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Impoverishment as feature deletion: Dual and plural agreement in Sámi*

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1. Introduction

Bonet 1995 provides an account of neutralizations in the pronominal clitic system of various Romance languages, that crucially relies on the possibility of deleting morphological features prior to lexical insertion (cf. Halle & Marantz 1993). Bonet accomplishes this by positing that "pronominal clitics constitute hierarchical structures of unordered morphological features" (p. 614), in the same way as is familiar from phonology. Under this view, neutralizations, or impoverishments, are the result of rules that delink features from these representations. Spanish spurious *se* provides an illustration, (1). As shown in (2), spurious *se* can be accounted for by assuming that the features representing third person dative of the dative clitic are deleted when co-occurring with an accusative clitic, (2). Now, the feature specification of the elsewhere clitic *se* matches the structure created in (2), hence preventing insertion of *le*.

(1) a. A Pedro, el premio, se lo dieron. (Bonet 1995:632)
to Pedro the price se 3rd-acc gave(3rd-pl)
'They gave the price to Pedro.'

b. *A Pedro, el premio, le lo dieron. (Bonet 1995:632)
to Pedro the price 3rd-dat 3rd-acc gave(3rd-pl)

Noyer 1998 challenges Bonet's approach to impoverishment, by claiming that deletion rules like the one illustrated in (2) are insufficient. In a study of Nimboran duals and plurals, Noyer proposes that in order to capture neutralization of dual to plural, a persistent redundancy rule is required, that spells out [–singular] as [+plural] in cases where a [–plural] feature has been

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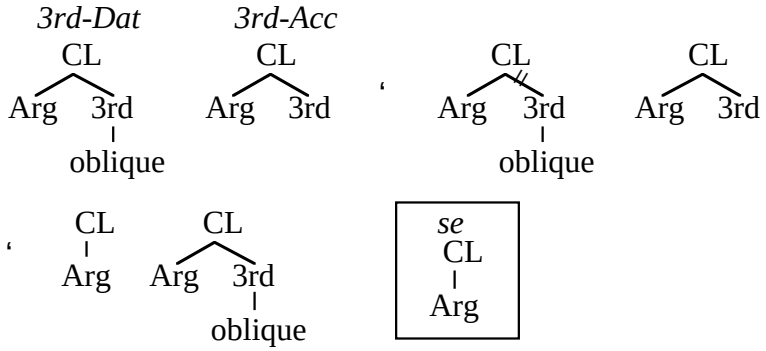


deleted from an original feature matrix like (3). Informally speaking, dual is represented as in (3a), whereupon an impoverishment rule (3b) deletes [-plural]. In order to obtain [+plural], the redundancy rule (3c) spells out the unmarked value of [–singular], which is [+plural].

(3) a. dual: [–singular, –plural]
b. Impoverishment: [–plural] ➔ Ø
c. Redundancy Rule: [–singular] ➔ [+plural]

In this squib, it will be shown that the feature deleting approach proposed by Bonet can be maintained, and still capture Noyer's insight that impoverishment is limited to moving from the marked to the unmarked. I will discuss three cases of impoverishment in Sámi, all of which involve neutralization of dual verb forms. I will show that delinking and deletion can capture the phenomena, by adopting the feature geometry of Ritter & Harley 1998.

2. Case 1: Northern Sámi duals and plurals

All Sámi dialects display dual agreement between a dual subject and the finite verb (cf. Bergsland 1994, Nickel 1994 and Spiik 1989). However, dual agreement is confined to instances where the subject is definite and animate. Consider the Northern Sámi examples in (4) and (5). Both sentences in (4) involve a definite animate subject, and as the contrast between (4a) and (4b) shows, the verb must appear with dual marking. Hence the ill-formedness of (4b), where the verb appears in the plural.

(4) a Dat guokte mánat boahtiba deike.
those two children.Nom come.Prs.Du here
'Those two children come here.'

b *Dat guokte mánat bohte deike.
those two children.Nom come.Prs.Pl here
'Those two children come here.'

