

Inflected Complementizers and the Licensing of Non-referential Pro-drop*

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1. Introduction

The present paper examines the licensing of null subjects in German and Icelandic. On the basis of data from West Flemish and Bavarian I argue that the pro-drop pattern of German and Icelandic should not be linked to licensing by the complementizer.

The alternative analysis proposed here holds that Icelandic is a restricted pro-drop language while German does not license null subjects at all. What appear to be null subjects in German, in particular the subjects of impersonal passives, are argued to be null cognate objects that must remain in direct object position.

2. The Problem

As is well known, some Germanic languages license a limited range of null subjects. Icelandic has null quasi-arguments and expletive pronouns (see (1)) while German has been analysed as having null expletive pronouns (see (2)) (Safir 1985, Grewendorf 1990).

- (1) a. *expletive pro*
I dag hafa *pro* veridh nokkrir kettir i eldhusinu. (Ice)
*I dag hafa thad veridh nokkrir kettir i eldhusinu.
today have expl been some cats in the-kitchen (VP-internal subject)
(from Vangsnes 1999)
- b. *quasi-arg pro*
Rigndi *pro* igaer? (Ice)
*Rigndi thad igaer?
rained expl yesterday
'Did it rain yesterday?' (weather pro)

In the literature these examples have been analysed as instances of pro-drop licensed by the complementizer. Holmberg and Platzack (1995: 111) assume that Icelandic licenses quasi-

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argumental *pro* since the C° can identify the feature [number] while German can only license an expletive *pro* since the C° has no feature content (cf., Cardinaletti 1990 for German).

- (2) *expletive pro*
- a. weil [IP *pro* um sechs Uhr gegessen wurde]. (Ge)
 since at six o'clock eaten was
 'since dinner was at six o'clock.' (impersonal passive)
- b. weil [IP *pro* [VP dem Kind ein Buch geschenkt wurde]]. (Ge)
 since the child.dat a book.nom given was
 'since a book was given to the child.' (VP-internal subject)
- (3) a. Icelandic: C identifies [number] ---> quasi-arg *pro* ok
 expletive *pro* ok
- b. German: C doesn't identify [number] ---> quasi-arg *pro* *
 expletive *pro* ok

This difference in feature-content on C° is then responsible for the contrast between German and Icelandic concerning the subject of weather verbs, the prototypical quasi-argument:

- (4) a. *Rigndi pad igaer? (Ice)
 Rigndi igaer?
 rained expl yesterday
- b. Regnete es gestern? (Ge)
 *Regnete gestern?
 rained expl yesterday
 'Did it rain yesterday?' (weather *pro*)

According to this analysis, the partial *pro*-drop in Germanic is licensed by an instance of limited, abstract complementizer-agreement (C° -agreement). In what follows I will show that the data from two Germanic languages that display *overt* C° -agreement, namely Bavarian and West Flemish, do not support this analysis.

3. C° -agreement and Non-referential *Pro*-drop in West Flemish and Bavarian

West Flemish has referential null subjects licensed by C° -agreement. The paradigm of C° -agreement distinguishes all person/number-combinations (cf., Law 1991, Haegeman 1992).

- (5) a. K weten dan-k (ik) goan weggoan. C° + 1sg (WFl)
 I know that-I I go leave
 'I know that I am going to leave.'
- b. K weten da-j (gie) goat weggoan. C° + 2sg
- c. K weten da-se (zie) goat weggoan. C° + 3fsg
- d. K weten da-tje (jij) goat weggoan. C° + 3msg
- e. K weten da-me (wunder) goan weggoan. C° + 1pl
- f. K weten da-j (gunder) goat weggoan. C° + 2pl
- g. K weten dan-ze (zunder) goan weggoan. C° + 3pl
- h. K weten da Jan goat weggoan. C° + NPsg (Jan)
- i. K weten dan Jan en Pol goan weggoan. C° + NPpl (Jan en Pol)
 (from Law 1991: 254, citing Haegeman 1992)

