

C-selection is Unique¹

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1. Introduction

C(ategorical)-selection is often assumed to be unique: if a given category selects for the categorial properties of its complement it does so by selecting one and only one category. In this paper I undertake two case-studies of categories which appear to c-select for more than one category: negation in German and diminutive marking in Halkomelem. I argue that these apparent cases of non-unique c-selection can – and in fact should – be analyzed in terms of unique c-selection. In both cases – I argue – the appearance of non-unique c-selection derives from the nature of roots, which by definition are category-neutral. On the one hand, the negative marker in German is itself a root and as such is not associated with any c-selectional properties. As a consequence, negation in German can combine with all categories apparently violating unique c-selection. On the other hand, the diminutive marker in Halkomelem selects for category-neutral roots. As a consequence, diminutive marking in Halkomelem appears to combine with nouns, verbs, or adjectives, apparently violating unique c-selection.

I conclude that the principle of unique c-selection can be maintained, even in light of superficial evidence for non-unique c-selection (such as negation in German or diminutive marking in Halkomelem). This paper then contributes to an ongoing research question concerning the nature of roots viewed as syntactic entities. According to the case-studies reported in this paper, roots do not c-select but can be c-selected for.

2. Cross-linguistic Differences in Selectional Properties of NEG

In German, sentential negation and constituent negation are both expressed by the same form: the uninflected particle *nicht*.

- (1) SENTENTIAL NEGATION: [Neg VP]
weil ich das Buch nicht gelesen habe²
COMP ISG DET book NEG read.PART AUX
'because I haven't read the book.'
- (2) CONSTITUENT NEGATION: [Neg DP]
Ich habe nicht das Buch gelesen sondern die Zeitung
ISG AUX NEG DET book read.PART but DET newspaper
'I have read not the book but the newspaper.'

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² I use the following glosses and abbreviations throughout the paper: 1=1st person; 2=2nd person; 3=3rd person; ADJ=adjectivizer; AUX=auxiliary; COMP=complementizer; CONT=continuative; D/C=determiner/complementizer; DEM=demonstrative; DET=determiner; DIM=diminutive; INDEP=independent pronoun; INF=infinitive; NEG=negation; NOM=nominalizer; O=object; PART=participle; PAST=past tense; POSS=possessive; PEF=prefix; S=subject; SG=singular; SS=subjunctive subject; SUBJ=subjunctive; TRANS=transitive

In contrast, in Halkomelem the form used for sentential negation (*éwe*), which merges with CP (Wiltschko 2002) cannot be used in the context of constituent negation. Rather, constituent negation is expressed through sentential negation in Halkomelem.³

(3) SENTENTIAL NEGATION: [Neg CP]

éwe *í-l* *teló:mét*
 NEG AUX-1SG.SS understand
 ‘I don’t understand.’

(4) CONSTITUENT NEGATION: *[Neg DP]

a. *éwe* *tl'ó-s* *te-é'elthe* *í:mex.* *Tl'ó* *te* *Strang.*
 NEG 3-3S DET-1SG.INDEP walk.CONT. 3INDEP DET Strang
 ‘It wasn’t me who walked. It was Strang.’

b. **í:mex* *éwe* *te-é'elthe.*
 walk.CONT NEG DET-1SG.INDEP
 ‘It wasn’t me who walked.’

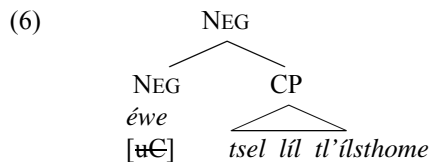
The data in (1)-(4) shows that there is a cross-linguistic difference in the selectional properties of negation. While German *nicht* can function both as sentential negation as well as constituent negation, Halkomelem *éwe* is restricted to sentential negation. To capture this difference one could posit a difference in the lexical entries of German and Halkomelem negation, respectively: while German *nicht* c-selects for DP or VP, Halkomelem *éwe* c-selects for CP only.⁴

- (5) a. *nicht* [NEG; {DP; VP}]
 b. *éwe* [NEG; CP]

Throughout this paper I use the same conventions for representing the categorial information associated with lexical entries. The first category within the square brackets represents the category of the respective linguistic element. The information following the semi-colon represents the c-selected category. If there is more than one c-selected category, all categories are given in curly brackets.

