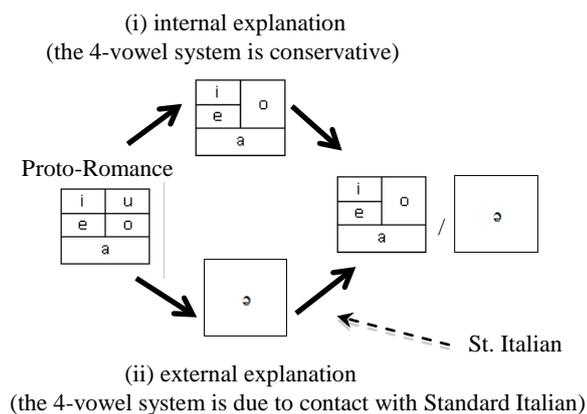


Figure 2: Diachronic interpretations of the final 4-vowel system in the dialects of Vallo di Diano.

In [8], [9], this option is preferred over the alternative one ((ii) in Figure 2), according to which non-reduced unstressed final vowels in the dialects of the area should be traced back to standardization.

### 3. Synchronic variation in final vowels

The above account of the diachronic evolution of the vowel system is intertwined with the interpretation of the synchronic variation observable in the present stage, as seen for Pollese in the examples (1-2).

#### 3.1. Standardization and koineization

This synchronic variation has been conceived of in one of the two following ways.

In several studies, the occurrence of four full final vowels in variation with schwa is accounted for as the product of osmosis between different levels of the speaker's repertoire ([6], [10], see above § 2): under this view, occurrence of unreduced final vowels is ascribed to standardization (cf. Italian -/i e a o/), while centralized vowels are taken to mirror the basilectal variety more faithfully. For example, as already mentioned in § 2, a similar account is provided in [6] for the dialects of Sannio Beneventano, while commenting on spontaneous productions by a speaker of Sant'Angelo a Cupolo who alternates [a vər'nifə] and [la vər'nife] 'the paint' "ripristinando [in the latter occurrence, RD, FC, ML] la vocale piena in concomitanza con l'uso dell'articolo standard" ([6], p. 58) [restoring the full vowel along with use of the standard article] (cf. Standard Italian *la vernice*). In a similar vein, the Pollese data too (in (1-2)) could be interpreted as due to vacillation between basilectal Campanian schwas ((1)) and acrolectal standard Italian full final vowels ((2)). We will refer to this possible interpretation as Hypothesis A. Under the alternative Hypothesis B, on the other hand, variation between /ə/ and full final vowels may be interpreted in terms of superposition of the regional Neapolitan-based koine, which displays final -/ə/, onto a basilectal, Tuscan-like system (with four full final vowels). The two Hypotheses A and B turn out to make quite different predictions. To realize that, however, it is necessary to elaborate a bit on some external factors, concerning the sociolinguistic dynamics of the communities involved.

#### 3.2. Sociolinguistics, geography and dialectology

The three dialects under study are spoken in three villages which differ significantly as to demography and geographic location (see the map in Figure 1).

Polla is the most populous (ISTAT 2008 population census: 5.368 inhabitants) and most dynamic, modern village: between 1971 and 2008 the population grew by 7.5% and only 4% of the present population works in agriculture. As for communications, the village is situated just at the bottom of Tanagro valley (475 m asl), close to the highway which follows the ancient Via Popilia's route and connects nowadays Vallo di Diano area with Naples.

S. Pietro al Tanagro, located south of Polla, is smaller and lies slightly apart from the main axis of the valley (457 m asl; ISTAT 2008: 1.703 inhabitants). The village displayed a population growth of 9% in the last 40 years, with 5% of the residents currently working in the primary economic sector.

Finally, Sanza is the most isolated village, located in a mountainous area (ISTAT 2008: 2.784 inhabitants; 622 m asl). 17% of the inhabitants are still employed in agriculture. Unlike Polla and San Pietro al Tanagro, the population of Sanza has witnessed a loss in the last years, decreasing by 15% from 1971 to 2008.