Quasi-arguments and expletives cannot be null however: the subjects of weather verbs, extrapositions and impersonal passives have to be lexical (L. Haegeman, p.c.):

- (6) a. K weten dat et regent (WFl)
 *K weten dat regent
 I know that expl rains
 'I know that it rains.' (weather verb)
- b. K weten dat et moeilijk is vur en appartement te vinden. (WFl)
 *K weten dat moeilijk is vur en appartement te vinden.
 I know that expl difficult is for an appartement to find
 'I know that it's difficult to find an apartment.' (extraposition)
- c. K weten dat er gedanst is. (WFl)
 *K weten dat gedanst is.
 I know that expl danced is
 'I know that there was danced.' (impersonal passive)

Bavarian also licenses referential null subjects by inflection on the complementizer; the inflectional paradigm on the C° is more restricted than in West Flemish, however: only the 2nd person sg/pl pronouns can be null (Bayer 1984).

- (7) wenn-st *pro* kummst. (Bav)
 when.2sg come.2sg
 'when you.sg come'
 (from Bayer 1984: 31)

Again, like in West Flemish, C° in Bavarian does not license null subjects for weather-verbs (J. Bayer, p.c.):

- (8) Da Hans beibt dahoam wei 's regnet (Bav)
 *Da Hans beibt dahoam wei regnet
 det Hans stays at-home because expl rains
 'Hans stays at home because it rains.' (weather verb)

Bavarian contrasts with West Flemish with respect to the impersonal passive: in Bavarian a lexical expletive is impossible with this construction (compare with (6c)).

- (9) Heid schlaffa olle a so lang (Bav)
 today sleep all so long
 wei (*'s) gestan bis in'd Fruah g'feiat woan is
 because expl yesterday until the early morning partied been is
 'Today everyone is sleeping so long because the party went on till late at night.'
 (impersonal passive)

The data from West Flemish and Bavarian can be summarised as follows:

- (10) a. The West Flemish and Bavarian paradigms of *overt* C°-agreement do not license quasi-argumental *pro*.
 b. The richness of the *overt* C°-agreement is not correlated with the possibility of having an empty expletive subject.

With respect to expletives, West Flemish behaves like Dutch in requiring an overt subject *er*, ‘there’, with impersonal passives and an overt *et*, ‘it’, for weather-verbs. In Bavarian the C°-agreement is *less* distinctive than in West Flemish; nevertheless Bavarian permits a null subject in impersonal passives just like Standard German. Since Dutch and Standard German do not have any overt C°-agreement the fact that West Flemish and Bavarian behave like Dutch and Standard German respectively suggests that the decisive factor in licensing the empty subject in Bavarian and German is independent of C°-agreement.

4. The Analysis

The West Flemish and Bavarian data show that the paradigms of overt C°-agreement do not license quasi-argumental *pro* (weather *pro*, e.g.). It therefore seems implausible to assume that abstract inflection on C° should license quasi-argumental *pro* in Icelandic.

In what follows I first motivate a modification of Rizzi’s theory of pro-drop: I show that the content identification of null pronouns has to be related to its referential status, not to the type of th-role. I then propose an alternative account of the contrast between Icelandic and German with respect to null subjects. Finally, I present some evidence that the behaviour of C°-agreement is an instance of a more general phenomenon, namely that given *non-finite* licensing categories referential null pronouns are less marked than their quasi-argumental and expletive counterparts.

4.1 Licensing of Pro-drop

Since Rizzi (1986), it has been generally accepted that null pronouns are subject to two separate licensing requirements:

- (11) a. **formal licensing:** *pro* is governed by $X^{\circ}y$
(where X° is a governing head of type y) (Rizzi’s (40), 1986: 519).
- b. **content identification:** Let X be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of the features on X coindexed with it (Rizzi’s (41), 1986: 520).

More specifically, Rizzi (1986: 543) proposes the following conditions for the identification of the content of empty categories.

