

When vowel harmony has a say in morpho-syntax

A case from suspended affixation

Utku Türk Boğaziçi University

Main Spoiler

- Suspended Affixation literature predicts (1a) and (1b):

(1) a. Mary(-ye) ve John-a mektup gel-miş.
M(-DAT) and J-DAT letter come-PST.EVD
'A letter arrived for Mary and John.'

b. Bana/*Ben ve sana mektup gel-miş.
I.DAT/I and you.DAT letter come-PST.EVD
'A letter arrived for me and you.'

- But cannot predict (2).

(2) Bana/Ben ve John-a mektup gel-miş.
I.DAT/I and J-DAT letter come-PST.EVD
'A letter arrived for me and John.'

Suspended Affixation?

- Where a single suffix scopes over two or multiple coordinands.

(3) Yılan ve köpek-ten korkuyorum.

snake and dog-ABL fear-PROG-1SG

'I fear from dogs and snakes.'

(Adapted from Erschler, 2018)

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- Coined by Lewis (1967).

Suspended Affixation Literature

- For Turkish: see Orgun (1995), Kabak (2007), Broadwell (2008), Kornfilt (2012), Kharytonava (2012a, b), Akkuş (2016), Atmaca (2020).
- For other languages including Korean, Ossetic, Serbian, Mari, and German: see Erschler (2018), Yoon (2017), Despić (2017), Guseva and Weisser (2017), Erschler (2012), Pounder (2006)

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- Most extensive study on Turkish SA
- Based on the idea of *morphological word*
- However, it falls short in
 - SA of derivational suffixes (Akkuş 2016),
 - explaining the productivity in inflection (Kornfilt, 2012)
 - **explaining SA with a single pronoun and non-pronominal one**

Guseva and Weisser (2017)

- Two possible structures:

(4) $[\beta - \alpha] \ \& \ [\gamma - \alpha]$ (5) $[\beta \ \& \ \gamma] - \alpha$

- SA is not performed on surface level,
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- **Denominator:** Locality and Phonological interactions
- Since vowel harmony is observed in Turkish SA: (4) 

Guseva and Weisser (2017)

- What does (4) predicts?

(4) $[\beta - \alpha]$ & $[\gamma - \alpha]$

Guseva and Weisser (2017)

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(4) $[\beta-\alpha]$ & $[\gamma-\alpha]$

- *Allomorphs of β must be preserved.*

(6) Pörjeng memnam/memna/*me den nunem už-eš.
Man.NOM us.ACC/us.*/us and them.ACC see-3SG-PRES
'The man sees us and them.'

(Adapted from Guseva and Weisser, 2017)

Guseva and Weisser (2017)

- What does (4) predicts?

(4) $[\beta-\alpha]$ & $[\gamma-\alpha]$

- *Allomorphs of β must be preserved. In Turkish? Nope.*

(7) Bana/Ben/*Ban ve John-a mektup gel-miş.
I.DAT/I/*I.? and J-DAT letter come-PST.EVD
'A letter arrived for me and John.'

Is Turkish SA necessarily (4)?

- Maybe, it is not (4), but (5)?


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- If cases assigned as in (5), questions like “Is it $[\beta \ \text{or} \ \gamma] - \alpha$?” should be ungrammatical.

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- Alternative question test proposed in Erschler (2018): Turkish SA as (4) 
- If cases assigned as in (5), questions like “Is it $[\beta \ \text{or} \ \gamma] - \alpha$?” should be ungrammatical. Yılan(dan mı) (veya) köpekten mi korkarsın?

(8) Yılan ya=da köpek-ten kork-ar=mı-sın?
snake or=EMP dog-ABL fear-AOR=Q-2SG
'Are you afraid of dogs or snakes?'

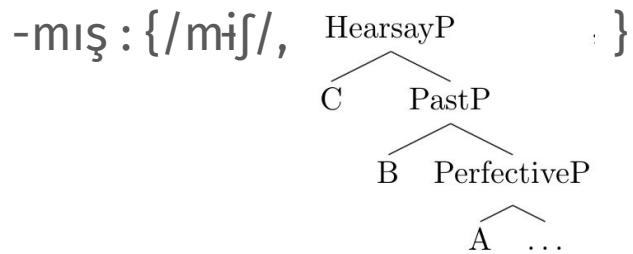
Ben/*Ban: Still a problem

- Why is (9) with “Ben” grammatical, but it is ungrammatical with “Ban”?
→ Phon-driven allomorph reranking (Starke, 2020)

(9) Bana/Ben/*Ban ve John-a mektup gel-miş.
I.DAT/I/*I.? and J-DAT letter come-PST.EVD
'A letter arrived for me and John.'