Turning to (5) where the subject in each sentence is indefinite, we find that the facts are exactly the reverse in comparison to (4). Now the verb can not appear with dual morphology, (5a), but must occur in the plural, (5b). Nevertheless, sentence (5b) has a dual interpretation, forced by the existence of the numeral quantifier *guokte* 'two'. In example (5c), on the other hand, no numeral quantifier is found, but the sentence can be ambiguous, given an appropriate context. The sentence is felicitous under a dual interpretation in a scenario where the speaker sees two children approaching.[2] In other words, a dual interpretation is not excluded, in spite of the lack of dual agreement morphology.

(5) a *Guokte mánat boahtiba deike.
two children.Nom come.Prs.Du here
'Two children come here.'

b Guokte mánat bohte deike.
two children.Nom come.Prs.Pl here
'Two children come here.'

c Mánat bohte deike.
children.Nom come.Prs.Pl here
'(Two) children come here.'

These facts show some resemblance to Nimboran, as discussed in Noyer 1998. In Nimboran, a special affix *tam* (durative) blocks the insertion of the dual marker, forcing the plural marker to occur in these cases. However, the sentence in (6) is ambiguous between a plural and dual interpretation, unlike (5b), but like (5c):

(6) Ngedói-i̯-tam-t-u (Noyer 1998:274)
draw-pl-dur-prs-1
'We (dual, plural) are drawing'

But if the durative marker does not occur, no such ambiguity arises, as shown in (7). (7a) and (7b) must be interpreted as dual and plural respectively:

(7) a Ngedóu-k-d-u (Noyer 1998:273)
draw-[-sg]-FU-1
'We (dual) will draw (here)'

[2]Notice that dual agreement is also allowed if the the subject is interpreted as definite, as in (i). Here we assume that the numeral *guokte* 'two' is dropped, perhaps for discourse reasons.

(i) Mánát boahtiba deike.
children.Nom come.Prs.Du here
'The two children are coming here'

b Ngedói-i-d-u (Noyer 1998:273)
draw-pl-FU-1
'We (plural) will draw (here)'

As mentioned in the introduction, Noyer's account relies on dual having the specification [–singular, –plural]. The claim is that whichever feature is deleted, we do not obtain [+plural]. Hence Noyer concludes that mere feature-deleting rules are insufficient, but must be accompanied by feature-inserting rules as well, as was shown in (3).

Although we will not attempt to propose an alternative analysis for Nimboran (since the facts are more complex than illustrated in (6) and (7)), we will show that the morphological output in (5) can be accounted for along the lines of Bonet 1991, by utilizing the feature geometry proposed by Ritter & Harley 1998. These means enable us to capture the fact that impoverishment targets the unmarked, without invoking a more complex machinery with feature inserting rules. Indeed, Noyer himself (1998:283) expresses that his "hope remains that continued and careful examination […] will show that neutralizations are in fact universally feature-erasing operations, validating the original insight of Bonet (1991)."

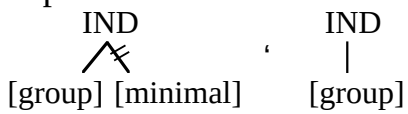
Ritter & Harley 1998 proposes a morphological feature geometry, that captures number distinctions as shown in (8). The Individuation node and its dependents [group] and [minimal] express number distinctions. The presence of [group] signals plural and the absence of [group] equals singular. [minimal] is a secondary enhancing feature that modifies [group], hence equaling dual. It follows then that [minimal] can only occur if [group] is present.

(8)

Singular	*Plural*	*Dual*
INDIVIDUATION	Individuation	Individuation
	|	2
	[group]	[group] [minimal]

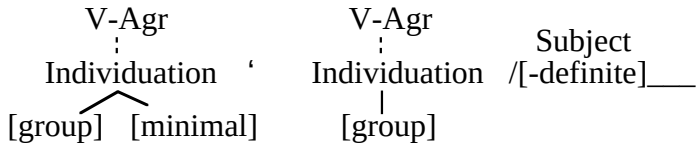
Now, the intuition behind Noyer's generalization can easily be captured as a feature deleting rule, rather than a feature changing rule: Impoverishment in Sámi involves delinking of the feature [minimal], as shown in (9), which we also assume involves Stray Erasure (Bonet 1995:633). The feature geometric expression of dual captures the markedness of this form in comparison to plural by requiring a higher complexity of feature combinations. Plural, on the other hand, is represented by less features, and therefore is less marked (Ritter & Harley 1998: 4). Now, the delinking operation in (9) has the effect of taking us from the marked to unmarked, a highly desired result, given Noyer's generalization.

