## ILLUSTRATIONS OF THE IPA

Derek Rogers<br>Independent linguist, Glasgow<br>derek@derek.co.uk

## Luciana d'Arcangeli

University of Strathclyde, Glasgow
luciana.d-arcangeli@strath.ac.uk

Italian is spoken in Italy, in parts of Switzerland and Croatia, and in diaspora communities across the world. The standard language as spoken in Italy has three main regional varieties: Northern, Central and Southern. But contemporary 'mainstream Italian' - not following the standard in all respects - appears to be a variety under construction by speakers wishing to give themselves a national appeal, a process driven by the media and by workplace mobility. Our speaker is representative of this group. She is a woman in her thirties who was brought up in a middle-class household in Rome, and has travelled extensively in Italy and abroad. She aims at a cultivated accent with no strong regional features, sometimes called a 'RAI' accent (RAI /rai/ is the national broadcaster). The style she uses is a somewhat coloured 'storytelling' style.

## Consonants

|  | Bilabial | Labiodental | Alveolar | Post-alveolar | Palatal | Velar | Labial Velar |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| Plosive | pb |  | td |  |  | kg |  |
| Nasal | m |  | n |  | n |  |  |
| Trill |  |  | r |  |  |  |  |
| Affricate |  |  | $\widehat{\mathrm{ts}} \overline{\mathrm{dz}}$ | $\widehat{\mathrm{t}} \mathrm{d} \widehat{3}$ |  |  |  |
| Fricative |  | fv | s z | f |  |  |  |
| Approximant |  |  |  |  | j |  | w |
| Lateral <br> Approximant |  |  | 1 |  | $\kappa$ |  |  |

Some commentators treat $/ \mathrm{j} /$ and $/ \mathrm{w} /$ as allophones of vowels, and so do not include them in the phoneme inventory. The phonemes /pbtdkgmnrtf $\widehat{d 3} \mathrm{fvs} 1 /$ can geminate, with contrastive effect. Geminate affricates double only the plosive element - e.g. [dd3] - but some commentators phonemicise them as e.g. $/ \widehat{d_{3}} \widehat{d} /$; readers should take note of this. $/ \mathrm{n} \int \kappa \widehat{\mathrm{ts}} \hat{\mathrm{dz}} /$ are always geminate when intervocalic; there is therefore no need to double the symbols in transcription, as any possible phonemic opposition is eliminated. A side-effect of this rule is that a word-initial singleton of this set will become geminate when a word ending in a vowel
precedes. Readers should also take note of an alternative analysis which treats geminates not as two occurrences of the same phoneme, but as a different phoneme from the singleton, increasing the phoneme count by 15 . For a discussion, see Schmid (1999: 167).

| p | /'pane/ | pane | 'bread' |
| :---: | :---: | :---: | :---: |
| b | /'bare/ | bare | 'coffins' |
| t | /'tale/ | tale | 'such' |
| d | /'dare/ | dare | 'to give' |
| k | /'kare/ | care | 'dear' (f.pl.) |
| g | /'gare/ | gare | 'competitions' |
| m | /'male/ | male | 'badly' |
| n | /'nome/ | nome | 'name' |
| J | /'nomo/ | gnomo | 'gnome' |
| r | /'rare/ | rare | 'rare' (f.pl.) |
| ts | /'patsa/ | pazza | 'mad' (f.sg.) |
| dz | /'gadza/ | gazza | 'magpie' |
| t | /'tjalda/ | cialda | 'wafer' |
| d3 | /'dsallo/ | giallo | 'yellow' |
| f | /'fare/ | fare | 'to do' |
| V | /a'vare/ | avare | 'miserly' (f.pl.) |
| S | /'sali/ | sali | 'you go up' |
| Z | /o'zare/ | osare | 'to dare' |
| J | /'Sali/ | sciali | 'you live it up' (subj.) |
| j | /'jone/ | ione | 'ion' |
| w | /'womo/ | uomo | 'man' |
| 1 | /'large/ | larghe | 'broad' (f.pl.) |
| $\kappa$ | /'Kene/ | gliene | (combination of pronouns) |

The voiceless plosives $/ \mathrm{pt} \mathrm{k} /$ are unaspirated. $/ \mathrm{t} \mathrm{d}$ ts $\widehat{\mathrm{dz}} /$ are denti-alveolar; $/ 1 \mathrm{n} /$ become denti-alveolar when followed by $/ \mathrm{t} / \mathrm{or} / \mathrm{d} / . / \mathrm{r} /$ is a trill, but can be a tap intervocalically. The approximants $/ \mathrm{j} \mathrm{w} /$ are not strongly articulated, and do not show a sharp transition with an adjacent vowel. Phrase-final consonants (rare in the language) are fully released, and can be supported by a following schwa.

