Clausal prolepsis: an overview*

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1. Introduction

This paper focuses on object clausal prolepsis, that is, the phenomenon in (1) from Dutch, where an object pronoun is linked to a CP situated at the right edge of the clause (hereafter, prolepsed CP).

(1) Ik hoop (het_i) [dat je wint]$_i$.
I hope it that you win
'I hope that you win.'

Different syntactic analyses have been proposed for clausal prolepsis in different languages, such as English (cf. Postal and Pullum 1988, Authier 1991, Rothstein 1995, Stroik 1996, Gluckman 2021 i.a.) or German (cf. Sudhoff 2016 i.a.), raising the question of whether any of them can be generalized beyond the language they were proposed for. In order to address this question, I examine in particular in what follows whether these analyses are able to account for a set of novel facts I present from Dutch object clausal prolepsis. These novel facts show that (i) *het* in (1) is a semantically contentful pronoun, not an expletive one, (ii) selection of a clausal complement is neither a necessary nor a sufficient condition for licensing clausal prolepsis, (iii) the verb and the prolepsed clause do not form a constituent to the exclusion of proleptic pronoun, (iv) the proleptic pronoun and the prolepsed CP are related underlyingly via a syntactic dependency, such as Merge, and (v) the matrix V and the prolepsed clause stand in a selectional dependency. In Angelopoulos (2022), I argue that (i)-(v) as well as other properties follow from an analysis that takes clausal prolepsis to involve nominalization of a clause underlyingly, much like Sudhoff (2016). Under this

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view, *het*, a D, takes the prolepsed clause as its complement underlyingly, as shown in the simplified structure in (2), and the prolepsed clause undergoes extraposition in the course of the derivation.

(2) $[_{DP}\ \text{het}_{D}\ CP]$

I show that previous accounts of clausal prolepsis in which the proleptic pro-form is analyzed as an expletive, or accounts in which the prolepsed CP is VP-adjoined, or the proleptic pro-form enters the derivation in Spec,CP of the prolepsed clause fail to capture properties (i)-(v). Given this, a conclusion of this paper is that the nominalization account of Dutch clausal prolepsis fares better than these previous analyses. The paper proceeds as follows. First, properties (i)-(v) are established in Sections (2)-(3). Based on these properties, section 4 discusses previous analyses of clausal prolepsis, and shows that they fall short in accounting for one or more of the properties (i)-(v). Given this, Section 5 concludes that an analysis according to which clausal prolepsis features clausal nominalization underlyingly is superior because it can account for all of these properties.

2. Data description: *het*

In this section I focus on the different syntactic contexts in which *het* is used as a pronoun. I show that in this case *het* can have two meanings, individual or proposition denoting, depending on whether it has as antecedent an individual-denoting expression or a proposition.

2.1 *Het* as a pronoun

The two meanings *het* can express, that is, proposition and individual-denoting, when used as a pronoun can be illustrated with different verbs like *hopen* 'hope' and *kennen* 'know.' *Hopen* selects for propositional arguments, e.g. an embedded clause as in (3b). This verb cannot take a plain DP such as *het antwoord* 'the answer' as an argument, (3a). Interestingly, *het* can serve as an argument of this verb, but, as illustrated in (3c), it can only refer to a proposition from the discourse such as the embedded clause in (3b).

(3) a. *Hij **hoopt** [het antwoord]$_m$.
he hopes the answer
Intended: 'He hopes for the answer.'

b. Hij **hoopt** [dat jij er bent]$_j$.
he hopes that you there are
'He hopes that you are there.'

c. Hij **hoopt** het$_{*m,\checkmark j}$.
he hopes it
'He hopes so.'

On the other hand, *kennen* 'know' can take a plain DP as an argument, (4a), but rejects a propositional one, (4b). *Het* can be used as an argument of this verb as well but, as illustrated in (4c), it can only refer to an individual denoting expression from the discourse, such as *het antwoord* 'the answer' in (4a).

