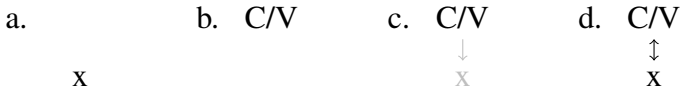
Dittongo mobile: no allomorphy, just phonology - Edoardo Cavirani - KU Leuven

Main claims Some Italian forms show an alternation between front and back diphthongs ([jɛ]/[wɔ]) in open, stressed syllables, and mid front and mid back vowels ([e]/[o]) in other contexts.

	SG	PL	SG	PL	SG	PL	SG	PL
1	ˈs**jɛ**do	s**e**ˈdjaːmo	ˈm**wɔ**jo	m**o**ˈrjaːmo	ˈv**ɛŋ**go	v**e**ˈnjaːmo	ˈp**ɔ**sːo	p**o**sˈsjaːmo
2	ˈs**jɛ**di	s**e**ˈdeːte	ˈm**wɔ**ri	m**o**ˈriːte	ˈv**jɛ**ni	v**e**ˈniːte	ˈp**wɔ**i	p**o**ˈteːte
3	ˈs**jɛ**de	ˈs**jɛ**dono	ˈm**wɔ**re	ˈm**wɔ**jono	ˈv**jɛ**ne	ˈv**ɛŋ**gono	ˈp**wɔ**	ˈp**ɔ**sːono

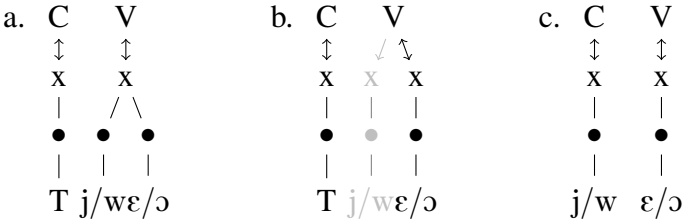
Most literature argues that this alternation is out of the purview or regular phonology, i.e. that it is a case of allomorphy. I challenge this view and propose a phonological analysis that builds on a refinement of phonological representations obtained by combining a version of strict CV (Scheer 2022) with Turbidity Theory (Goldrick 2001). This allows for collapsing the differences of the allomorphs in the representation of a common underlier. This contains a 'turbid' glide that surfaces only in stressed, open syllables, where the lengthening of the nucleus provides extra space.

Turbidity Theory (TT) TT posits two asymmetric melody-prosody relations: a projection relation (↓) expressing the lexical affiliation of a melodic prime to a prosodic node, and a pronunciation relation (↑) expressing the phonetic interpretation of a melodic prime in a specific prosodic node. This is illustrated below, where a. represents a floating segment, b. an empty prosodic node, c. a silent non-empty prosodic node, i.e. a node that has some melodic content that is not pronounced, and d. a full prosodic node.



The melodic content of d. is faithfully interpreted. The phonetic interpretation of the other structures depends on the context. If followed by a full V, they can be governed, thus stay silent, otherwise they get pronounced. More precisely, empty nodes (b.) get a default epenthetic melodic content, while silent non-empty nodes (c.) have their melodic content faithfully interpreted.

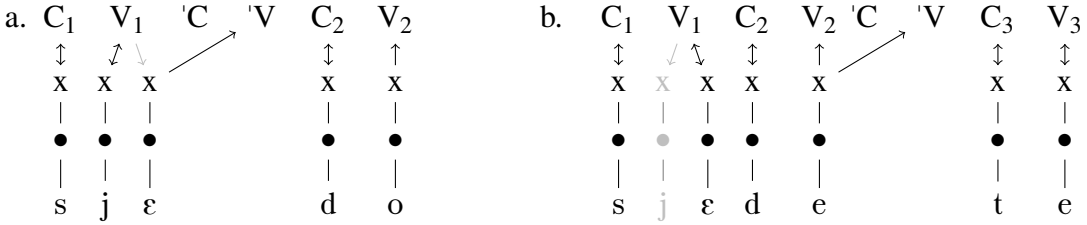
Analysis - Representations Despite their phonetic identity, (Italian) diphthongs do not behave homogeneously. Word-medially, they behave like simple vowels, as they i) can be pronounced as short or long depending on the context (der Veer 2006), ii) can be found after complex consonant clusters (thus no *CCC(C) violation), and iii) allow for the faithful surfacing of intrinsically long consonants. Word-initially, diphthongs behave as a CV sequence, as they select for the SG.M.DEF/INDF article [lo]/[uno] ([lo jelˈlaːto] 'the unfortunate (man)' *vs* [l eletˈtroːne] 'the electron'; Faust et al. 2018). Thus, depending on their position, diphthongs can be given different phonological structures: word-medially, they are represented as complex nuclei (a., b.), whereas word-initially they correspond to CV sequences (c.).