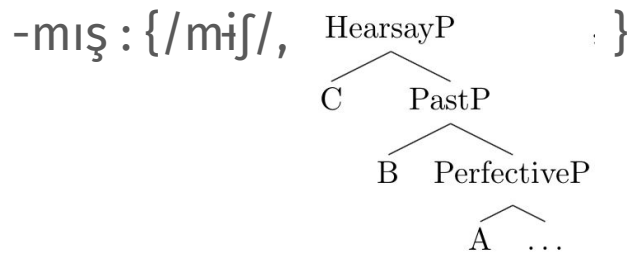
Generating Ben ve John'a

Starke (2010): Matching syntactic trees involving sub-morphemic features with spell-out candidates.



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Prior to matching, features like A, B, C goes through necessary spell-out driven movements.

Generating Ben ve John'a

1. Merge → [C [B A]] → Spell out?
2. Cyclic movement → [B [C [A]]] → Spell out?
3. Rollup movement → [[B A] [C]] → Spell out?
4. Backtrack → Redo {1,2,3} → Spell out?

== Match is completed > Merge the next feature ==

Where does phonology kick in?

Generating Ben ve John'a

Bye & Svenonius (2012), Starke (2020): When there is a clash in PF/SpellOut, phonology may have a say.

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smart + COMP → smarter 

intelligent + COMP → intelligenter 

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Phonology forces the final spell-out “*intelligenter*” to be reconsidered.¹
Now, comparative feature externally merged.

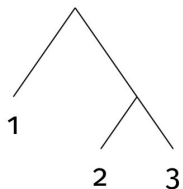
COMP + [intelligent + _] → more intelligent 

¹Special thanks to Pavel Caha for the discussion.

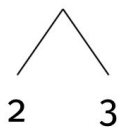
Generating Ben ve John'a

What happens when SA occurs?

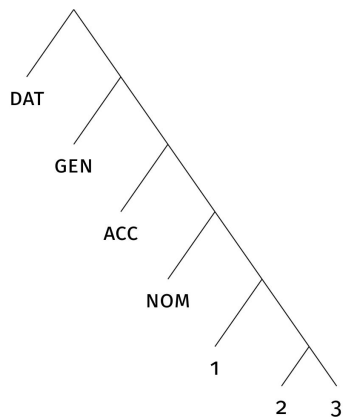
*ban*¹



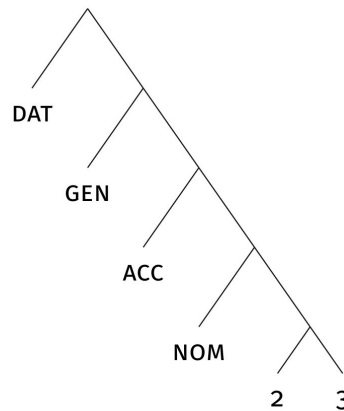
sen



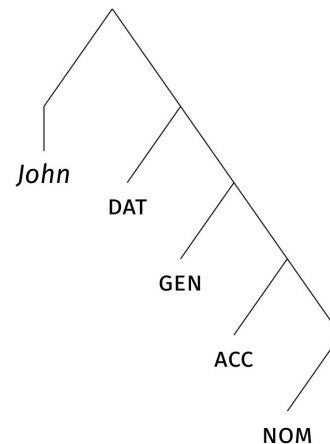
bana



sana



John-a

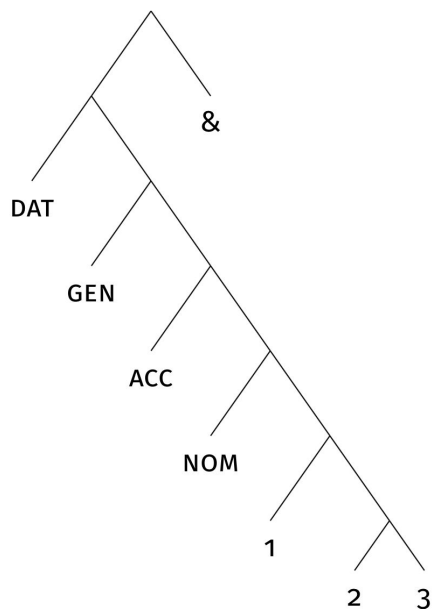


¹See (Wyngaerd, 2018) for the whole discussion.

