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■ Not everything should be put into the morphology

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- Clitics: are they part of the morphology?

Urdu Ezafe



Introduction

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- Clitics: are they part of the morphology?
- Huge discussion about architectural questions and terminology: phrasal affixes vs. clitics



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- The expressions of possession in Urdu are clitics



Introduction

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Architecture

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Urdu Ezafe



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Ezafe

sher=e punjaab lion.M=Ezafe Punjab.Nom 'The Lion of Punjab'



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Urdu Ezafe

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- We here give a short overview over the Genitive (as the "normal" construction), but focus mainly on *Ezafe*.
- Our main concern is with the interplay of morphology, syntax and prosody and sorting through architectural assumptions made by others (vs. ourselves).
- Main Question: Should Ezafe be analysed as part of morphology ("phrasal affix" as proposed in HPSG) or rather as a clitic, triggering an interaction of prosody and syntax?



The Genitive

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Genitive Agreement

paakistaan=kii hukuumat

Pakistan.M=Gen.F.Sg government.Nom.F.Sg

'Pakistan's government'



Structural Representation

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- Even though the genitive *k* is unique in Urdu among the case markers because it inflects, it patterns with the other case markers in all other respects.
- Butt and King (2004) argue that case markers in Urdu (including the genitive) should be analyzed as case clitics (not postpositions).
- Since clitics are independent functional items as far as the syntax is concerned (they are "little words"), Butt and King (2004) accord case markers their own terminal node.

Structural Representation of Case

→ Case markers are functional heads of a KP (Butt and King 2004):

KP --> NP[obl] K (General Schema)



Architecture

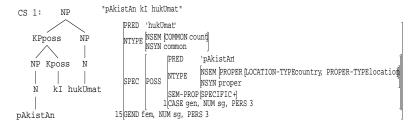
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Clitics and Phrasal Affixes

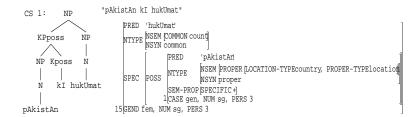
→ Specialized Rule for Genitive (Structures from the Urdu ParGram Grammar):



```
"pAkistAn kI hukUmat"
CS 1:
           NP
                                  'hukUmat'
                            PRED
                                  NSEM [COMMON count]
NSYN common
    KPposs
                NP
                            NTYPE
                                         PRED
                                                  'pAkistAn
   NP Kposs
                                                  NSEM PROPER LOCATION-TYPEcountry, PROPER-TYPElocation
                            SPEC
                                  POSS
                                                  NSYN proper
         kI hukUmat
                                         SEM-PROP SPECIFIC+
                                        1 CASE gen, NUM sq, PERS 3
pAkistAn
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Urdu Ezafe - phrasal affix or clitic?

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General idea: functional heads (like other "little words") can be clitics.



Structural Representation of Case II



- General idea: functional heads (like other "little words") can be clitics.
- → Note that the prosody and syntax here do not contradict each other: kii shares a mother node with the modifier, which is also its prosodic host.



Case Markers are Clitics

Evidence supporting the analysis that case markers are clitics (Butt and King 2004):



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- **3 Stress:** Case markers do not carry stress and do not affect the placement of stress while affixes may.



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 - (2) sadaa=e buland voice=Ez high 'a high voice'



The Problem of Representation

Compare the *Ezafe*-construction in (a) to the genitive in (b):

a) hukuumat=e paakistaan government=Ez Pakistan 'Government of Pakistan'

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- → **Problem**: The *Ezafe* is part of the modifying construction it licenses the modifier paakistaan. This should be expressed within the **syntax**. However, **prosodically**, the *Ezafe* is part of the head noun hukuumat.



Is it part of the noun morphology?

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Urdu Ezafe



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- Is it part of the noun morphology?
- Is it a clitic like the case markers in Urdu?
- If it is a clitc, where do clitics in LFG "come in"?
- How would we represent a construction like that and cover **all** its morpho-syntactic and prosodic aspects?



Samvelian's Analysis

Samvelian (2007) analyzes the Persian *Ezafe* as a "Phrasal Affix":



Urdu Ezafe - phrasal affix or clitic?

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- The *Ezafe* is introduced in the **morphology** and marks the noun as expecting a modifier.
- Its phrasal placement is effected by an EDGE constraint.



Urdu Ezafe is a clitic

Our Analyis: Ezafe is a clitic

→ like the case clitics it can have scope over coordination.



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- → like the case clitics it can have scope over coordination.
- → Coordination with Ezafe

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[ye maal or daulat]=e dunyaa
this material and wealth=Ez world
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→ Coordination with Case

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- → Coordination with Case [maal or daulat]=ko kumaa-o material and wealth=Acc earn-Imp.Rude 'Earn/gather material and wealth!'
- → The *Fzafe* attaches to constituents rather than words.



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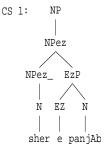


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 - So how should/can this be represented?
- → LFG with its modular projection architecture allows for a thorough analysis without engendering a need to generate clitics within the morphology (as in HPSG).

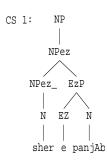


Syntax — the C(onstitutent)-structure





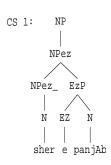
Urdu Ezafe - phrasal affix or clitic?



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Clitics and Phrasal Affixes

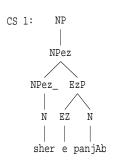
Intro



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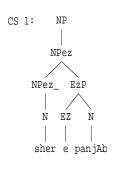
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- The *Fzafe* is inserted at a terminal node and is thus analyzed as a syntactic word in its own right: EZ
- It licences a modifier to its right: panjAb 'Punjab'
- Together, they form the modifying constituent for the head noun fer.



Syntax — the F(unctional)-structure

