

Implications of Feature Realization in Hindi-Urdu Copular Sentences

Bejar & Kahnemuyipour (2017) and Keine, Wagner & Coon (2018) have documented the existence of person hierarchy effects in copular sentences in Eastern Armenian and German respectively. We investigate copular sentences in Hindi-Urdu where we find hierarchy effects similar to the ones identified for German. We show that the distribution of the hierarchy effects in Hindi-Urdu is sensitive to not just the hierarchy but also the realization of the agreement. In particular, person hierarchy effects disappear/weaken in the past tense which in Hindi-Urdu does not encode person. Person hierarchy effects are also weakened in environments such as gapping and right node raising if the elliptical process in question allows for the offending agreeing head to go unrealized. Our analysis utilizes Coon & Keine's Feature Gluttony system.

HIERARCHY EFFECTS: With Bejar & Kahnemuyipour (2017) and Keine, Wagner & Coon (2018), we focus on assumed identity sentences. Person hierarchy effects surface in assumed identity sentences. In these sentences, the subject DP takes on the role of the DP in the predicate and agreement goes with the subject: in (1, 2), *I/you* take on the role of *Ramesh* and agreement is with *I/you*. But if we want to convey that *Ramesh* has taken on *my/your* role, we cannot use copular sentences, (3, 4).

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|---|---|
| <p>(1) aaj=se mĒ ramesh hū:
 Today-from I Ramesh be.Prs.1Sg
 'From today onwards, I am Ramesh.'</p> | <p>(3) * ramesh mĒ hE/hū:
 Ramesh I be.Prs.3Sg/be.Prs.1Sg
 intended: 'Ramesh is me.'</p> |
| <p>(2) aaj=se tum ramesh ho
 Today-from you.Pl Ramesh be.Prs.2Pl
 'From today onwards, you are Ramesh.'</p> | <p>(4) * ramesh tum hE/ho
 Ramesh you.Pl be.Prs.3Sg/be.Prs.2Pl
 intended: 'Ramesh is you.'</p> |

Note that the choice of agreement will not save sentences such as (3, 4) under the intended interpretation: the structure is simply ineffable. Furthermore, the strings themselves are grammatical with first or second person agreement but with the interpretation where *I/you* take on the role of *Ramesh*. The unacceptable patterns are schematized below, 5. Crucially, 1/2 features on DP₂ block agreement with DP₁ even though DP₂ does not intervene between T and DP₁.

- (5) a. *... T [_{PredP} DP₁[3] [Pred DP₂[1]]] b. *... T [_{PredP} DP₁[3] [Pred DP₂[2]]]

Person hierarchy effects do not arise in 1>2 and 2>1 contexts or in 3>3 contexts.

EFFECTS OF REALIZATION: Person hierarchy effects disappear in the past tense.

- (6) us din mĒ ramesh tha: aur ramesh mĒ tha:
 that day I Ramesh be.Pst.MSg and Ramesh I be.Pst.MSg
 'That day I was Ramesh and Ramesh was me.'

We believe that this is so because in the past tense, the person distinction is neutralized. The past agreement paradigm in contrast to the present agreement paradigm does not involve person agreement.

Hierarchy effects also disappear if the offending verb is left unpronounced. We show this with gapping, (7), though the same pattern also holds for right-node raising.

- (7) aaj=se mĒ Ravi hū: aur Ravi mĒ.
 today=from I Ravi be.Prs.1Sg and Ravi I
 'From today, I and Ravi and Ravi is me.'

ANALYSIS: We use the Coon & Keine (2018) system of 'Feature Gluttony'. The insight is that in certain

structural configurations, one head can end up with too many features. The morphological realization of these features can in certain circumstances be impossible resulting in ungrammaticality. To apply this system to Hindi-Urdu, we propose that: Finite T looks for **participant** person features (1st and 2nd person). There are three sets of cases: (Participant > Participant/3), (3 > 3) and (3 > Participant).

- (8) **Participant>Participant/3**: T's need for participant person features is satisfied by the closest DP; the features of DP₂ do not get copied on to T.

- a. ... T[Present][1] [_{PredP} DP₁[1] [Pred DP₂[3]]]
- b. ... T[Present][2] [_{PredP} DP₁[2] [Pred DP₂[3]]]
- c. ... T[Present][1] [_{PredP} DP₁[1] [Pred DP₂[2]]]
- d. ... T[Present][2] [_{PredP} DP₁[2] [Pred DP₂[1]]]

T only has one set of features to realize, the features of the subject, which it does.

- (9) **3>3**: ... T[Pres][3] [_{PredP} DP₁[3] [Pred DP₂[3]]]

T ends up with two sets of 3rd person features; but these are treated as non-distinct and realized as regular 3rd person agreement.

- (10) **3>Participant**: T's need for participant person features is not satisfied by DP₁. But features of DP₁ are copied to T.

Then T copies the features of DP₂ which has participant person features.

- a. *... T[Present][1/3] [_{PredP} DP₁[3] [Pred DP₂[1]]]
- b. *... T[Present][2/3] [_{PredP} DP₁[3] [Pred DP₂[2]]]

T now has two sets of features to realize, the features of DP₁ and the features of DP₂, but no exponent that will allow it to do so. This leads to ill-formedness.

GIVING REALIZATION A ROLE: Note that Feature Gluttony is not in and of itself fatal. When multiple features can be realized together or when they don't need to be realized at all, there is no ungrammaticality.

- (11) Situations where multiple features on T don't lead to ungrammaticality:

- a. Hindi-Urdu past tense copula: person contrasts are not morphologically realized, *no problem*
- b. Hindi-Urdu gapping/right node raising: the copula does not get realized overtly, *no problem*

WHY MULTIPLE FEATURES? Why does T come to have multiple features in these copular sentences? In regular transitive sentences in Hindi-Urdu, T only agrees with the subject. We don't have a full answer to this *why* question but we can demonstrate that T is involved in the licensing of the non-subject DP argument of a copula: the counterpart of 'it is bad for him to be me' is ungrammatical in Hindi-Urdu, while the counterpart of 'it is bad for him to hit me' is well-formed. We relate the badness of the copular structure in (12) to the need of pronouns to be licensed by a head: in a copular infinitival structure, T is unavailable and *be* is unable to license the 1st person pronoun leading to ill-formedness.

- (12) [us=ka: *mẽ ho-na:/ mujhe ma:r-na:] bura: hai
s/he=Gen I be-Inf/ me.Dom hit-Inf bad is
'It is bad for him to be me/hit me.'