

# CASE AND AGREEMENT AS DEPENDENT MARKING

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## 1. Head marking vs. dependent marking (Nichols 1986, 1992)

CONSTRUCTION	HEAD	DEPENDENT
<i>possessive</i>	possessum	possessor
<i>attributive</i>	noun	adjective
<i>adpositional</i>	adposition	complement
<i>clausal</i>	verb	arguments

TABLE 1

### (1) *possessive*

	DEPENDENT	HEAD	
a.	<b>az ember</b> the man 'the man's house'	<b>haz-a</b> house-3SG	Hungarian
b.	<b>the man's</b>	<b>house</b>	English

### (2) *attributive*

	DEPENDENT	HEAD	
a.	<b>wist</b> high 'tall house'	<b>t-citx°</b> REL-house	Shuswap
b.	<b>zelen-yj</b> green-NOM.MASC.SG 'green house'	<b>dom</b> house <sub>MASC</sub>	Russian

### (3) *adpositional*

	HEAD	DEPENDENT	
a.	<b>bez</b> without	<b>brat-a</b> brother-GEN	Russian
b.	<b>r-umaal</b> 3SG-by 'by Yaax'	<b>aa Yaax</b> CL Yaax	Tz'utujil

### (4) *clausal*

	.....DEPENDENTS.....	HEAD	
a.	<b>a-xàc'a a-pñ°ès a-š°q'è</b> the-man the-woman the-book	<b>ə-l è-y-te-yt'</b> it-to.her-he-gave-FIN	Abkhaz
	'The man gave the woman the book.'		
b.	<b>boku-ga tomodati-ni hana-o ageta</b> 1SG-NOM friend-DAT flower-OBJ gave		Japanese
	'I gave my friend flowers.'		

### (5) *Phrase structural definition of dependency (Nichols 1986:57)*

- a head determines the presence and properties of other material within the phrase (selection)
- a head determines the features of the phrase as a whole (projection)

## 2. The expression of dependency

- (6) Dependency is which must be can be and
- |                                     |                     |
|-------------------------------------|---------------------|
| a. a <i>semantic</i> relation       | e.g. predication    |
| b. <i>syntactically</i> realized,   | in phrase structure |
| c. <i>morphologically</i> marked,   | by agreement        |
| d. <i>phonologically</i> expressed. | via cliticization   |

- (7) The relations  $((SEM \rightarrow SYN) \rightarrow MORPH) \rightarrow PHON$  need not be homomorphic.

### I SEM $\rightarrow$ SYN

- (8) a. 

	<i>subject</i>	<i>predicate</i>			
	<b>Jij</b>	<b>eet vlees</b>		[NP]	[VP]
	you	eat meat			

 Dutch
- b. **Eet jij vlees ?** [V] [NP] [NP]  
'Do you eat meat?'

### II ((SEM $\rightarrow$ SYN) $\rightarrow$ MORPH)

- (9) 

	<i>verb</i>	<i>complement.....</i>	
<b>Ich</b>	<b>liebe</b>	<b>mein-en</b>	<b>Gartenzwerg</b>
I	love:1SG	my-ACC.SG	garden-gnome

 German  
'I love my garden gnome.'

- (10) *incomplete dependency marking (standard)*  
A dependency relation between  $\alpha$  and  $\beta$  may be marked on  $\gamma$ , a term of  $\beta$

- (11) *dependent head-marking*  
A dependency relation between  $\alpha$  and  $\beta$  may be marked on  $\gamma$ , the head of  $\beta$

- (12) A marking on a head does not signify head marking

### III (((SEM $\rightarrow$ SYN) $\rightarrow$ MORPH) $\rightarrow$ PHON)

- (13) 

<i>head</i>		<i>dependent</i>	
<b>nep'idi-da</b>	<b>gənanəm</b>	<b>xa</b>	<b>guk<sup>w</sup> sa t'isəm</b>
throw-DEIC	child	OBJ	house OBL rock

 Kwakwala  
'The child hit the house with a rock (by throwing).'

- (14) *phonological expression on an outsider (the subject)*  
nep'idi-da **gənanəm=xa** gukw sa t'isəm

- (15) 

<i>head</i>	<i>dependent</i>	
a cup	of coffee	> a cup=of [cuppa] coffee

- (16) cliticization onto a head does not signify head marking

## 3. The nature of subject-verb agreement

- (17) 

<i>semantic relation</i>	predication
<i>syntactic realization</i>	NP, XP
<i>morphological marking</i>	head of XP (unmarked case)