```
"sher e panjAb"
      PRED
            'sher'
                     'panjAb
      MOD
            30 GEND masc, MOD-TYPE ezafe, NUM sg, PERS 3
      CHECK [ EZAFE +]
    1 GEND masc, NUM sq. PERS 3
```

Clitics and Phrasal Affixes

■ LFG's f(unctional)-structure abstracts away from surface position and constituency and models functional information and dependencies.



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- LFG's f(unctional)-structure abstracts away from surface position and constituency and models functional information and dependencies.
- At f-structure, fer is clearly the head of the phrase.
- paniAb is the modifier of the head noun.
- The type of modification is registered as being of the *Ezafe* type: MOD-TYPE ezafe.

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- LFG's projection architeure allows for other types of linguistic representations as well. Some that have been argued for: a(rgument)-structure, i(nformation)-structure, p(rosodic)-structure (Butt and King 1998).
- For *Ezafe*, we have experimented with p(rosodic)-structure following proposals as to the prosodic hierarchy as formulated within Prosodic Phonology (e.g., Selkirk 1984).

At p-structure the *Ezafe* is not represented as an independent p(rosodic)-word.



- At p-structure the *Ezafe* is not represented as an independent p(rosodic)-word.
- Rather, it is encoded via the feature CL-FORM.



$$\left\{ \begin{bmatrix} 83 \left\{-1 \text{[CL-FORMezafe, DOMAIN P-WORD, P-FORM sheif]} \right\} \\ 129 \left\{-2 \text{[DOMAIN P-WORD, P-FORM panjak]} \right\} \\ 135 \text{[131 DOMAIN P-PHRASE} \end{bmatrix} \right\}$$

- At p-structure the Ezafe is not represented as an independent p(rosodic)-word.
- Rather, it is encoded via the feature CL-FORM.
- The CL-FORM *Ezafe* is clearly integrated into the domain of a p-word fer at p-structure, although it syntactically shares a mother node with paniAb at c-structure.



Prosody — the P(rosodic)-structure

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- Rather, it is encoded via the feature CL-FORM.
- The CL-FORM *Ezafe* is clearly integrated into the domain of a p-word *fer* at p-structure, although it syntactically shares a mother node with *panjAb* at c-structure.
- The morphological component was not involved in the analysis in any form with respect to *Ezafe*.



Demo/Example of an Coordinated Structure with Ezafe



Urdu Ezafe - phrasal affix or clitic?

Conclusion

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- Instead, an interaction between **Prosody** and **Syntax** accounts for the properties of Urdu *Ezafe* (and Persian *Ezafe* as well).



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- There is no need to generate clitics within the morphological component.
- Instead, an interaction between Prosody and Syntax accounts for the properties of Urdu Ezafe (and Persian Ezafe as well).
- We have not explicitly demonstrated how to deal with Second Position clitics or other types of special clitics, but the basic approach would be the same as illustrated here.





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