- (12) **Content identification** (Rizzi 1986):
 - a. referential : identify the feature [person]
 - b. quasi-arguments : identify the feature [number]
 - c. expletives : no features need to be identified

This typology implies a hierarchy of empty categories according to which any language capable of identifying referential null subjects should also admit quasi-argumental and expletive pro-drop. The content identification in (12) is based on the assumption that null pronouns will pattern together depending on the type of th-role assigned to them (a full th-role, a quasi-th-role, no th-role), so that Rizzi’s system implies the following hierarchy:

- (13) Pro-drop hierarchy: referential *pro* ---> quasi-argumental *pro* ---> expletive *pro*
(full th-role) (quasi-th-role) (no th-role)

The pro-drop patterns of partial pro-drop languages like Finnish and Modern Hebrew show, however, that the possibility of having a null pronoun is not a function of the th-role assigned to the pronouns.

As discussed in Holmberg and Nikanne (1994), Finnish 1st and 2nd person pronouns can be dropped, while 3rd person pronouns have to be lexical: (For different analyses of the contrast between 1st/2nd and 3rd person pronouns see e.g., Holmberg and Nikanne (1994, to appear), Shlonsky (1997)).

- (14) a. (Minä) ostin kirjan. (Fi)
 I bought-1sg book
 b. (Sinä) ostin kirjan.
 you.sg bought-2sg book
 c. *(Hän) ostin kirjan.
 (s)he bought-3sg book
 d. (Me) ostimme kirjan.
 We bought-1pl book
 e. (Te) ostitte kirjan.
 you.pl bought-2pl book
 f. *(He) ostivat kirjan.
 they bought-3pl book
 (from Holmberg and Nikanne 1994)

I want to focus on the behaviour of arbitrarily interpreted pronominals. The arbitrary pronoun takes 3rd person morphology but does not pattern with the referential 3rd person pronouns. In fact, arbitrary pronominals—which bear a full th-role—are null:

- (15) Metsästä löytää helposti mustikoita (Fi)
 forest-elative find.3sg easily blueberries-partitive
 ‘One finds blueberries easily in the forest.’
 (from Vainikka and Levy 1999)

This particular patterning of arbitrary pronominals can also be found in Modern Hebrew. Modern Hebrew allows pro-drop for the 1st and 2nd person pronouns, but referential pro-drop is limited to the future and in the past tense (c.f., Borer 1980, 1986, 1989, Shlonsky, 1997).

- (16) ti-xtov (MH)
 2m.sg/3f.sg will-write
 ‘You-ms will write.’
 *‘She will write.’
 (from Shlonsky 1997)
- (17) arbitrary pro +present: (MH)
 moxrim Sam kartisim.
 sell[benoni]-3m.pl there tickets
 ‘They(arb) sell tickets there.’ (arb pro)
 (from Shlonsky 1997)

Modern Hebrew shows particularly clearly that arbitrary null pronominals do not pattern with the fully referential personal pronouns: although the present tense does not license 1/2/3 person *pro-drop*, arbitrary null pronominals are allowed as in (17) above.

In both Finnish and Modern Hebrew the subject of weather verbs—the prototypical quasi-argument—is also null:

- (18) *atmospheric pro*:
- | | | |
|----|---------------------------------------------|------|
| a. | (Se) sataa.
it rains
(ex 1b., H&N)) | (Fi) |
| b. | kar
(it is) cold
(from Shlonsky 1997) | (MH) |

The distribution of arbitrary null pronominals in Finnish and Modern Hebrew suggests that the availability of null subjects depends on the referential status of the pronouns: arbitrary null pronominals carry a full *th*-role, but they resemble weather-subjects in that they are not fully referential. Following Shlonsky (1997), I will refer to null arbitrary pronominals and null subjects of weather predicates as *quasi-referential pro-drop*. I further want to suggest, that the subjects of weather-verbs and arbitrary pronominals pattern together:

- (19) If the subjects of weather-verbs are null then *arbitrary* null subjects are licensed, too.