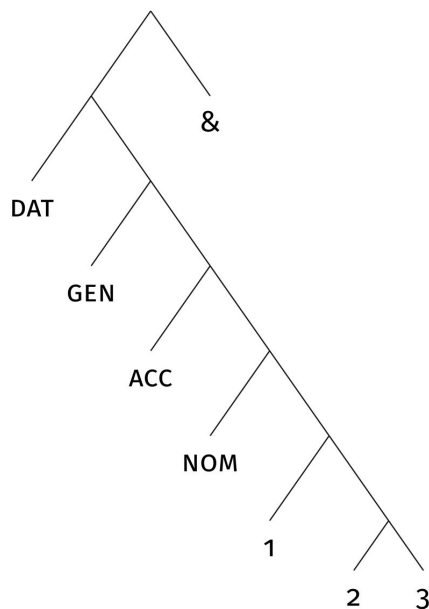
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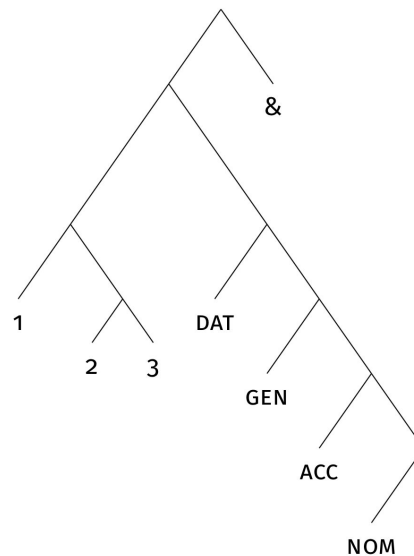
bana ve ✓



bana ve ✗



ban-DAT ve ✓



Interim Summary

- Structure of Turkish SA: $[\beta-\alpha]$ & $[\gamma-\alpha]$
- Case marked pronouns are non-decomposable.
- Vowel Harmony triggers re-analysis of the spell-out of the 1st cordinand.
- Re-analysis is only triggered within the scope of the conjunct.
- If 2nd cordinand is decomposable, SA fails anyway.

Evidences for Phonological Interference

- Labiodental Nasal:

Cross phrase boundary consonant assimilation is extremely rare in Turkish.

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Cross phrase boundary consonant assimilation is extremely rare in Turkish.

/n/ is almost never pronounced as [n], but as [ŋ] in (10).

(10) [Beŋ=ve] John-a ...
I=and J-DAT ...
'... for me and John.'

→ <ve> behaves as if it is a clitic and append itself to the same phonological word.

Evidences for Phonological Interference

- Regressive & Bidirectional Vowel Harmony

When there is a mismatch between phonological and syntactic structure, vowel harmony messes up.

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When there is a mismatch between phonological and syntactic structure, vowel harmony messes up.

Regressive: nɛ aɾi-joɹ-sun? → na aɾi-jo-sun?
 what search-PROG-2SG → what search-PROG-2SG

(Rona, 1986)

Possible Counterpoint

- What about using conjoiners that do not have a front vowel?

(11) %Ben ya=da John-a mektup gel-miş.

I or=EMP J-DAT letter come-PST.EVD

'A letter arrived for me or John.'

Experiment (2x2): Items

(12) a. **No Suspended Affixation, AND (ve)/ OR (ya=da)**

Bana ve/ya=da Olgun'a mektup gel-miş.

I and/or=EMP O-DAT letter come-PST.EVD

'A letter arrived for me_{dat} or/and Olgun.'

b. **Suspended Affixation, AND (ve)/ OR (ya=da)**

Ben ve/ya=da Olgun'a mektup gel-miş.

I and/or=EMP O-DAT letter come-PST.EVD

'A letter arrived for me_{bare} or/and Olgun.'