(4) a. Hij **kent** [het antwoord]$_m$.
he knows the answer
'He knows the answer.'

b. *Hij **kent** [dat jij er bent]$_j$.
he knows that you there are
Intended: 'He knows that you are there.'

c. Hij **kent** het$_{\checkmark m,*j}$.
he knows it
'He knows it.'

So far we have seen that *het* can refer to a proposition from the discourse or to an individual denoting expression. In what follows, using evidence from parasitic gap licensing as well as a novel empirical generalization regarding the distribution of *het*, I argue that *het* of clausal prolepsis has semantic content, and is the same item as propositional *het*. This novel empirical generalization will also be shown to reveal a new fact, namely, that the licensing of clausal prolepsis is independent of the ability of a verb to take a clausal complement.

3. Clausal prolepsis background

3.1 *Het* and parasitic gaps

Using evidence from parasitic gap licensing, I present data in what follows showing that propositional *het* and *het* of clausal prolepsis are both semantically contentful pronouns. In order to illustrate this, I consider the verb *hopen* which, as shown before, can only take an embedded clause as an argument or propositional *het*. When merged as an argument of *hopen*, propositional *het* undergoes scrambling, just like all unstressed pronouns in Dutch. This is shown in (5a) where *het* precedes the adjunct clause that comprises the parasitic gap. The same example further shows that propositional *het* can bind a parasitic gap from its scrambled position.[1] In this respect, propositional *het* behaves exactly like *het* of clausal

[1]Note also that individual denoting *het* which arguably is a referential pronoun may as well bind a parasitic gap, just like propositional *het*. This is illustrated in the following example where *het*, being an argument of *kennen* 'know', is individual denoting (cf. 4), and, as shown, it can bind the gap from its scrambled position:

(i) Jan zei dat hij het [na e lang gestudeerd te hebben] wel t kende.
Jan said that he it after long studied to have well knew
'John said that he knew it after having studied for long.'

prolepsis, which also undergoes scrambling, and, as shown in Bennis (1986), may also bind a parasitic gap, (5b) (= modified from Bennis 1986:(19a)).

(5) a. Jan zei dat hij het [na nogmaals e overwogen te hebben] toch t hoopte.
John said that he it after again considered to have yet hoped
'Jan said that he hoped it (after considering again).'

b. Jan zei dat hij *(het) [na nogmaals e overwogen te hebben] toch t
John said that he it after again considered to have yet
hoopte dat deze beslissing genomen was.
hoped that this decision taken was
'Jan said that he hoped it, after considering again, that this decision had been made.'

The fact that *het* of clausal prolepsis can bind a parasitic gap suggests that just like propositional *het*, it is a contentful pronoun, not a expletive one. Furthermore, since in clausal prolepsis, *het* is semantically interpreted like propositional *het* in the sense that it refers to a proposition, we can assume that *het* of clausal prolepsis is propositional *het*. This assumption finds further support in a generalization, discussed next, showing that propositional *het* and *het* of clausal prolepsis occur in the same exact contexts.

3.2 The prop-prolepsis generalization

I present the following novel generalization which states that the syntactic contexts in which clausal prolepsis is found are identical to the ones where propositional *het* can occur.

(6) **Prop-Prolepsis Generalization:** Clausal prolepsis can occur in all and only those contexts that allow for propositional *het*.

This generalization is revealed by the behavior of three different types of predicates: *hopen* 'hope', repeated below from (3), *blij zijn* 'be happy', and *aandoen* 'do to'. (7a) shows that *hopen* can take *het* as its argument. *Het* can be propositional in this case, as shown by the fact that it can have a proposition as antecedent (cf. 3b). *Hopen* can also take an embedded clause as an argument, (7b), and it can also license clausal prolepsis, as illustrated in (7c). The behavior of *hopen* is consistent with the Prop-Prolepsis Generalization because clausal prolepsis is licensed in a syntactic context where propositional *het* is also allowed.