Given these differences, one can assume that the effects of contact-induced changes radiating from the prestige centre (Naples) are/were stronger in more dynamic communities (like Polla), whereas one can expect more isolated communities (like Sanza) to be more resistant to such changes and better preserve the original local dialect. Within this scenario, it follows that, with respect to the final vowel system, the two contrasting hypotheses presented in § 2.1 generate the following testable predictions: Hypothesis A predicts more centralized vowels in Sanza, the most isolated village, because of the better preservation of the basilectal Campanian vowel system; Hypothesis B, on the contrary, predicts more centralized vowels in Polla, the bigger and more dynamic community, because of stronger contact with the Neapolitan koine variety. In order to test these opposite predictions, we carried out an experimental analysis of the data collected in the three villages of Vallo di Diano under investigation, which we also compared with urban Neapolitan.

## 4. Experimental analysis

### 4.1. Material and methods

Data from the dialects of Polla, Sanza and S. Pietro al Tanagro were collected on a fieldwork trip in July 2006, during which we recorded data from several subjects per point, who had volunteered to answer questions on their dialects. The questionnaires covered a wide range of issues on several levels of analysis (phonetics-phonology, morphology and syntax). Neapolitan data, on the other hand, were collected in a follow-up session (July 2010) in order to allow for comparisons. Due to empirical limitations in the data collection during the 2006 fieldwork session – which was not designed to run a large-scale sociophonetic investigation – available data for acoustic analysis were limited to one speaker for each dialect. All speakers (male speakers for S. Pietro al Tanagro, Polla and Naples, a female speaker for Sanza) are native speakers of the local dialect, born in their current villages of residence, with a middle level of education and aged between 40 and 70 years.

The questionnaire covered 400 isolated word forms elicited in an Italian-dialect translation task (70 items for final unstressed *-a/*, 110 for *-i/*, 105 for *-e/* and 115 for *-o/*). The number of items eventually considered has been reduced because of various noise perturbations (see [8] for further details).

Manual segmentation of the items was performed using the software *Praat* [11]; the items were assigned to one of the categories {A},{E},{I},{O} on the basis of their etymological origin. After visual inspection of F1-F2 plots for the values extracted by *Praat* (standard parameters), in some cases a more sophisticated procedure for the automatic extraction of formant values (with control of poles, pre-emphasis and resolution) turned out to be necessary in order to exclude spurious formant values. In these cases, LPC analysis was performed using Long Term Average Spectra (LTAS) in *Snack* (Tcl/Tk) with Hamming window (256 points), pre-emphasis 1.0 and FFT resolution of 512 points. The individuation of formant values was performed via detection of spectral peaks in restricted frequency ranges, established through our previous knowledge of the stressed vowel systems of the relevant dialects ([12]). For example, in the analysis of Sanza's [i] (female speaker), the F1 value was identified by taking the spectral peak in the 0-1KHz frequency region (see [8] for further details). Plots and statistical analyses were performed using *R*.

### 4.2. Results

Let us start with the analysis of Neapolitan. As expected, experimental measurements confirmed complete merger in this system, as the realizations of all final vowels occupy the central area of the vocalic space, which corresponds to a final schwa (Figure 3).

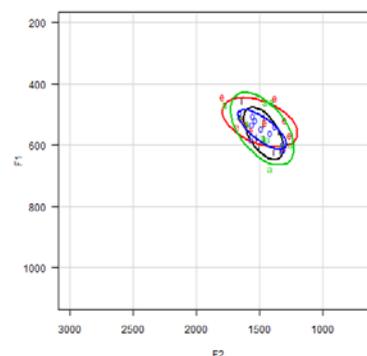


Figure 3: Naples. Vowel dispersion graph (68% ellipses, male speaker, Praat analysis with standard parameters).

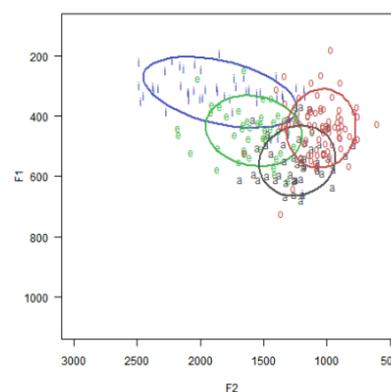


Figure 4: Polla. Vowel dispersion graph (68% ellipses, male speaker, Praat analysis with standard parameters).

