Dittongo mobile no allomorphy, just phonology

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Dittongo mobile

Dittongo mobile - the role of stress

- a. $\sqrt{\text{SED}}$ 'sit', PRS.IND
 - SG PL 1 'sjræ.do se.'djra.mo 2 'sjræ.di se.'de.te 3 'sjræ.de 'sjræ.do.no
- j t in 'C_.: 1/2/3sg, 3PL
 e elsewhere : 1/2PL

- **b**. $\sqrt{\text{MOR}}$ 'die', PRS.IND
 - SG PL 1 'mwə.jo mo.'rj.a.mo 2 'mwə.ri mo.'ri.te 3 'mwə.re 'mwə.jo.no
- w·ɔ· in 'C_.: 1/2/3sg, 3PL
 o elsewhere : 1/2PL

Dittongo mobile - the role of stress

- a. $\sqrt{\text{VEN}}$ 'come', PRS.IND
 - SG PL 1 'vɛŋ.go ve'.nj·a·.mo 2 'vj·ɛ·.ni ve.'ni:.te 3 'vj·ɛ·.ne 'vɛŋ.go.no
- jre in 'C_.: 2/3sg
 ε in 'C_C.: 1sg, 3pL
 e elsewhere: 1/2pL

b. $\sqrt{\text{VOL}}$ 'want', PRS.IND

	SG	$_{\rm PL}$
1	oλ.λ <mark>c</mark> v'	v <mark>o</mark> ʎ.ˈʎj · a·.mo
2	'vw'ə'.i	vo.'ler.te
3	'vw'ɔ'.le	'v³λ.λo.no

w or in 'C_.: 2/3sg
o in 'C_C.: 1sg, 3PL
o elsewhere: 1/2PL

• UR = $/i\epsilon/$ and $/u\rho/$ (Saltarelli 1970)

- Monophthongization rule applying in C_. and 'C_C.
- Unmotivated and arbitrary rule ordering
- Empirically inaccurate
 - 'pjrægo 'l fold' ~ pje'gjrarmo 'we fold' (*pe'gjrarmo)
 - 'swrorno 'l play' ~ swo'njrarmo 'we play' (*so'njrarmo)

UR = /e/ and /o/ (Sluyters 1992)

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 - \blacksquare be'vja:mo 'we drink' ~ 'be:vo 'l drink' (*'bj*e:vo)
 - \blacksquare vo'tja:mo 'we vote' ~ 'vo:to 'l vote' (*'vw:5:to)

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Overgeneration

- Wrong predictions
- DiMo can only be found in a few lexical items
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UR = /jɛ/, /e/ and /wɔ/, /o/ (van der Veer & Booij 2015) Interaction of OT FAITH-MARKEDNESS constraints

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- Allomorphy increases grammar idiosyncrasy
- Storage/Lexicon vs computation/derivation
- Storage is more costly than computation \rightarrow minimize storage and maximize computation
- Q How plausible is a (phonological) derivation?
 - good ~ be-tter/-st: two ROOTs
- A How plausible a derivation is depends on your phonology
 - If computation is universal (autosegmental phonology)...
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Proposal

Refining representations reduces cases of allomorphy

- Strict CV (Lowenstamm 1996, Scheer 2004, 2022)
- Turbidity Theory (Goldrick 2001, Cavirani and van Oostendorp 2017, Cavirani 2022)

Collapsing DiMo allomorphs in one and the same UR

- DiMo UR contain a floating j/w that surfaces only in 'C_.
- Stress provides room for j/w to surface
- DiMo and non-alternating diphthongs are representationally different

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Structure of the talk

1 Refining strict CV

2 Representations

3 Computation



Refining strict CV

Strict CV - the standard view (Lowenstamm 1996, Scheer 2004)

Phonological strings as CV sequences (C/V as skeletal slots)
 Segments as 'melodic expressions' (m) associated with C/V



No formal status assigned to {m}

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Q1 How to represent melodic expressions as {m}? They behave as a unit (e.g. lengthehing, metathesis ...)

Q2 How to represent floating segments?

■ They must exist independently of C/\

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A1 Melodic expressions = sets of m (a.), i.e. as Representational units (b.) containing m (or not, c.)

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Segments can contain temporally-ordered subcomponents

- Affricates
- Pre-post-nasalized segments, pre-/post-laryngealized segments (including affricates), consonants with on- and off- glides ...
- Some TR clusters
- Light diphthongs

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- Q3 How to represent contour segments?