3. Problems Associated with German NEG

Lexical entries such as (5)a are problematic as they violate the principle of unique c-selection, i.e. a principle according to which every category can select for only one category. This principle has recently been derived by assuming that c-selection reflects the presence of an uninterpretable categorial feature [uF] (Adger 2003). [uF] must be checked under sisterhood. For Halkomelem negation, this works without problems: *éwe* is associated with an uninterpretable C feature [uC] which is checked when *éwe* merges with CP:



³ Halkomelem is a Central Coast Salish language. The data presented are from the Upriver dialect. If not otherwise indicated, they come from original fieldwork by the author. I would like to thank Dr. Elizabeth Herrling for sharing her knowledge of the language with me.

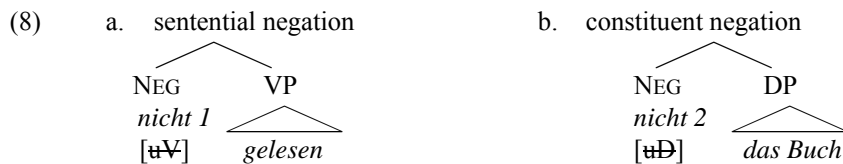
⁴ In addition, the two negative elements differ in that German negation functions as a modificational particle which does not project its categorial label (Zimmermann and Stromswold ms.), while Halkomelem negation functions as a functional head (Wiltschko 2002).

The unique c-selectional properties of Halkomelem negation are consistent with their status as a functional head (Wiltschko 2002). It is generally assumed that functional categories c-select for one and only one category (cf. Ouhalla 1991, Grimshaw 1991, Williams 2003 among many others).

In the context of German negation however, the principle of unique c-selection is faced with problems. The lexical entry for *nicht* would include two uninterpretable features ([uV] and [uD]) reflecting the fact that it can function as sentential as well as constituent negation. Consequently, one of these features remains unchecked after merge. When it functions as sentential negation, NEG merges with VP (Grewendorf 1990, Webelhuth 1992) in which case [uD] remains unchecked as in (7)a. When it functions as constituent negation, NEG merges with DP and consequently [uV] remains unchecked (7)b. In either case, the derivation should crash, contrary to fact.



To address this problem, one could posit two separate lexical entries for German NEG: *nicht* 1 which functions as sentential negation and selects for VP; and *nicht* 2 which functions as constituent negation and selects for DP. Under this view, no [uF] remains unchecked after merge since each of the homophonous negative elements is only associated with one [uF] as in (8).



The problem persists however. The negative particle *nicht* not only merges with VP and DP; it can also negate constituents of any category:

- (9)
- | | | |
|----|--|-----------|
| a. | Wenn nicht [IP der Peter bald kommt] | [NEG IP] |
| | <i>if NEG DET Peter soon come-3SG</i> | |
| | ‘If Peter doesn’t come soon, I’ll get mad.’ | |
| b. | Nicht [CP dass ich wüsste] | [NEG CP] |
| | <i>NEG COMP 1SG know.SUBJ</i> | |
| | ‘Not that I know of.’/‘Not that I would know.’ | |
| c. | Der nicht [AP zufriedene] Mann verschwand | [Neg AP] |
| | <i>DET NEG content man disappear.PAST</i> | |
| | ‘The man who isn’t content disappeared.’ | |
| d. | Ich habe nicht [PP mit dem Ball] gespielt | [Neg PP] |
| | <i>1SG. AUX NEG with DETball played.PART</i> | |
| | ‘I haven’t played with the ball.’ | |
| e. | Der Peter ist nicht [AP schnell] gelaufen | [Neg Adv] |
| | <i>DET Peter AUX NEG fast run.PART</i> | |
| | ‘Peter hasn’t run fast.’ | |

The problem that emerges in light of the data in (9) is that unless we allow for non-unique c-selection, we would need (at least) seven lexical entries for *nicht* - each with its own unique [uF]. This pattern stands in sharp contrast with Halkomelem, where constituent negation always proceeds via sentential negation, no matter what the negated category. There is no need for multiple lexical entries to maintain the principle of unique c-selection.