(18) *other morphological markings*

a. *multiple marking*

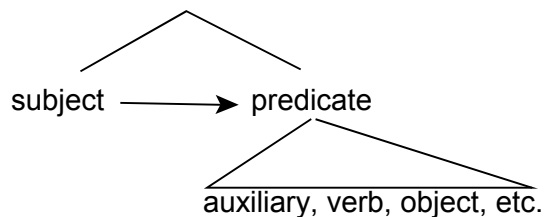
<b>Juma</b>	<b>a-li-kuwa</b>	<b>a-ngali</b>	<b>a-ki-fanya</b>	<b>kazi</b>	Swahili
Juma <sub>1</sub>	1-PAST-be	1-still	1-PROG-do	work	
'Juma was still working.'					

b. *agreement on object*

i.	<b>Dios</b>	<b>tupo'-n</b>	<b>naxo-xt'e'wal</b>	<b>wako'</b>	Coahuilteco
	god	DEM-1AGRS	1PL:SU-annoy	CAUS	
'We annoyed god.'					

ii.	<b>Dios</b>	<b>tupo'-m</b>	<b>xa-ka'wa</b>	<b>xo</b>	<b>e ?</b>
	god	DEM-2AGRS	2SU-love	AUX	Q
'Do you love god?'					

(19)



(20) Relation not between *head-dependent* but between *dependent-nondependent*

(21) Subject-verb agreement is an instantiation of *dependent head-marking* (11).

(22) *Other considerations*

- Consistent dependent-marking languages commonly show subject-verb agreement
- The subject is not directly related to the verb (arguments are—a subject can be any type of argument and even a nonargument)

(23) *Question: how much nondependent-marking is there in the languages of the world?*

#### 4. Review of Nichols' (1986, 1992) observations

##### 4.1 Possessive constructions

(23)	CONSTRUCTION	SEMANTIC RELATION	
a.	<b>Jan's</b> <b>boek</b>	<i>subject-predicate</i>	Dutch
	John-POSS book		

b.	<b>het</b> <b>boek</b> <b>van</b> <b>Jan</b>	<i>head-complement</i>	
	the book of John		

(24)	NONDEPENDENT	DEPENDENT	MARKING	
a.	<b>az</b> <b>ember</b>	<b>haz-a</b>	<i>dependent</i>	Hungarian
	the man	house-3SG		
	'the man's house'			

b.	<b>the</b> <b>man's</b>	<b>house</b>	<i>nondependent?</i>	English
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c.	<b>het</b> <b>boek</b>	<b>van</b> <b>Jan</b>	<i>dependent</i>	Dutch
	the book	of John		

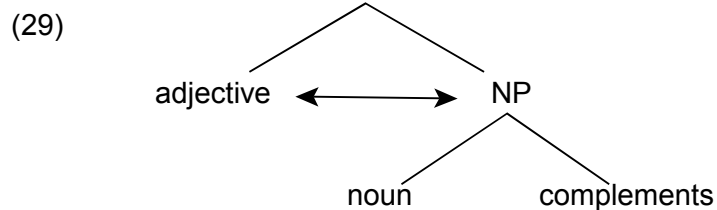
(25)	the man	his house	(cf. Dutch	<i>de man z'n [&lt;zijn] huis</i> )
	the man=	=s house		

- (26) *the izafet construction: dependent marking + cliticization*
- |       | NONDEPENDENT             | DEPENDENT                     | MARKING          |         |
|-------|--------------------------|-------------------------------|------------------|---------|
| a.    | <b>asb=</b><br>horse     | <b>=é mard</b><br>EZ man      | <i>dependent</i> | Persian |
|       | 'the horse of the man'   |                               |                  |         |
| b. i. | <b>ki-tabu</b><br>7-book | <b>ch-a Juma</b><br>7-EZ Juma | <i>dependent</i> | Swahili |
|       | 'the book of Juma'       |                               |                  |         |
| ii.   | <b>vi-tabu</b><br>8-book | <b>vy-a Juma</b><br>8-EZ Juma |                  |         |
|       | 'the books of Juma'      |                               |                  |         |

- (27) *genitive case: unclear*
- |    | NONDEPENDENT                 | DEPENDENT                 | MARKING              |         |
|----|------------------------------|---------------------------|----------------------|---------|
| a. | <b>kniga</b><br>book         | <b>Ivan-a</b><br>Ivan-GEN | <i>dependent?</i>    | Russian |
|    | 'John's book'                |                           |                      |         |
| b. | <b>Ahmeda-n</b><br>Ahmed-GEN | <b>wan</b><br>voice       | <i>nondependent?</i> | Lezgian |
|    | 'Ahmed's voice'              |                           |                      |         |

#### 4.2 Attributive constructions

- (28) the [ new [students of linguistics ] ]