- Kaye (1981, 1985) and Pöchtrager (2015): light diphthongs
 - **T**wo 'melodic expressions' (x) associated to a nuclear position (N)
- Rennison (1998): affricates
 - Two 'components' associated to an onset position (O)
 - i. Stable component (specified as such in the Lexicon)
 - ii. 'Lazy' component (realized last, either floating, or acquired)
- Lowenstamm (2003): some TR clusters
 - 'Bisegmental complex'
 - "C[×], where x [...] stands for secondary articulation"
- Q-Theory (Garvin et al. 2018, Shih and Inkelas 2019)
 - 3 (or maybe 4) linearly-ordered subsegments (q)
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Subsegmental components

o

Segments

•

Skeletal anchoring/prosodic nodes

C/V



Turbidity Theory (Goldrick 2001, Cavirani 2022)

OT-born input-output Containment relation

The input is always contained in the output

Asymmetric relations between segments and prosodic nodes

- Projection (\downarrow)
 - Lexical affiliation of a segment to a prosodic node
 - No manipulation
- Pronunciation (↑)
 - Phonetic interpretation of a segment on a prosodic node
 - Manipulated by phonology (addition/deletion of ↑)

Turbid strict CV (Cavirani and van Oostendorp 2017, Cavirani 2022)



- a. Floating segment
- b. Empty prosodic node
- c. Silent prosodic node
- d. Full prosodic node

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Decoupling of phonological (UR) relations and their pronunciation

- Lateral activity of silent non-empty V (Cavirani 2022)
- Normalization of apparently exceptional morphophonological patterns

Adequate formalization of spreading

- Spreading as ↑ addition
- The lengthened is not lexically affiliated to the node it spreads to

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Representations

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Non-alternating diphthongs behave like monophthongs GV in C_./ C_C. ~ GV in 'C_. If G ∈ C/V and V ∈ V', then GV → GV Ok after C clusters (e.g. setten 'trivene 'north') If G ∈ C, then *CCCC Intrinsteally long C → C / V_(G) + (e.g. at typene 'action of the comparison of the co

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Non-alternating diphthongs

- Complex vocalic segments
- \updownarrow as is always fully pronounced



Alternating diphthongs (DiMo) need more space

- G only surfaces if extra skeletal space is provided
 - G•V^{*} in 'C_
 - V elsewhere

Vocalic segments (also word-initially)

- DiMo select the pre-V SG.M.DEF/INDF article allomorph
 - I/un 'w o mo 'the/a man' vs lo/uno 'jɛɛɪti 'the/a yeti'

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Alternating diphthongs (DiMo)

- Bisegmental structures
- The second segment (V) is always pronounced (\$)
- The first segment (G) is floating, and surfaces only if it can



Stress provides extra skeletal space (Larsen 1998)

The inserted '(C)V needs to be licensed
 Only a full V can license (b. vs b'.)

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Representations

a. Non-alternating diphthongs



b. Alternating diphthongs (DiMo)



Computation

Non-alternating diphthong

$\checkmark \sqrt{\text{PJEG}}$ 'fold'



Non-alternating diphthong

■ 'pj*ɛ*go 'I fold' ■ 'C'V insertion \rightarrow • spreading to 'V \rightarrow j*ɛ*



Non-alternating diphthong

pje'garte 'you_{PL} fold'

I No 'C'V insertion after $V_1 \rightarrow$ no • spreading \rightarrow no j ϵ lengthening



DiMo





DiMo



d

0

• $\uparrow \bullet V$: pronounce only one \bullet per V

- ▲ ↑●: pronounce ●
- ↓•: pronounce where it belongs

■ ↑•V, ↑• ≫ \$•

DiMo

■ 'sj*e*do 'I sit' ■ 'C'V insertion → • spreading to 'V → j pronunciation on V₁ C_1 V₁ 'C , 'V C₂ V₂



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- $\uparrow \bullet V$, $\uparrow \bullet \gg \uparrow \bullet$

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Conclusion

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The difference between alternating diphthongs and DiMo can be related to their phonological representation

- Automatic and regular phonological derivation
 - No need for allomorphy
- Refined strict CV representation
 - Independently motivated/logically necessary
- Phonetically similar objects can have different representations
 - Phonology is not busy with phonetics, what matter are phonological analyses
 - Lowenstamm 2003, Blaho 2008, Samuels 2012, Dresher 2014, 2018, losad 2017, Scheer 2019, Chabot 2021, Odden 2022, Cavirani 2022

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Does [dittongo mobile, DiMo] signal a morphological category? No, it applies to N and V

- Do we lose a generalisation if we relegate [DiMo] to the lexicon?
 No, we would miss a generalization if we don't do that
- Does [DiMo] have to be exceptionless/automatic/fully productive?
 It'd better be, and it can be so only if we have the right UR
- Does [DiMo] have to be natural?
 - Not necessarily, but DiMo does (which is not bad)
- Are there different components/strata?
 - Maybe, but it's not that important now
- What is the role and purview of phonology, and (how) does it differ from other areas of our linguistic competence?
 - It mechanically transforms a phonological input into a phonological output, and it only cares about phonological objects

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