(7) a. Ik hoop het.
I hope it
'I hope so.'

b. Ik hoop dat je wint.
I hope that you win
'I hope that you win.'

c. Ik hoop het dat je wint.
I hope it that you win
'I hope that you win.'

Blij zijn 'be happy' differs from *hopen* in that it cannot take *het* as an argument, (8a). It behaves exactly like *hopen* in that it accepts a clausal argument, (8b). Nonetheless, as shown in (8c), this is insufficient to license clausal prolepsis. The behavior of *blij zijn* supports the Prop-Prolepsis Generalization because, just as predicted by this generalization, clausal prolepsis is not allowed in a syntactic context where *het* is also blocked.

(8) a. *Ik ben het blij.
I am it happy
Intended: 'I am happy about it.'

b. Ik ben blij dat Jan slaapt.
I am happy that John sleeps
'I am happy that John sleeps.'

c. *Ik ben het blij dat Jan slaapt.
I am it happy that John sleeps
Intended: 'I am happy that John sleeps.'

The third type of predicate is *aandoen* 'do to'. This verb behaves like *hopen*, and, unlike *blij zijn*, in that it can take propositional *het* as an argument. In (9a), *het* is propositional, as shown by the fact that it can have as antecedent the proposition that is introduced in the previous clause. On the other hand, *aandoen* behaves like *blij zijn*, and, unlike *hopen*, in that it cannot take a bare clausal argument, (9b). Clausal prolepsis is permitted with this verb, (9c). Given the Prop-prolepsis generalization, the availability of clausal prolepsis is expected in this case because it correlates with the availability of propositional *het*.[2]

[2]The judgment illustrated for *aandoen* in (9) arises more clearly for some speakers with adjectival predicates like *beu zijn* 'be tired'. This predicate takes propositional *het* as an argument, (ia). It does not select for clausal arguments, (ib). Yet, it can license clausal prolepsis, as shown in (ic).

(i) a. Marie zei [dat John zal doorgaan met ons iedere dag te bezoeken]$_i$ maar ik ben het$_i$ beu.
Marie said that John will continue with us every day to visit but I am it tired
'Marie said that John will continue visiting us every day, but I am tired of it.'

b. *Ik ben beu dat Jan slaapt.
I am tired that John sleeps
Intended: 'I am tired of the fact that John sleeps.'

c. Ik ben het beu dat Jan slaapt.
I am it tired that John sleeps
'I am tired of the fact that that John sleeps.'

(9) a. Marie zei [dat ze John pijn zal doen]$_i$ maar ik kan het$_i$ hem niet aandoen
Marie said that she John hurt will do but I can it him not do
dus zal ik haar tegenhouden.
so will I her stop
'Marie said that she will hurt John, but I cannot do it to him so I will stop her.'

b. ?*Ik kan hem niet aandoen dat ik hem nu in de steek laat.
I can him not do that I him now in the stab let
Intended 'I cannot do that to him, that is, to abandon him.'

c. Ik kan het hem niet aandoen dat ik hem nu in de steek laat.
I can it him not do that I him now in the stab let
'I cannot do that to him, that is, to abandon him.'

The (un)availability of clausal prolepsis and how this correlates with the distribution of propositional *het* after the three types of predicates in (7)-(9) is summarized in the table below:

	PropDP	*dat*-clause	Prolepsis
Type I: (hopen)	✓	✓	✓
Type II: (blij zijn)	✗	✓	✗
Type III: (aandoen)	✓	✗	✓

Table 1: The distribution of propositional *het* and clausal prolepsis.

Two conclusions can be drawn from this table. First, as the Prop-Prolepsis Generalization suggests, the availability of clausal prolepsis correlates with those syntactic contexts in which propositional *het* is possible (cf. Type I and Type III verbs). I take this fact to suggest that *het* of clausal prolepsis is propositional *het*. This said, an additional conclusion is that selection of a clausal complement is neither a necessary nor a sufficient condition for licensing clausal prolepsis (cf. Type II verbs). This said, we can now proceed to the discussion on the constituency structure of clausal prolepsis.