- (10) a. *te'í móqw éwe tskwím. *[Neg AP]
DEM bird NEG red
 'This bird is not red.'
 b. éwe lí-s tskwím te'í móqw. Ts'míth'.
NEG AUX-3S red DEM bird blue
 'This bird is not red. It's blue.'
- (11) a. *tsel lí éwe lá:yem *[Neg VP]
ISG AUX NEG laugh
 'I'm not laughing.'
 b. éwe tsel lí lá:yem; hásem tsel
NEG ISG AUX laugh sneeze ISG.
 'I'm not laughing; I'm sneezing.'

4. German NEG is a Root with no C-selectional Properties

Instead of positing seven lexical entries for German *nicht*, I argue that its properties can be derived with a single lexical entry which has no c-selectional properties: German NEG is not associated with any [uF] that would need to be checked. This allows us to capture the fact that *nicht* can merge with any category.



We have now, however, created an apparent problem. While we can derive the fact that *nicht* merges with any category, we have no principled way of determining whether *nicht* functions as constituent negation or as sentential negation. This is an interesting problem since *nicht* functions as sentential negation only when it merges with VP but not when it merges with any other category of the clausal domain (i.e., IP or CP). The problem is especially pressing in light of the fact that Halkomelem *éwe* functions as sentential negation when it merges with CP. How do we know that NEG does not function as sentential negation when it is merged with CP in German? The evidence stems from the patterns of negative concord.

Colloquial German displays negative concord effects with sentential negation. Only if *nicht* merges with VP as in (13), a negative concord interpretation is available; if *nicht* merges with IP as in (14) or with CP as in (15), the only interpretation available is one with double negation:

- (13) (Ich weiss) dass der Peter kein Buch **nicht** liest [Neg VP]
ISG. know COMP DET Peter NEG.DET book NEG read-3SG
 ✓ (I know that) ... it is not the case that Peter read a book ✓ negative concord
 * (I know that) ... it is not the case that Peter read no book * double negation
- (14) Wenn **nicht** der Peter kein Buch lies-t [Neg IP]
if NEG DET Peter NEG.DET book read-3SG
 * If it were not the case that Peter read a book * negative concord
 ✓ If it were not the case that Peter read no book. ✓ double negation
- (15) **Nicht** dass der Peter kein Buch lies-t [Neg CP]
NEG COMP DET Peter NEG.DET book read-3SG
 * It is not the case that Peter read a book * negative concord
 ✓ It is not the case that Peter reads no book. ✓ double negation

The data in (13)-(15) establishes that sentential negation is only available when *nicht* merges with VP. If however there is only one lexical entry for *nicht*, we cannot stipulate this information in the

lexical entry of one form of *nicht*. According to our proposal, the interpretation associated with sentential negation should be a byproduct of *nicht* merging with VP and cannot be an inherent property of the lexical entry itself. So what determines whether [NEG + X] is interpreted as sentential negation?

I propose (without going into details) that *nicht* functions as sentential negation when it merges with VP via *focus projection*. It is well known in the relevant literature that other focus-sensitive particles display similar properties (cf. Zimmermann and Stromswold ms.; Penka and Stechow 2001).

At this point we have established that the c-selectional properties of German *nicht* can be accounted for under the assumption that it has no c-selectional properties and as a consequence it can merge with all categories. It remains to be determined however, whether there is a principled reason that determines the absence of c-selectional properties associated with *nicht*.