- |    | NONDEPENDENT                         | DEPENDENT                           | MARKING              |         |
|----|--------------------------------------|-------------------------------------|----------------------|---------|
| a. | <b>zelen-yj</b><br>green-NOM.MASC.SG | <b>dom</b><br>house <sub>MASC</sub> | <i>nondependent?</i> | Russian |
|    | 'green house'                        |                                     |                      |         |
| b. | <b>wist</b><br>high                  | <b>t-citx°</b><br>REL-house         | <i>dependent</i>     | Shuswap |
|    | 'tall house'                         |                                     |                      |         |

- |         |                        |                              |  |               |
|---------|------------------------|------------------------------|--|---------------|
| (31) a. | <b>calay</b><br>funny  | <b>a-monit</b><br>REL-person |  | Karbi (Mikir) |
| b.      | <b>monit</b><br>person | <b>calay</b><br>funny        |  |               |

- |         |                              |  |  |       |
|---------|------------------------------|--|--|-------|
| (32) a. | <b>het</b><br>the:NTR.SG.DEF | <b>boek-∅</b><br>book <sub>NTR-SG</sub>  |  | Dutch |
|         | 'the book'                   |  |  |       |
| b.      | <b>de</b><br>the:PL.DEF      | <b>boek-en</b><br>book <sub>NTR-PL</sub> |  |       |
|         | 'the books'                  |  |  |       |

(33) NONDEPENDENT DEPENDENTS.....  
**de** **oud-e boek-en**  
the:PL.DEF old-PL book<sub>NTR</sub>-PL  
'the old books'

(34) Case and number are not inherent features of N, so dependent marking. Gender...?

(35) *the izafet construction*

	NONDEPENDENT	DEPENDENT	MARKING	
a.	<b>küh=</b> mountain 'high mountain'	<b>=e boländ</b> EZ high	<i>dependent</i>	Persian
b.	<b>ki-ti</b> 7-chair 'wooden chair'	<b>ch-a m-ti</b> 7-REL 3-wood	<i>dependent</i>	Swahili

#### 4.3 Adposition constructions

	NONDEPENDENT	DEPENDENT	MARKING	
a.	<b>bez</b> without	<b>brat-a</b> brother-GEN	<i>dependent</i>	Russian
b.	<b>r-umaal</b> 3SG-by 'by Yaax'	<b>aa Yaax</b> CL Yaax	<i>nondependent?</i>	Tz'utujil

(37) 'head marking' adpositions are 'relational nouns' (Nichols 1992:58), marked by possessor agreement

	NONDEPENDENT	DEPENDENT	MARKING	
a.	<b>ja</b> 1SG:OBL 'with me, beside me'	<b>a-płči</b> 1SG-side	<i>dependent</i>	Burushaski
b.	<b>Ląğa Brumo</b> L.B.:NOM 'with Langa Brumo'	<b>mo-płči</b> 3SG-side		

(39) Tz'utujil: a. noun raising ?  
b. dependent precedes nondependent ?

(40) *spurious cases of head-marked adpositions*

a. i.	<b>i'-ma</b> 1SG-for 'for me'	ii. <b>te'-ma</b> 3SG-for 'for him'	iii. <b>pə'le-ma</b> boy-for 'for the boy'	Wappo
b. i.	<b>'ab</b> TOWARD 'toward us'	<b>t-wui</b> 1PL-to	ii. <b>'am</b> AWAY 'toward you'	Papago
c. i.	<b>Waraka</b> Waraka 'I have come from Waraka.'	<b>hyaye k-omok-no</b> from 1SG-come-IMM.PAST		Hixkaryana
ii.	<b>i-hyaye</b> 3SG-from	<b>k-omok-no</b> 1SG-come-IMM.PAST 'I have come from him.'		

## 5. A theory of dependency

- (51) a. head-complement  
 b. subject-predicate NB predicate = the phrase that is the sister to the subject, not V

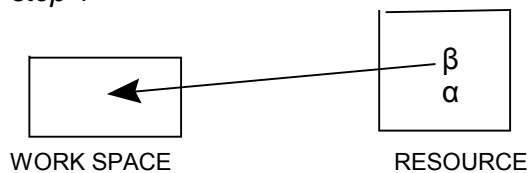
(52) *common property*: sisterhood

(53) *sisterhood is a function of Merge*  
 Merge  $\alpha$  and  $\beta$  yielding  $\gamma = \{\alpha, \beta\}$

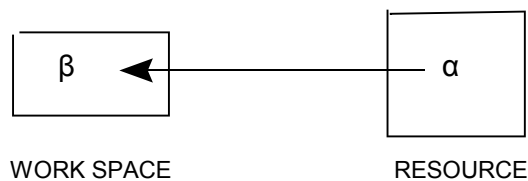
(54) *asymmetry between sisters*  
 a. labeling (Chomsky 1995):  $\{\delta \{\alpha, \beta\}\}$   
 b. ordered pair (Zwart 2003):  $\langle \alpha, \beta \rangle$

(55) Merge transfers elements one at a time from a resource (the pool of elements eligible for inclusion in the derivation) to a work space (the current derivation)