The nasals $/ \mathrm{mm} \mathrm{n} /$ are not distinctive for place of articulation when a consonant follows: only $[\mathrm{m}]$ is found before the labials $/ \mathrm{p} \mathrm{b} \mathrm{m} /$, only $[\mathrm{m}]$ before the labio-dentals $/ \mathrm{f} \mathrm{v} /$, only [ n ] before the alveolars and post-alveolars $\left./ \mathrm{t} \mathrm{ds} \mathrm{z} \int \widehat{\mathrm{ts}} \widehat{\mathrm{dz}} \mathrm{t}\right\} \widehat{\mathrm{d} 3} \mathrm{nrl} /$, only [ n ] before the palatals $/ \mathrm{nj} K /$, and only $[\mathrm{\eta}]$ before the velars $/ \mathrm{kg} /$. Taken together with the gemination of intervocalic $/ \mathrm{n} /$, this rule nullifies the opposition between $/ \mathrm{VnjV} /$ (occurring across a word-boundary) and $/ \mathrm{VnV} /$, both being realised as [VnnV].

The oppositions $/ \mathrm{s} / \sim / \mathrm{z} /$ and $/ \mathrm{ts} / \sim / \widehat{\mathrm{dz}} /$ do not operate in all phonetic contexts - only $/ \mathrm{s} /$ appears word-initially before a vowel, for example, and many speakers use only $/ \widehat{\mathrm{dz}} /$ word-initially.

The term Raddoppiamento fonosintatiico denotes the practice of doubling (or at any rate lengthening) word-initial consonants when the final syllable of the preceding word is stressed; the feature is also applied after a lexically prescribed set of words not stressed on the last syllable. (The 'intrinsic geminates' $\mathrm{n} \int \kappa \overline{\mathrm{ts}} \overline{\mathrm{dz}} /$ and the strings $/ \mathrm{s} \mathrm{z} /+$ PLOSIVE are immune to the process.) Raddoppiamento is not found in the North.

## Vowels



The chart shows the vowel-positions for this speaker, arrived at impressionistically. Accounts of the standard language show all the vowels as more peripheral, and /e o $\varepsilon \rho$ / slightly lower (e.g. Canepari 1986: 149).

| i | /'bile/ | bile | 'rage' |
| :--- | :--- | :--- | :--- |
| e | ''bere/ | bere | 'to drink' |
| $\varepsilon$ | ''bene/ | bene | 'well' |
| a | ''bara/ | bara | 'coffin' |
| o | ''boja/ | boia | 'executioner' |
| o | ''borgo/ | borgo | 'village' |
| u | ''bujo/ | buio | 'darkness' |

All seven vowels are oral. Six of them are close to cardinal; the seventh, $/ a /$, is low and central. There are no phonemic differences of length (but see below for phonetic lengthening). A noticeable feature of vowels in stressed syllables is the maintenance of an unchanging vowelquality throughout the duration of the vowel. The oppositions $/ \mathrm{e} / \sim / \varepsilon /$ and $/ \mathrm{o} / \sim / \mathrm{o} /$ exist only in stressed syllables.

Since most words in Italian end with a vowel and many begin with one, two-vowel sequences arise frequently at word boundaries; they also exist word-internally. Such sequences can be realised as two syllables, or as one syllable with two vowels, or alternatively one vowel may be deleted. Two-syllable realisations are used where the two-vowel sequence falls at the end of a phrase, and also in some lexically prescribed cases - typically where the sequence arises from adding a prefix to a stem; one-syllable realisations are used in other cases. The lexically prescribed disyllables tend to become monosyllables, however, in rapid speech and among younger speakers.

## Stress

Stress is phonemic. Stressed syllables show a tendency to lengthen the consonant in coda, if there is one; if there is no consonant, they lengthen the vowel. (This phenomenon, known as 'phonetic lengthening', is controversial.) But word-final stressed vowels remain short.

## Transcriptions

The phonemic transcription we provide is an idealised rendering as suggested by the orthography. The phonemes are those of the standard language; no assimilations are shown, because they are predictable by convention, and similarly we have not doubled the 'intrinsic geminates' $\mathrm{n} \int \kappa \widehat{\mathrm{ts}} \widehat{\mathrm{dz}} /$ when intervocalic. Since raddoppiamento fonosintattico is most often predictable from phonetic context, we have omitted that also, though with some misgivings.