I argue that German *nicht* has no c-selectional properties because it has no *categorial properties* at all. But why? Are there other elements without any categorial properties? It has been independently argued that this is the defining property of roots (Borer 2004). Consequently, I argue that German *nicht* is a root with the lexical entry in (16).

(16) \sqrt{nicht}

Evidence that this lexical entry for *nicht* is indeed on the right track stems from the fact that, with an appropriate affix, *nicht* can be nominalized, verbalized, and adjectivized as in (17):

- | | | | | | | |
|------|----|--|----|---|----|--|
| (17) | a. | $[n \sqrt{nicht}]_n$
nicht-s
NEG-NOM
'nothingness' | b. | $[v \sqrt{nicht}]_v$
ver- nicht-en
PREF-NEG-INF
'destroy' | c. | $[a \sqrt{nicht}]_a$
nicht-ig
NEG-ADJ
'nothingy' |
|------|----|--|----|---|----|--|

In sum, I propose that *nicht* is a root and as such is not associated with any categorial information. This suggests that German *nicht* does not function as a functional category NEG but rather functions as a modificational particle (cf. Grewendorf 1990, Lederer 1969, Webelhuth 1992, Zimmermann and Stromswold ms.; contra Hauptmann 1993). In addition, we derive the absence of any c-selectional properties associated with *nicht*. As a result, *nicht* can merge with all categories including heads and phrases. This approach allows us to assume a single lexical entry for *nicht* while still maintaining the principle of unique c-selection.

In the next section, we turn to another case which appears to violate the principle of unique c-selection: diminutive marking in Halkomelem.

5. Cross-linguistic Differences in Selectional Properties of DIM

In Halkomelem, diminutive marking is a form of reduplication, namely Ci- or Ce-reduplication. It is possible to diminutivize nouns, verbs, and adjectives as shown in (18)-(20):

- | | | | | | |
|------|------|-------------------------|----|--|--------------------|
| (18) | a. | NOUN (unmarked) | b. | DIMINUTIVE NOUN | |
| | i. | q'á:mi
<i>girl</i> | | q'á-q'emí
<i>small girl</i> | Galloway 1993: 377 |
| | ii. | xótsa
<i>lake</i> | | xó-xtsa
<i>small lake</i> | Galloway 1993: 377 |
| | iii. | theqát
<i>tree</i> | | thí-thqet
<i>little tree</i> | |
| (19) | a. | VERB (unmarked) | b. | DIMINUTIVE VERB | |
| | i. | lhí:m
<i>picking</i> | | lhi-lhi:m
<i>picking a little bit</i> | Galloway 1993: 331 |
| | ii. | xá:m
<i>crying</i> | | x̣e-xám
<i>sobbing</i> | Galloway 1993: 331 |

- | | | | | |
|------|------|----------------------------|---|----------------------|
| | iii. | tl'ewéls
<i>barking</i> | tl'í-tl'ewéls
<i>barking a little</i> | |
| (20) | a. | ADJECTIVE (unmarked) | b. DIMINUTIVE ADJECTIVE | |
| | i. | p'eq'
<i>white</i> | p'í-p'eq'
<i>a little white, whitish</i> | Galloway 1993: 330f. |
| | ii. | qel
<i>be bad</i> | qí-qel
<i>be naughty</i> | Galloway 1993: 330f. |
| | iii. | lós
<i>fat</i> | li-lós
<i>little bit fat</i> | |

In contrast, in German diminutive marking (-chen) can only combine with nouns.

- | | | | |
|------|----|---|---|
| (21) | a. | NOUN (unmarked)
Hund
<i>dog</i> | b. DIMINUTIVE NOUN
Hünd-chen
<i>dog-DIM</i> |
| (22) | a. | VERB (unmarked)
lesen
<i>read</i> | b. DIMINUTIVE VERB
*les-chen
<i>read-DIM</i> |
| (23) | a. | ADJECTIVE (unmarked)
schön
<i>beautiful</i> | b. DIMINUTIVE ADJECTIVE
*schön-chen ⁵
<i>beautiful-DIM</i> |

The data in (18)-(23) shows that there is a cross-linguistic difference in the selectional properties of diminutive markers. While Halkomelem diminutive marking can merge with all lexical categories, German diminutive marking can only merge with nouns. To capture this difference one could posit the following lexical entries associated with Halkomelem and German diminutive marking, respectively: while in Halkomelem, DIM c-selects for N, V, or A, in German DIM c-selects for N.