(56) *step 1*



*step 2*



(57) In step 2,  $\alpha$  is new to the derivation,  $\beta$  is the 'elder sister'

(58) *Dependency relations*

- a.  $\alpha$  is in a dependency relation with  $\beta$  iff  $\alpha$  is merged to  $\beta$   
 b. when  $\alpha$  is merged to  $\beta$ ,  $\beta$  is the dependent of  $\alpha$  ( $\alpha$  is the 'nondependent')

(59) *The core dependency relations*

- a. head-complement: the complement is the dependent of the head  
 b. subject-predicate: the predicate is the dependent of the subject

	SUBJECT/HEAD		PREDICATE/COMPLEMENT	
<i>prosody</i>	weak	( $\sqrt{\text{subject}}/\sqrt{\text{head}}$ )	strong	( $\sqrt{\text{predicate}}/\sqrt{\text{complement}}$ )
<i>order</i>	'left'	( $\sqrt{\text{subject}}/?\text{head}$ )	'right'	( $\sqrt{\text{predicate}}/?\text{complement}$ )
<i>merge</i>	new	( $\sqrt{\text{subject}}/?\text{head}$ )	old	( $\sqrt{\text{predicate}}/?\text{complement}$ )
<i>dependency</i>	nondependent	( $? \text{subject}/\sqrt{\text{head}}$ )	dependent	( $? \text{predicate}/\sqrt{\text{complement}}$ )

TABLE 2

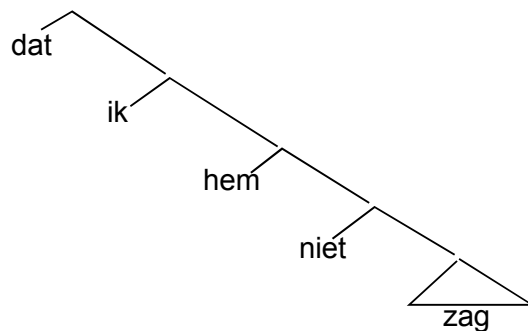
## 6. Case

(60) *Object is not a direct dependent of the verb in many cases:*

**..dat ik hem niet zag**  
 that 1SG:NOM 3SG:MASC:OBJ not saw  
 ‘..that I did not see him’

(Dutch)

(61)



(62) Objective case is the marking of the predicate’s dependency of the subject on a (grammatical function expressing) noun phrase contained within the predicate (i.e. dependent-marking)

(63) opposition NOMINATIVE (unmarked, null case) — OBJECTIVE (marked, dependent case) as in Jakobson 1935, except that the object is not dependent of the verb, but (in a way) of the subject

a. *ergativity*

(64) the opposition in (63) is absent in ergative languages, where the ergative subject is marked with inherent case (instrumental, possessive, etc.; cf. Nash 1995)

(65) ergative case-marking: the object surfaces in the unmarked case (object case cannot be used to mark the dependency of the predicate w.r.t. the subject)

(66) *ergative case combined with subject-verb agreement*

a. **ngaju ka-rna wangka-mi**  
 I:ABS AUX:PRES-1SG:SU speak-NONPAST  
 ‘I am speaking.’

Warlpiri

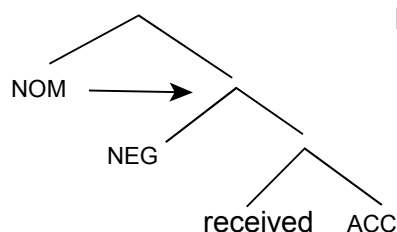
b. **ngajulu-rlu ka-rna-ngku nyuntu nya-nyi**  
 I-ERG AUX:PRES-1SG-2OB you:ABS see-NONPAST  
 ‘I see you.’

b. *genitive of negation*

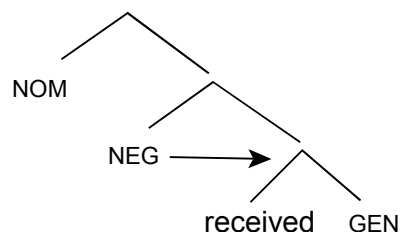
(67) **ja ne polučal pis'ma / pisem**  
 I:NOM NEG received letter:ACC.PL / GEN.PL  
 ‘I didn’t receive any letters.’

Russian

(68) a.



b.



### c. microparametric variation

SUBJECT-PREDICATE DEPENDENCY	MARKED ON VERB	MARKED ON OBJECT
<i>German</i>	+	+
<i>Dutch</i>	+	-
<i>Swedish</i>	-	-

## 7. Conclusion

1. Dependencies are relations between sisters
2. Participants are *dependents* and *nondependents*
3. Case and agreement are both instances of *dependent marking*
4. Clear examples of nondependent marking are few

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