

Silent lateral actors in Arabic

Edoardo Cavirani
CRISSP/KU Leuven

Contact Information:
CRISSP, KU Leuven
Email: edoardo.cavirani@kuleuven.be

KU LEUVEN

Main proposal: CVCV + Turbidity Theory

Main question

What to do with patterns that suggest the presence of a contentful N despite N being silent?

Theoretical assumptions I: strict CV

1. Phonological strings are sequences of Cs and Vs
2. Melodic primes are either floating, or associated to skeletal nodes (Goldsmith 1976/1990)
3. Governees cannot be more complex than governors (Harris 1990)
4. FEN activity by systemic parameter (Scheer 2004)

Specific subquestions

1. How to make a N laterally active despite not being pronounced?
2. How to account for cases where FEN parameters do not work?
3. Can we get rid of FEN parameter(s)?

Theoretical assumptions II: Turbidity Theory

1. OT-born input-output Containment relation
 - (a) The input is always contained in the output
 - (b) Deletion as non-pronunciation
2. Asymmetric melodic primes-prosodic nodes relations
 - (a) **Projection** (↓)
 - i. Lexical affiliation of a melodic prime to a prosodic node
 - ii. No manipulation allowed
 - (b) **Pronunciation** (↑)
 - i. Phonetic interpretation of a melodic prime in a prosodic node
 - ii. Manipulated by phonology (addition/deletion)

Extended representational typology

Floating prime	EN	eN	Full N
	V ₁	V ₂	V ₃
A		A	A
∅	∅	∅	[a]

1. Floating primes: no V, no relation
2. EN: no prime, no relation
3. eN: prime, V, ↓ relation (= *yers*)
4. Full N: prime, V, ↓ and ↑ relation

Silence ≠ phonological activity

Silence does not make eN phonologically inactive

Complexity = lateral strength

1. eN are more complex and laterally stronger than EN
2. Some (F)EN are actually (F)eN

Glide mutation and transfer in CA

Data (Bohas and Lowenstamm 2022)

Glide mutation

1. /aGV/ → [a:] (G = glide; V = any vowel)
2. Triconsonantal roots surfacing as biconsonantal
 - (a) √ktb 'write' → /kataba/ → [kataba] 'he wrote'
 - (b) √qwl 'say' → /qawala/ → [qa:la] 'he said'