3.3 Constituency structure: VP-fronting

Using VP-fronting as a diagnostic, I examine the constituency structure of clausal prolepsis. I present new data showing that the following items can form a constituent: (a) the matrix verb alone, (b) the verb together with *het*, (c) the verb and the prolepsed clause can form a constituent only if the proleptic pronoun is part of it. I begin by illustrating a standard case of VP-fronting, in (10b), where the VP moves from its underlying position in (10a) into a clause-initial position.

(10) a. Jan zal niet toegeven dat het probleem nu opgelost is.
Jan will not admit that the problem now solved is
'Jan will not admit that problem is now solved.'

b. [Toegeven] zal Jan niet dat het probleem nu opgelost is.
admit will Jan not that the problem now solved is
'Jan will not admit that problem is now solved.'

Although this type of fronting is referred to as VP-fronting, it is important to note that it can affect constituents larger than a VP. This is illustrated in (11), where the constituent that is fronted not only comprises a verb, but a scrambled object DP, *boeken* 'books', as well. That the object has undergone scrambling is witnessed in (11) by the fact that it precedes the adverb *meermaals* 'repeatedly'.

(11) [Boeken meermaals lezen] doet hij niet.
books repeatedly read does he not
'He does not repeatedly read books.'

With this in mind, let us now turn to VP-fronting with the verb *beloven* 'promise'. (12a) shows that *beloven* can take an embedded clause as an argument, and (12b)-(12c) show *beloven* can undergo fronting either by itself or together with the embedded clause.

(12) a. Jan wil niet beloven [dat hij komt].
Jan wants not promise that he comes
'Jan doesn't want to promise that he will come.'

b. [Beloven] wil hij niet [dat hij komt].
promise wants he not that he comes
'Jan doesn't want to promise that he will come.'

c. [Beloven [dat hij komt]] wil hij niet .
promise that he comes wants he not
'Jan doesn't want to promise that he will come.'

Beloven may also license clausal prolepsis, (13a). In this case, the verb can undergo fronting either alone, (13b), or together with *het*, (13c). The verb may also undergo fronting together with the pronoun and the prolepsed clause, (13d). Interestingly, VP-fronting of the verb and the clause is not possible to the exclusion of the pronoun, (13e).

(13) a. Hij wil het niet beloven [dat hij komt].
hij wants it not promise that he comes
'He doesn't want to promise it that he will come.'

b. ?[Beloven] wil hij het niet [dat hij komt].
promise wants he it not that he comes
'Jan doesn't want to promise it that he will come.'

c. [Het [beloven]] wil hij niet [dat hij komt].
it promise wants he not that he comes
'Jan doesn't want to promise it that he will come.'

d. [Het [beloven [dat hij komt]]] wil hij niet.
it promise that he comes wants he not
'Jan doesn't want to promise it that he will come.'
e. *[Beloven [dat hij komt]] wil hij het niet.
promise that he comes wants he it not
'Jan doesn't want to promise it that he will come.'

Based on the standard assumption that only constituents can undergo dislocation, we can conclude on the basis of the facts in (13) that the following items can form a constituent: (a) the verb can form a constituent, a VP, in which case it is allowed to undergo movement on its own, (13b), (b) the verb and *het* can form a constituent, which as such may as well undergo fronting, (13c), (c) the verb can form a constituent together with *het* and the prolepsed clause, which altogether can surface dislocated in the left periphery of the clause, (13d). Based on the same reasoning, I argue the verb and the embedded cannot undergo fronting together to the exclusion of the proleptic pronoun, (13e), because the first two, that is, the verb and the embedded clause do not form a constituent in clausal prolepsis (see Angelopoulos 2022 for more details). With this in mind, let us now turn our attention to an additional property of clausal prolepsis, namely, that the proleptic pronoun and the prolepsed clause stand in a syntactic dependency.