4.2. *The Contrast between Icelandic and German*

Given this modified typology of null subjects, I propose that the contrast between Icelandic and German can be accounted for by the following assumptions: (i) Icelandic allows quasi-referential null subjects, and (ii) German does not allow null subjects at all. This analysis implies in particular that there cannot be any null expletive subjects in German.

4.2.1 *Expletive pro*

Rejecting the existence of null expletive subjects in German might seem contradictory with the fact that in German NP subjects may occupy several syntactic positions. In particular with *werden*-passives the nominative NP may stay in a VP-internal position. The possibility of having multiple positions for the subject-NP and the existence of an expletive *pro* are not directly linked, however. The link between the two properties requires several additional assumptions:

- (20) (i) **Nominative assignment and expletive chains:**
 There is a designated subject position (spec IP) that receives nominative case.
 Subject NPs in a position other than spec IP have to form an expletive-associate chain with an expletive in spec IP (to receive case).
 If there is no visible expletive, the expletive-associate chain is formed with a null expletive.
- (ii) **EPP:** Spec IP must be filled.

Since I reject the existence of expletive *pro*, I cannot assume that nominative assignment proceeds via expletive-associate chains. Following Borer (1986) I will assume that nominative assignment is due to a co-indexation relation between the inflection and the nominative subject. This then implies that subjects in non-canonical positions need not enter into an expletive chain for case reasons.

Once expletive-associate chains are set aside, only the EPP forces the existence of an empty expletive. Several authors have proposed that the EPP does not necessarily require the filling of the designated subject position (Nash and Rouveret 1996, Speas 1995). I will follow essentially a proposal in Holmberg and Platzack (1995), and assume that the EPP-requirement can be met in two ways: (i) either by insertion of a lexical expletive in the designated subject position, or (ii) by V-movement to I°.

If there are no null subjects in German, we need an alternative account for the German example (2a) that has no surface subject. Following Dobrovie-Sorin (1986, 1998) I assume that the passivisation of intransitives relies on the projection of a null cognate object.

- (21) [CP Hier wird [IP [VP *cog* gebaut.]]] (Ge)
 here *werden.3sg* built
 ‘Here is built. = Here there is building going on.’

The null inner object *cog* is licensed in its base position in the impersonal passive (see (22a.)), in parallel with the lexical subject of a *werden*-passive (22b).

- (22) a. [CP Hier wird [IP [VP *cog* gebaut.]]] (Ge)
 b. [CP Hier wird [IP [VP **ein Haus** gebaut.]]]
 here wird a house built

Under this analysis an impersonal passive always appears in a construction licensing a VP-internal subject. When an expletive appears it is not the subject of the impersonal passive: its appearance is conditioned by the syntax of constructions with a VP-internal subject.

This analysis then integrates the generalisation of Vikner (1995) stating that languages that allow impersonal passives also allow personal passives with VP-internal subjects (Vikner’s *impersonal passive transitives*). In languages where the spec IP position is necessarily filled, impersonal passives and VP-internal subjects of passives should appear with the *same* expletive. The Mainland Scandinavian languages (illustrated here by Danish) confirm this expectation:

- (23) a. ... at der blev spist et aeble (Da)
 that expl was eaten an apple
 ‘... that there was eaten an apple.’
 b. ... at der er blevet danset
 that expl is been danced
 ‘... that there was dancing going on.’
 (from Vikner 1995)
 c. [CP [C’ at [IP der [I’ [VP V **et aeble**]]]]] (see (23a))
 [CP [C’ at [IP der [I’ [VP V *cog*]]]]] (see (23b))

In Icelandic a personal passive with the nominative NP in object position does not allow a lexical expletive in spec IP. Correlatively the impersonal passive — which I claim to be an instance of the same construction — does not have a lexical expletive in spec IP.