Transfer

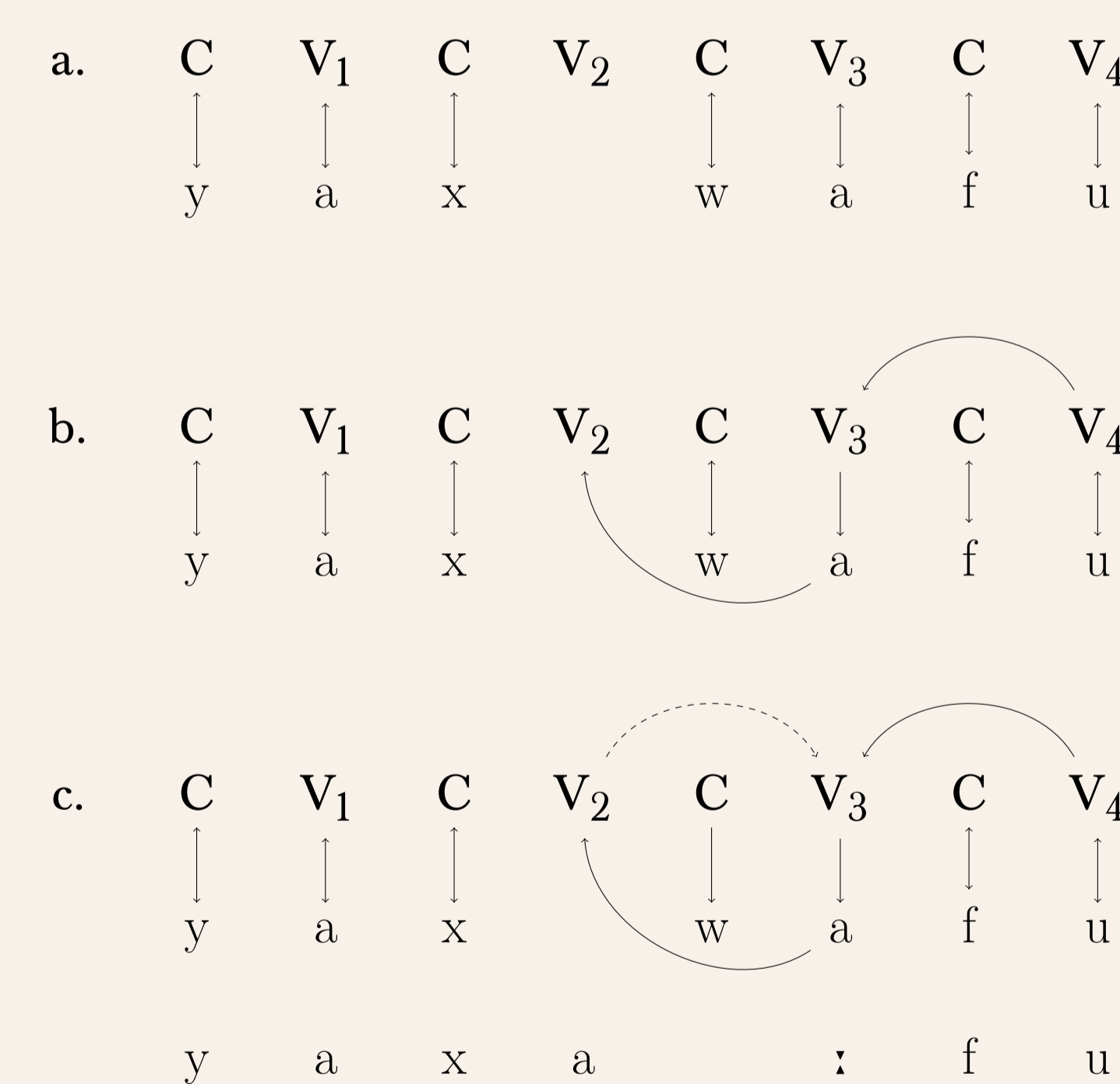
1. /CGV/ → [CVG]
2. 'Movement' of V to the left of G
 - (a) √ktb 'write' → /yaktabu/ → [yaktabu] 'he writes'
 - (b) √qwl 'say' → /yaqwulu/ → [yaqwulu] 'he says'

Glide mutation-transfer interaction

1. "the vowel has been removed from its canonical position, yet its former presence somehow continues to count, in ghostlike fashion, as the righthand side environment of the [mutation] rule"
2. "the modern theoretical construct that most closely corresponds to [this] seems to be trace theory" (Bohas and Lowenstamm 2021)
3. /aG/ → /a:_ {V, t_a}/ (mutation II)
 - (a) √xwf 'fear' → /xawifa/ ([xa:fa]) → /yaxwafu/
 - (b) Expected: /yaxwafu/ → *[yaxawfu] (transfer, a.→b.)
 - (c) Attested: /yaxwafu/ → [yaxa:fu] (transfer + mutation II, b.→c.)

Formal analysis

Transfer as change of ↑: /a/-to-V₃ → /a/-to-V₂



1. /a/ pronounced in V₂
2. V₃ still phonologically active due to /a/'s ↓
 - Cf. /sawt'un/ 'whips' → *[sa:t'un]
3. Creation of the context triggering mutation II (/aGt_a/)
4. Lengthening as [a] spreading
 - Cf. /xawifa/ → [xa:fa]

Word-final CC cluster in CEA

Data (Fathi 2013)