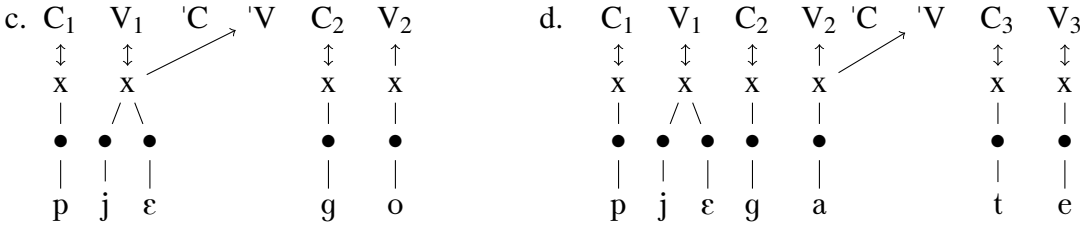
The representation of the alternating diphthong (b.) differs from the other two in two respects. Firstly, rather than as a segment (x) with two components (•), it is represented as a 'bisegmental

complex' (Lowenstamm 2003), namely as two segmental structures belonging to one and the same V node. In TT, 'belonging' is formally expressed by the projection relation associating a C/V node with its segmental content. Secondly, the two segments are asymmetric, in that the glide is lexically endowed only with the projection relation, whereas the vocalic segment has both relations. This encodes the idea that, whereas the 'vocalic core' of the diphthong is always pronounced, the glide only surfaces if, in a specific context, phonological computation adds the necessary pronunciation relation. Assuming that C/V nodes can only pronounce one segment, the representation of alternating diphthongs as 'bisegmental complexes' rather than as segments containing two distinct components, allows us to account for why the glide surfaces only in specific phonological contexts.

Analysis - Computation Assuming that i) stress provides an extra CV (Larsen 1998), ii) C/V nodes can only pronounce one segment, and iii) projected segments surface if (not governed and) there is some C/V host, the extra V provides room for rearranging the pronunciation relations in such a way that the glide is pronounced on the V node from which it is projected, and the vocalic segment on the extra V node. This is shown below, where /sjɛd/ 'sit' surfaces as [sjɛd] when occurring in an open, stressed syllable (/sjɛd/+/o/$_{\text{IND.PRS.1SG}}$ [ˈsjɛdo] 'I sit'; a.), and as [sed] elsewhere (/sjɛd/+/ete/$_{\text{IND.PRS.2PL}}$ [seˈdeːte] 'you sit'; b.).



Non-alternating diphthongs behave differently. This is shown below with /pjɛg/ 'fold'. Note that, i) in terms of TT relations, /j/ and /ɛ/ are identical, for they 'belong' to one and the same segment, and ii) the segment associates with its V node via both TT relations. This encodes the fact that this segment and its components are always pronounced, and that the segment as a whole surfaces as short or long depending on the phonological context. Thus, we have [ˈpjɛgo] 'I fold' (c.), where the whole diphthong is as long as a lenghtened monophthong, ([ˈpeːlo] 'I peel'), but [pjeˈgaːte] 'you fold' (d.), where the whole diphthong is as short as a short monopthong ([peˈlaːte] 'you peel').



Selected references Faust, N., N. Lampitelli, and S. Ulfsbjorninn (2018). Articles of italian unite! *Canadian Journal of Linguistics* 63 (3), 1–27 • Lowenstamm, J. (2003). Remarks on mutae cum liquida and branching onsets. In S. Ploch (Ed.), *Living on the Edge*, pp. 339–363. Berlin/Boston: Mouton de Gruyter • Scheer, T. (2022). 3 x Phonology. *Canadian Journal of Linguistics* 67 (3), 1–56 • van der Veer, B. (2006). *The Italian 'Mobile Diphthongs'. A test case for experimental phonetics and phonological theory*. Ph.D dissertation. Utrecht: LOT.