(9) Impoverishment



Let us now return to the Northern Sámi examples in (5), where some kind of neutralization is forced to take place. We will assume that if a subject is non-specific, then the following rule applies, where delinking and feature deletion applies when the verb occurs in a context with a non-specific subject.

(10)



(10) should be considered part of a wider phenomenon[3], involving the interpretation of definite vs. indefinite subjects. It has been claimed by a number of linguists (cf. Diesing 1992, Bobaljik 1995 etc.) that indefinites are interpreted in different syntactic positions than definites. For reasons of space we will defer a discussion to a later opportunity. This particular issue is itself a paper topic.

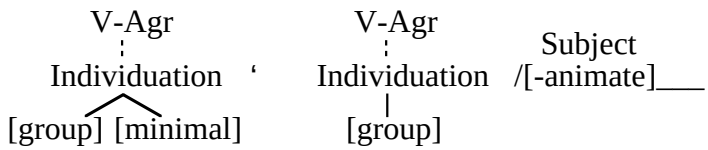
Dual impoverishment, i.e. delinking, also applies when the subject is inanimate, as seen the following examples:

(11) a *Gákti ja boagán leaba gárvanát.
coat.Nom and belt.Nom be.3Du.Prs completed
‘The coat and the belt are ready.’

b Gákti ja boagán leat gárvanát.
coat.Nom and belt.Nom be.3Pl.Prs completed
‘The coat and the belt are ready.’

Hence, we can construct another rule which says that the secondary enhancing feature [minimal] of the finite verb is delinked and deleted, if the subject is inanimate:

(12)



[3]We leave the question open whether the [–definite] would be better captured as the lack of a feature [definite] or not.

According Bergsland 1994 and Spiik 1989, similar facts hold in Southern Sámi as well as in Lule Sámi. That is, in order for dual agreement to be triggered, the subject must be definite and animate.

However, the contexts for the rules (10) and (12) appear to be fairly arbitrary, in spite of the empirical similarities of the phenomena that they capture. The rules simply state that impoverishment occurs in some special context, but they do not give us any clue as to why this would happen in the first place. It is of course not surprising to find idiosyncrasies, in particular in relation to duals. This, however, does not preclude a principled account. We may assume a language particular redundancy rule, which states that the enhancing feature [minimal] in Sámi implies [+definite] and [+animate]:[4]

(13) [minimal] ➔ [+definite], [+animate]

Hence, the presence of [minimal] entails the existence of definiteness as well as animacy. Thus we conclude that the rules (10) and (12) are forced to apply in order to avoid feature mismatches.

3. Case 2: Impoverishment in Lule Sámi

Let us now turn to a second case of morphological impoverishment in duals, which can be captured by some version of the delinking hypothesis. In the past tense, verbs in Lule Sámi make no distinction between dual and plural for the first and second persons, as shown in (14).

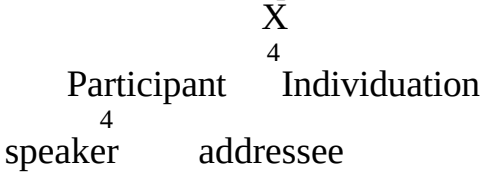
(14) *Past Tense Paradigm for Lule Sámi. bårrat* 'eat.infinitive' (Spiik 1989)

Pers	*Sg*	*Dual*	*Plural*
1	bårriv	**båråjma**	
2	bårri	**båråjda**	
3	båråj	bårråjga	bårrin

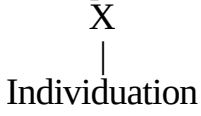
First of all we should notice that 3rd person is the odd man out in (14), and this gives us reason to briefly consider Ritter & Harley's 1998 treatment of person distinctions. Based on a wide range of cross-linguistic facts, Ritter & Harley 1998:5-6 suggest that 1st and 2nd person are encoded in a Participant node, as shown in (15a). Third person, on the other hand is expressed by the absence of Participant, (15b).