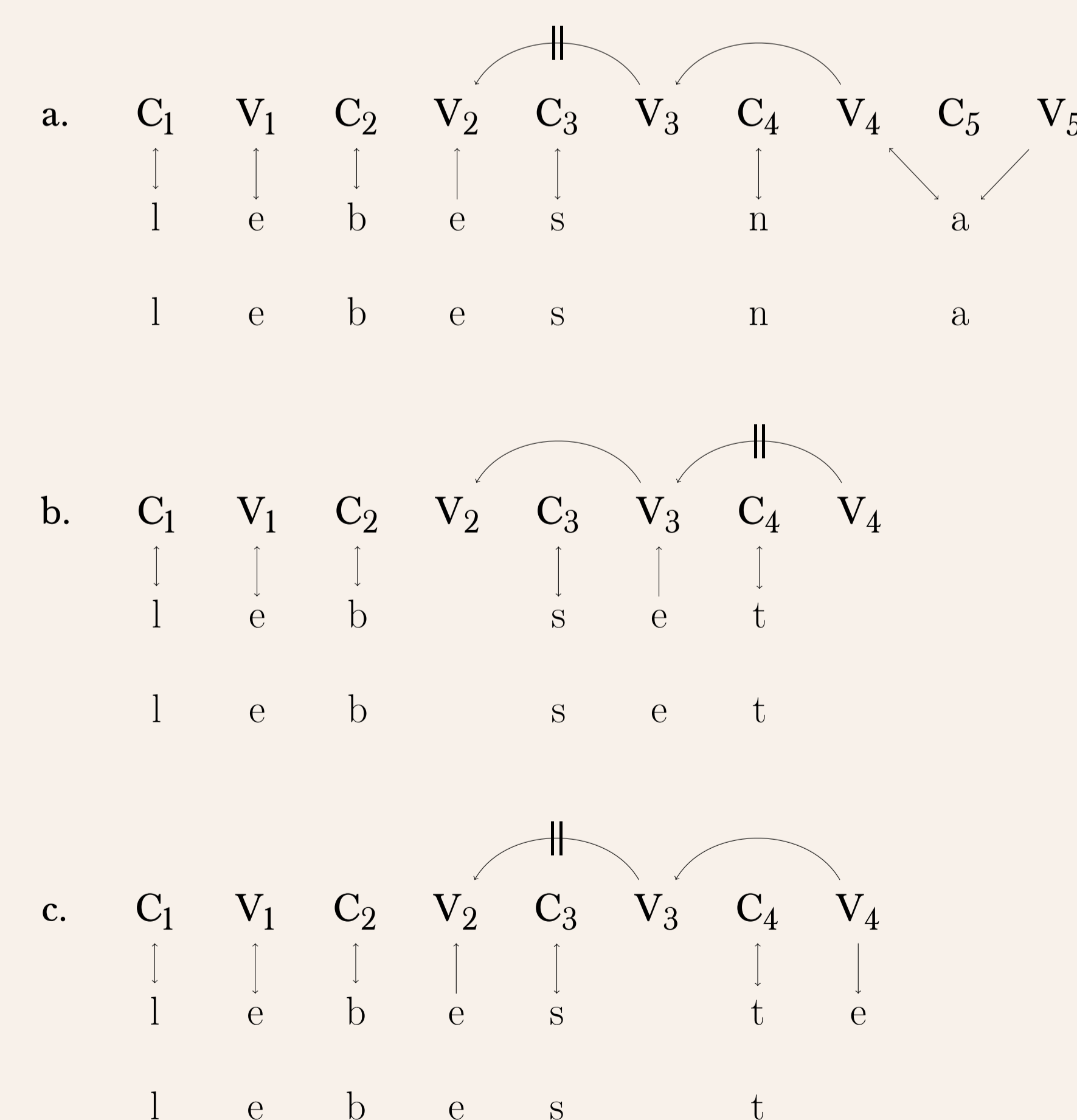
Different kinds of final silent N

1. Perfective paradigm of √lbs 'put cloths on'

	1pl	lebesna
	1sg	lebest
	3f.sg	lebsat
2. [e] between root's C₂ and C₃ iff followed by CC
 - (a) 1pl: *lebes_na* → root FEN PGed by suffix full N
 - (b) 1sg: *lebes_t_* → root FEN PGed by suffix FEN
 - (c) 3f.sg: *leb_set_* → root FEN non-PGed by suffix FEN
3. No systemic FEN parameter
 - (a) 3f.sg has FEN
 - (b) 1sg has FeN
4. Three different N (Fathi 2013: 37)
 - (a) "governors that enjoy explicit phonetic and phonological content" → +PG
 - (b) N that "can be characterized as both phonologically and phonetically contentless" → -PG
 - (c) N that "was evacuated from [its] concrete phonetic vocalic content [and] involves a latent, yet structurally active nucleus" → +PG

Formal analysis

Different UR: FEN, -PG vs FeN, +PG



1. 1pl: V₄=N, V₄ PGs V₃ → V₃=[∅]; V₃ *PGs V₂ → V₂=[e]
2. 3f.sg: V₄=EN, V₄ *PGs V₃ → V₃=[e], V₃ PGs V₂ → V₂=[∅]
3. 1sg: V₄=eN, V₄ PGs V₃ → V₃=[∅]; V₃ *PGs V₂ → V₂=[e]

Conclusion

Silence can conceal phonological complexity → eN ≠ EN

- Upgrading strict CV with TT allows for
1. Accounting for opacity (*phonological traces*)
 2. Preserving a direct relation between lateral actorship and representational complexity
 3. Reducing the need for FEN parameters: lateral strength encoded in the Lexicon
 - (a) "all parameters of variation are attributable to differences in the features of particular items (e.g. the functional heads) in the Lexicon" (Borer-Chomsky conjecture)
 - (b) Syntactic functional head = (word-final) N
 - (c) Feature distinguishing between active and non-active silent N = melodic prime
 - (d) Prime not necessarily phonetically interpreted

Extra

Improving the formalization of *yers*

1. Formally unclear status
 - (a) (F)EN can distinguish EN from *yers* (Scheer 2004), but ...