- | | | | |
|------|----|-------------|---------------------|
| (24) | a. | Ci/Ce-redup | [DIM; {uN, uV, uA}] |
| | b. | -chen | [DIM; uN] |

6. Problems Associated with Halkomelem DIM

Recall from section 3 that lexical entries such as (24)a are problematic as they violate the principle of unique c-selection. Whatever category DIM merges with, there will always be some [uF]'s which remain unchecked.

- | | | | | | | |
|------|----|--|----|--|----|--|
| (25) | a. | | b. | | c. | |
|------|----|--|----|--|----|--|

Again, one might hypothesize that we are dealing with multiple lexical entries; and that each of them is associated with its own uF, in accordance with the principle of unique c-selection:

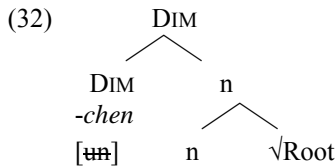
- | | | |
|------|----|--------------------|
| (26) | a. | Ci/Ce Red [DIM uN] |
| | b. | Ci/Ce Red [DIM uV] |
| | c. | Ci/Ce Red [DIM uA] |

⁵ This form is well-formed if interpreted as coerced into a noun meaning 'someone who is beautiful'

- | | | |
|------|-------------------------|-----------------------------------|
| iii. | s-qwemáy
<i>dog</i> | s-qwi-qwemáy
<i>little dog</i> |
| iv | s-teqiw
<i>horse</i> | s-ti-tiqiw
<i>small horse</i> |

This contrasts with German DIM which merges with nouns after the nominalizer is attached - consistent with the assumption that German DIM c-selects for nouns and not for roots.

- (31) a. Schül-er-chen
school-nom-dim
'little pupil'
b. *Schül-chen-er
school-dim-nom



Similarly, Halkomelem DIM attaches before the adjectivizer⁶

- | | | | |
|------|-----|---|---|
| (33) | i. | s-xwóxwth'
<i>stat-insane</i>
'be insane' | s-xwi-xwóxwth'
<i>stat-insane</i>
'be stupid, a little crazy' |
| | ii. | s-máth'el
<i>stat-proud</i>
'be proud' | s-má-mth'el
<i>stat-dim-proud</i>
'be a little bit proud' |

Summing up, we have seen that the selectional properties of Halkomelem DIM can be accounted for with the assumption that it c-selects for roots in line with the principle of unique c-selection. As a consequence it appears to combine with nouns, verbs and adjectives.

8. Conclusion

I have discussed two different cases which appear to violate the principle of unique c-selection. First, German *nicht* functions as a root and is consequently not associated with any c-selectional properties. Second, Halkomelem diminutive marking c-selects for roots and therefore appears to be merged with nouns, verbs, and adjectives. This suggests that the principle of unique c-selection can be maintained even in light of superficial counter-evidence.

In the course of discussing the c-selectional properties of negation and diminutive marking we have also learned something about the nature of roots. It has been argued in the literature over the past decade that roots can function as syntactic categories in their own right (Borer 2004, Marantz 1997 among many others). A question that arises in this context concerns the c-selectional properties of roots.

From the study of Halkomelem diminutive marking we can conclude that roots can be c-selected – as is in fact expected if they function as syntactic categories. From the study of German negation we can conclude that roots do not c-select. It remains to be seen whether these conclusions can be maintained against a broader empirical base. But I have to leave this issue as a question of future research.

⁶ Unfortunately, it is not straightforward to establish that DIM attaches before a verbalizer because the verbalizer is a suffix whereas the diminutive marker is a prefix.

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