[4]Altough this means that we take recourse to feature inserting rules, (13) is crucially not a feature changing rule.

(15) a *1st and 2nd person*

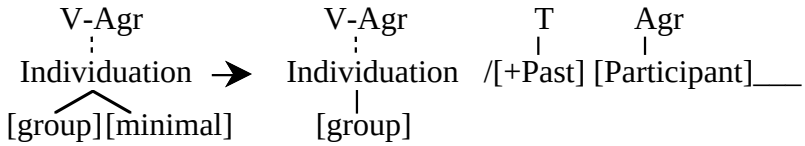


b *3rd person*



Given the feature geometry of Ritter & Harley 1998, it is expected that first and second persons should behave as a natural class, both being dependents of the participant node. For instance, the participant node implies animacy for personal pronouns (i.e. first and second pronouns are inherently animate), while pronouns that lack the participant node, i.e. third person pronouns, can be either animate or inanimate. (For further evidence for Participant as a natural class, see Ritter & Harley 1998). Now, (14) can potentially also be interpreted as consequence of the Participant node. In particular, it appears that Participant is incompatible with past tense and dual. If this is correct, then we have another case where a version of the dual impoverishment rule is at work. As stated in (16), the secondary enhancing feature [minimal] delinks in the context of [+past] and [Participant].

(16)



For the time being, I have no explicit answer to the question why (16) should hold. While it is not unusual in languages that tense affixes compete with number affixes for lexical insertion, as in English past tense forms, it is not obvious that arguments for English carry over to Lule Sámi. Clearly, more research need to be done, and for the time being I leave (16) as an idiosyncratic rule. The crucial point, however, is the fact that a feature deleting rule is arguably active in (14).

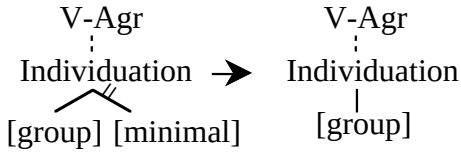
4. Case 3: Language change as feature deletion

A third phenomenon, which can be captured by means of the delinking hypothesis, is discussed in Svonni 1992, namely the loss of dual morphology in Northern Sámi. In his pilot study of young native speakers of Sámi, Svonni notices not only a sharp decline in the usage of dual verb forms, but several speakers also lack them entirely. Thus, this ongoing language change has resulted in many speakers' accepting sentences like (17).

(17) Dat guokte mánat bohte deike. (cf (4b))
those two children.Nom come.Prs.Pl here
'Those two children come here.'

Also, for many speakers, either plural or dual may occur in (17). Svonni (p.c.) notices that among these speakers, duals also occur in constructions with indefinite and/or inanimate subjects. Although a discussion concerning the actual triggers for this language change is more a matter for a sociolinguistic investigation[5], the crucial point is that we can *capture* the change by means of the delinking hypothesis. That is, what is going on is simply the loss of the enhancing feature [minimal], as shown in (18):

(18)



Again, in this particular instance of language change, we find that Noyer's generalization holds. The change targets a marked form and reduces it to an unmarked form.

5. Conclusions

In this squib I have argued against Noyer's 1998 claim that impoverishment in duals involve feature changing, and in support of Bonet 1995 who have proposed that impoverishment is feature delinking/deletion. By adopting Ritter & Harley's 1998 feature geometry, I have shown that Noyer's generalization that impoverishment targets the unmarked can not only be maintained but also elegantly captured by feature deletion/delinking.

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[5]It seems likely that influence from the Scandinavian languages and Finnish, which all lack dual forms, is a highly contributing factor.

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