 - (b) *Yers* = V + floating primes
 - (c) If primes are floating ⇒ no association with C/V
 - (d) If C/V is not associated with any prime ⇒ C/V is empty
 - (e) (F)EN should not distinguish *yers* from EN
2. Unconstrained landing site
 - (a) If primes for V = primes for C (Element Theory) ⇒ floating primes of *yers* can associate with neighbouring Cs
3. Formalizing *yers* as eN allows for solving these problems
 - (a) eN *project* some melodic prime ⇒ the prime is integrated in the phonological string
 - (b) (F)EN can 'see' the prime ⇒ (F)EN can distinguish between EN and eN
 - (c) (All being equal; see *transfer*) the melodic primes of eN are pronounced on the latter

Other patterns (Cavirani *apctd*, Cavirani and van Oostendorp 2019)

1. Vowel-zero alternations in Emilian dialects
2. Vowel-zero alternations in Hungarian
3. Relation between stress (position) and length in Colloquial Egyptian Arabic
4. Blocking of final devoicing in Dutch dialects verbs

Selected references

Bohas, G. and J. Lowenstamm (2021). The *tasrtf* in the medieval arabic grammatical tradition. In *The Oxford Handbook of the History of Phonology*. Oxford: Oxford University Press. • Cavirani E. (accepted). *Silent lateral actors: the phonological activity of unpronounced segments*. • Cavirani E. and van Oostendorp M., Degrees of Emptiness in Dutch Dialect Atlases: Reducing morphosyntactic variation by refining emptiness typology. *Glossa* 4(1), 1-22. • Fathi, R. (2013). Vowel length in Egyptian Arabic: a different view. PhD thesis, Université Paris Diderot (Paris7), Paris.

Acknowledgments

This work is supported by the FWO Marie Skłodowska-Curie Actions - Seal of Excellence postdoctoral research grant nr.12Z7520N. I'm grateful to the CRISSP members and to anonymous reviewers of *The Linguistic Review* for comments on (earlier versions of) this work.