The phonetic transcription, on the other hand, is narrow: we have tried to take a languageindependent approach, and to transcribe only what we hear. Our marking of consonants as doubled or not, and of vowels as long or not, are the results of our subjective judgement, as is our marking of diphthong elements as 'more vocalic' (using [i u]) or 'more consonantal' (using [j w]) and of syllable boundaries in vowel-sequences. Doubled consonants arising from phonemic geminates and from raddoppiamento are marked by writing a pair of symbols: this enables us to put the stress mark between them, thus preserving the syllabification. Doubled consonants that arise from syllabic lengthening, and long vowels, are marked by a colon. We mark diphthongs with a bottom-tie when they arise between words, and with the diacritic for 'non-syllabic' when they are word-internal; hiatus we mark with a dot. (Our marking is therefore overspecified in this respect, since it uses no default.) Where a word-boundary diphthong ends with a semivowel, we close the words up. We use | to show where the speaker pauses with a rising inflection, and $\|$ to show pauses with a falling (i.e. sentence-final) inflection. We used spectrograms and wave-analysis where possible to confirm doubtful cases.

Features of this speaker worth mentioning are: much vowel reduction [vjəḑa,torre]; intervocalic $/ \mathrm{n} /$ can be realised as a tap [sta:vər̃o], [rẽ]]; /r/ can be an approximant (plus tap) ['lo:ıo], [al,loura]; sporadic nasalisation of vowels [mãn'te:lo]; /l/ and /r/ can assimilate to a following consonant [im man'tદllo], [fat' 'to: $\swarrow ə r$ ], respectively; variable distribution, in the stressed syllable, of lengthened consonants and lengthened vowels [mãn'te:lo, man'tello]; creak on some instances of sonorants before $/ \mathrm{s} /$, instead of the affrication of post-sonorant $/ \mathrm{s} /$ more typical of the Central region ['tol:s], [il 'so:le] rather than ['toltse], etc.; de-affrication of /t $]$ in [rinun' $\int \supset$ ] (another Central trait); pharyngeal colouring in ['fo ${ }^{〔}$ rte].

## Phonemic transcription

il 'vento del nord ed il 'sole |'stavano disku'tendo su 'ki | tra i 'due | 'fosse il pju 'forte | 'kwando arri'vo un viad§̧atore av'volto in un man'tello || i 'due | de't fizero ke il 'primo di 'loro | ke 'fosse ri.u'fito a far 'to Kere il man'tعllo al vjadḑa'tore | ,sa'rebbe stato il pju 'forte tra i 'due \|, kwindi il 'vento del 'nord sof'fjo pju 'forte ke 'mai | ma 'pju 'lui sof'fjava| pju il vjadđ̧̧a'tore si avvol'ḑ̧eva nel suo man'tello || 'fin a 'kwando il 'vento rinun'țo \|| alllora il 'sole lo riskal'do kon i suoj 'rad $\widehat{3} \mathrm{i} \mid$ |'e | ,immedjata'mente | il vjadḑa'tore si 'tolse il man'tello | fu ko'zi ke il 'vento del 'nord | am'mize ke il 'sole | 'عra il pju 'forte tra i 'due ||

## Phonetic transcription

il 'ven:to del nor:d ed il 'sorle | 'sta:var̃o disku'ten:do su 'ki | tre_i 'du:wè | 'foss il pju f'for:tê | 'kwand ari'və_um vjəə $3 ə$,torire_av'volt in um mãn'te:lo || i 'du:wẹ | de'țizero ke_il 'pri:mo di 'lo:so| ke f'fosse rjuf'jito_a fat' 'to:Kər il man'tع:lo_av
 'nor:də sof'fjo ppju f'for:te ke 'ma.:i i ma 'pju l'luj sof'fja:va |, pju:w il vjedḑ̧̧e'tơ:re
sj avvol'đ̧̧eva rẹ̃ so man'tello || 'fin a 'kwan:do | il 'vento | rinun'fo || allloura_ il
 'toless im man'tello || fu ko'zi kejl 'ven:to del 'nor:də | am'mi:ze ke_il 'sorlè | 'عirajl pju f'fo ${ }^{\text {ºrte }}{ }^{\text {re }}$ tre i 'du:wee $\|$

## Orthographic version

Il vento del nord ed il sole stavano discutendo su chi, tra i due, fosse il più forte quando arrivò un viaggiatore avvolto in un mantello. I due decisero che il primo di loro che fosse riuscito a far togliere il mantello al viaggiatore sarebbe stato il più forte tra i due. Quindi il vento del nord soffiò più forte che mai, ma più lui soffiava più il viaggiatore si avvolgeva nel suo mantello; fin a quando il vento rinunciò. Allora il sole lo riscaldò con i suoi raggi e, immediatamente, il viaggiatore si tolse il mantello. Fu così che il vento del nord ammise che il sole era il più forte tra i due.

## Acknowledgements

The authors extend their thanks to Julia Barron, Bob Ladd, Peter Ladefoged, Mike MacMahon, Sam de Smith and anonymous reviewers for their many helpful suggestions.

## References

CANEPARI, LUCIANO (1986). Italiano standard e pronunce regionali (3rd edn.). Padova: CLEUP. Schmid, Stephan (1999). Fonetica e fonologia dell'italiano. Torino: Paravia.