- (24) a. Igaer var bordhadh epli (Ice)
 yesterday was eaten an apple
 ‘Yesterday was eaten an apple.’
- b. Igaer hefur veridh dansadh
 yesterday is been danced
 ‘Yesterday was dancing going on.’
 (adapted from Vikner, 1995)
- c. [CP Igaer [C’ [IP [I’ [VP V **epli**]]]] (see (24a))
 [CP Igaer [C’ [IP [I’ [VP V **cog**]]]] (see (24b))

Vikner analyses impersonal passives as having an expletive associate-chain between the expletive and the passive morpheme. Notice that this analysis supposes a difference between personal and impersonal passives: while in impersonal passives like (23a) the expletive forms a chain with the passive morphology and thereby with the *external* argument, the personal passive in (23b) relies on a chain between the expletive and the *internal* argument of the underlying verb. The present analysis differs from Vikner’s proposal in several ways.

First, the two proposals presuppose different analyses of passivisation. Vikner follows Jaeggli (1986), Baker, Johnson and Roberts (1989) in assuming that the passive morpheme realises the external th-role. Under this type of analysis the unifying feature of personal and impersonal passivisation is the absorption of the external th-role by the passive morphology, or in more theory-neutral terms, the demotion of the subject. The analysis proposed here does not assume that the external th-role of the passivised verb is realised in the syntax. The unifying feature of personal and impersonal passivisation is taken to be the promotion of the underlying object (Perlmutter and Postal 1977, Dobrovie-Sorin 1986). Secondly, unlike Vikner’s analysis, the present analysis does not assume expletive-associate chains. Thirdly, according to the analysis proposed here the examples (23a) and (23b) are taken to be completely parallel: in both structures the promoted object of the passive is realised in VP-internal position, while the expletive (if it appears) fills the spec IP position for independent reasons.

4.2.2 Atmospheric *pro*

Under the proposed analysis the null subjects of weather verbs in Icelandic are a case of quasi-referential *pro*-drop:

- (25) Rigndi *pro* igaer? (Ice)
 rained yesterday
 ‘Did it rain yesterday?’ (weather *pro*)

In section 4.1. I have argued that quasi-argumental *pro* and arbitrary pronouns pattern together. The analysis of Icelandic as a quasi-referential *pro*-drop language is therefore supported by the fact that Icelandic also satisfies (19) allowing arbitrary subjects:

- (26) *arbitrary pro*:
- a. Var oft komidh seint heimm. (Ice)
Was often come late home.
'People/we (etc) often came home late.'
 - b. 'Eg vissi ekki adh aetti adh fara svona oft til Graenland. (Ice)
I knew not that should to go so often to Greenland.
'I did not know that one should go so often to Greenland.'
(exs (3) and (27a) from Sigurdhsson 1990)

4.2.3 Summary

I have proposed an analysis of German null subjects that does not assume empty expletives: impersonal passives are analysed as having empty VP-internal subjects corresponding to the cognate object of the underlying verb. The assumption underlying this analysis is that the possibility of projecting an object position is common to all unergative verbs (c.f., dummy reflexives in English resultatives *He drank himself silly*, cognate objects *He lives the life of Riley*). The compatibility of unergative verbs with a transitive structure is independent of the possibility of having null subjects (c.f., English).

According to the analysis presented here German allows superficially subjectless constructions since the direct object NP in *werden*-passives can be assigned nominative in VP-internal position. So under a conjunction of particular circumstances, the null cognate object — that I take to be available crosslinguistically — can function as the nominative subject of the clause. Under the analysis proposed here, German is not a null subject language since it does not allow null external arguments. According to the present analysis a language that allows null external arguments allows at least quasi-referential null subjects.

If this is correct, there are three types of languages:

- (27)
- a. Languages in which the designated subject position has to be filled (EPP) (e.g., Mainland Scandinavian).
 - b. Languages in which the designated subject position does not have to be filled (no EPP/EPP satisfied by other means). Here two cases are possible:
 - (b.i) Languages in which the lexical subject has access to several syntactic positions (e.g., German).
 - (b.ii) Languages in which allow null subjects to varying degrees (e.g., Icelandic (quasi-referential pro-drop), Finnish (partial pro-drop), Spanish (full pro-drop)).

Notice that in analyses that recognize an empty expletive, the types b.i. and b.ii. of the above typology are collapsed.