Experiment: Descriptive Statistics

- Speeded acceptability judgment experiment (N=170) shows that the use of “Ben ya=da...” is less acceptable than “Ben ve...”²

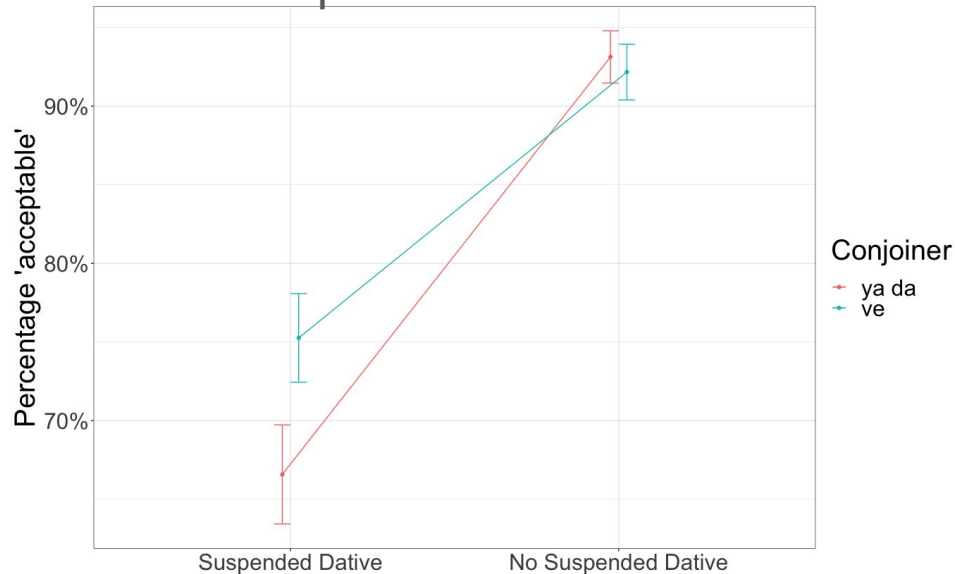


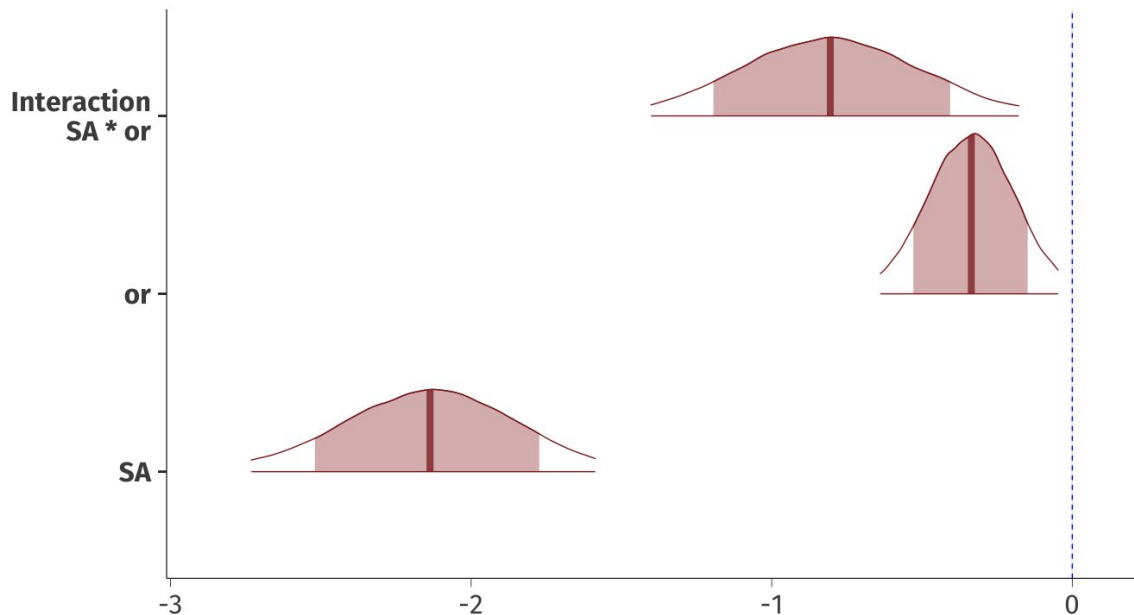
Figure 1. Error bars are standard errors calculated following Cousineau (2005).

¹Experiment and analysis of the experiment can be found online: https://github.com/utkurturk/susp_affix_experiment

Experiment: Bayesian Inference

- Bayesian Maximal Hierarchical Model (Barr et al., 2013)

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yes ~ SA*or + (SA*or | subj ) + (SA*or | item)
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Conclusions

- Turkish SA involves phonological re-analysis of the 1st coordinate.
- Combined with Nanosyntax, modified version of the Guseva & Weisser (2017) covers the both grammatical and ungrammatical observations.
- Phonological and experimental data suggest that conjunctors “*ve*” and “*ya da*” behave slightly differently.

Thank you!

Questions?

Contact: utku.turk@boun.edu.tr | www.utkuturk.com

Selected References

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