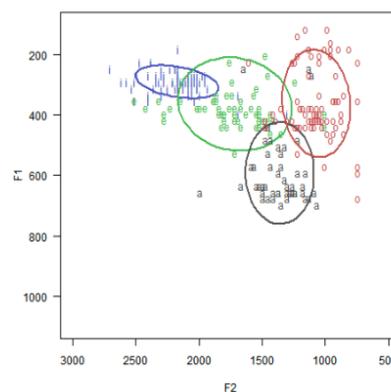


Figure 5: San Pietro al Tanagro. Vowel dispersion graph (68% ellipses, male speaker, [i, e] LTAS (10 poles), [a, o] LTAS (40 poles)).

Valdianese dialects, on the contrary, display four separate areas for final unstressed vowels (Figures 4-6), corresponding to etymological *-i e a o/ (-o/ < proto-Rom. -u, -o)*. For both

F1 and F2 results of ANOVA tests as well as *post hoc* comparisons were significant ( $p < 0.001$ ) (with the exception of /e/ vs /o/ for F1). Comparison of the results from the three dialects, however, shows that vowels areas are more centralized in Pollese (Figure 4) than in Sanzese (Figure 6), with the realizations of San Pietro al Tanagro holding an intermediate position (Figure 5).

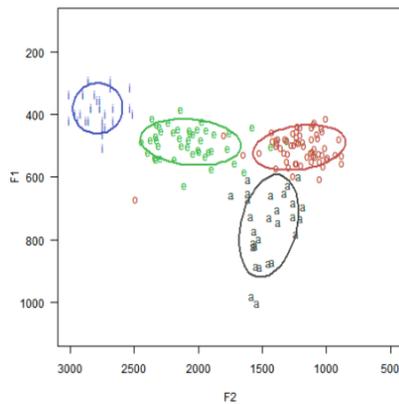


Figure 6: Sanza. Vowel dispersion graph (68% ellipses, female speaker, [a, e, o] Praat standard parameters, [i] LTAS (10 poles).

### 4.3. Discussion

The results of experimental analysis support the predictions made by Hypothesis B (see § 3.2): final vowels are more strongly centralized in Polla, the most dynamic community and the one closer to Naples. As a consequence, given what has been said in § 3, centralized realizations in the three Valdianese dialects should probably be ascribed primarily to koineization (influence from Neapolitan), while the occurrence of non-merged final vowels -[i e o u] has to be interpreted as preservation of the (basilectal) vowel system rather than as a reflex of Standard Italian influence. True, as pointed out by one anonymous reviewer, the limited data sample taken into account here (one speaker for each variety, see § 4.1) does not allow us to rule out subject-dependent (e.g. gender-related) differences. And of course we second his/her opinion that "a large-scale sociolinguistic investigation (or, at least, a speaker sample controlled for major sociolinguistic variables) would provide more reliable data". For the moment, however, in the lack of such a larger-scale investigation, all we can add on this point is that the results displayed in Figures 4-5 vs 6 mirror faithfully the perception of the human transcriber confronted with those dialects. In other words, while doing fieldwork in Polla we found ourselves transcribing centralized final unstressed vowels (occurring in the productions by all subjects, both male and female) much more often than in Sanza, with San Pietro al Tanagro somewhere in between. To ascertain whether this first impression – and the experimental illustration thereof provided in Figures 4-6 above – accurately mirrors sociolinguistic variation in the speech communities involved, further research is needed.

### 5. Conclusions

Preliminary analyses performed on the final vowel system of the Valdianese dialects of Polla, San Pietro al Tanagro and

Sanza provided some indications concerning the two questions formulated in § 1 ((i) and (ii)). In this paper we proposed:

(i) a diachronic analysis of the unreduced final unstressed vowels of the dialects of Polla, San Pietro al Tanagro and Sanza according to which those full vowels go back in a straight line to Proto-Romance rather than be the product of secondary standardization; (ii) an interpretation of the variation between full final vowels and schwa in the same dialects according to which variable centralization is due to the spread of the Neapolitan-based koine variety, where all final unstressed vowels merged in  $-/\ə/$ .

In order to arrive at those conclusions, it proved useful to combine several different sources of evidence, including reconstructive internal arguments, fine-grained acoustic-phonetic measurements and consideration of geographic and sociolinguistic factors.

### 6. Acknowledgements

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