4.3 Licensing of pro-drop by a Non-finite Category

We have seen in West Flemish and Bavarian that given an inflected C° the licensing of referential null pronouns does not imply the licensing of expletive or quasi-referential null pronouns (going against the pro-hierarchy in Rizzi 1986). This seems to be part of a more general phenomenon:

- (28) The licensing of non-referential null pronouns by *non-finite* categories (i.e., other than the finite verb) is more restricted than pro-drop licensed by the finite verb.

The data from West Flemish and Bavarian presented above point to this conclusion and in the next section I will present further evidence from Modern Hebrew.

4.3.1 Modern Hebrew

The Modern Hebrew inflected negation particle also displays restrictions on non-referential null subjects (Shlonsky 1997). As the following example illustrates, the inflected negation particle *?eyn* is compatible with referential null pronouns of the 1st and 2nd person:

- (29) *?eyn* -(en)i/ -xa/ -ex/ -enu kotev/et/im sipurim. (MH)
 neg-1sg /2msg/2fsg/1pl write(benoni)-m.sg/f.sg/pl stories
 'I/you.m/you.f/we do not write stories.'
 (from Shlonsky 1997))

The third person cannot be dropped even though the agreement on the particle is unambiguously 3msg:

- (30) * *?eyn* -o kotev sipurim. (MH)
 neg 3m.sg write(benoni)-m.sg stories
 'He doesn't write stories.'
 (from Shlonsky 1997)

Given that for the 1st and 2nd person null pronouns are possible, a null pronoun must be formally licensed in configurations with *?eyn*. Even though formal licensing is available, however, the nominal inflection on the negation particle *?eyn* cannot be expletive or quasi-referential (Shlonsky 1997: 140ff):

- (31) Inflected *?eyn*: (MH)
- a. * *?eyn* -an mitxolelot kan sufot.
 neg-3fpl occur(benoni).fpl here storms
 'Storms don't occur here.' (DP-expletive)
 - b. * *?eyn* -o kaSe li-lmod polanit.
 neg 3msg difficult to-learn Polish
 'It isn't difficult to learn Polish.' (CP-expletive)
 - c. * *?eyn* -am dofkim ba-delet.
 neg 3mpl knock(benoni).mpl on-the door
 No one is knocking on the door.' (existential arb *pro*)
 - d. * *?eyn* -am ma?arixim ?et ha-truma Sela.
 neg-3mpl value(benoni).mpl acc the-contribution her
 People don't value her contribution.' (universal arb *pro*)
 - e. * *?eyn* -o kar.
 neg-3mg cold
 'It isn't cold.' (atmospheric *pro*)
 (from Shlonsky 1997)

The negative particle in Modern Hebrew therefore furnishes an additional example of a pro-drop pattern licensed by a non-finite category where expletive and quasi-argumental pro-drop more marked than quasi-referential pro-drop.

4.3.2 Finiteness and Non-referential pro-drop

If the present interpretation of the Modern Hebrew data turns out to be correct, then Modern Hebrew provides another instance of the generalization in (28). This would then suggest that the two licensing conditions proposed by Rizzi are not sufficient to account for the distribution of referential and quasi-referential pro-drop. In particular, finiteness might have a role to play in the account of the licensing of quasi-referential pro-drop.

5. Conclusion

I have presented data from West Flemish and Bavarian that show that overt C°-agreement does not license non-referential *pro*-drop. Consequently, I have argued that the null subjects in German and Icelandic should not be analysed as instances of pro-drop licensed by abstract C°-agreement. Under the alternative analysis proposed here Icelandic allows quasi-referential (but not expletive) *pro*-drop. The null subjects in impersonal passives in Icelandic as well as in German result from two factors (i) unergative verbs project a direct object position when in combination with passive morphology, and (ii) the null cognate object can be assigned nominative VP-internally. Finally, I have presented another construction where given a non-finite licensor the non-referential null subjects do not seem to be the unmarked case. This evidence has led me to the conclusion that finiteness might be crucial in licensing non-referential *pro*-drop.

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