3.4 Proform choice

Using evidence from the distribution of the proleptic pro-forms in clausal prolepsis, this section argues that the proleptic pro-form and the prolepsed clause stand in a syntactic dependency, such as Merge. As I discuss, this syntactic dependency is responsible for a contrast in the behavior of *het* and the demonstrative *dit* 'this' in clausal prolepsis. Specifically, in contrast to *het*, *dit* is ruled out in clausal prolepsis. I begin with a short background on *dit*. This demonstrative is ambiguous just like *het*, between individual and proposition denoting depending on whether it has an individual-denoting expression or a proposition as antecedent. For instance, (14) illustrates an example in which *dit* 'this' is individual denoting.

(14) Jan ging naar de bibliotheek$_i$. Dit$_i$ was zijn favoriete plek in de stad.
Jan went to the library this was his favorite place in the city
'John went to the library. This was his favorite place in the city.'

Under the propositional usage, *dit* can have a proposition as an antecedent. So, assuming a speaker, Speaker A, who utters a proposition like *blue whales are pregnant for 10-12 months*, Speaker B can use the sentence in (15) as a possible answer. In this case, *dit* can pick the proposition introduced by Speaker A as an antecedent.

(15) ?Dit wist ik.
this knew I
'I knew this.'

(16a) shows that *dit* 'this' can relate semantically to a clause that follows, (16a).[3] Nonetheless, (16b) shows that this property is not sufficient to license *dit* in clausal prolepsis.

(16) a. Ik wist dit$_i$: [Erik was hier]$_i$.
I knew this Erik was here
'I knew this: Erik was here.'

b. *Ik wist dit$_i$ [dat jij er bent]$_i$.
I knew this that you there are
Intended: 'I knew this that you are there.'

Since in principle *dit* can relate semantically to a proposition that follows it (cf. 16a), the ungrammaticality of (16b) cannot be due to semantic properties of *dit*. Instead, I assume that the ungrammaticality of (16b) is suggestive of a syntactic dependency between the pro-form and the embedded clause. For instance, I propose in Angelopoulos (2022) that the ungrammaticality of (16b) follows as a result of the fact that in clausal prolepsis, the pro-form and the embedded CP stand underlyingly in the syntactic dependency in (2) where a D-head takes the prolepsed clause as its complement. As mentioned previously, the CP undergoes movement that is, CP-extraposition, outside the DP, and, thus, must transit through the first phase edge, that is, Spec,DP. With *het*, the Spec,DP position is empty so CP-extraposition can take place, and thus, clausal prolepsis is well-formed in this case. On the other hand, demonstratives occupy Spec,DP (cf. Leu 2015 and references therein). Given this, *dit* is not allowed in clausal prolepsis because occupying Spec,DP, *dit* blocks the escape hatch through which CP-movement takes place.

3.5 Selectional Dependencies

In this section I show that the matrix verb and the prolepsed clause stand in a selectional dependency. This is shown below with the verb *afvragen* 'wonder'. This verb selects an embedded interrogative, as shown in (17a). Furthermore, the selectional dependency established between the matrix verb and the embedded clause is not blocked by the presence of *het* in clausal prolepsis. Similarly, the same verb does not select for declarative clauses, and, as shown in (17b), the presence of *het* does not change this property.

[3]The discussion here does not include *dat* 'that'. Just like *het*, *dat* cannot be used in clausal prolepsis, (ia). However, it is unclear whether this is due to syntactic reasons because in contrast to *dit*, *dat* cannot be used cataphorically more generally, as shown by the fact that it cannot refer to a clause that follows it, (ib).

(i) a. *Ik wist dat$_i$ [dat jij er bent]$_i$.
I knew that that you there are
Intended: 'I knew that: that you are there.'

b. *Ik wist dat$_i$: [Erik was hier]$_i$.
I knew that Erik was here
Intended: 'I knew that: Erik was here.'

(17) a. Ik vraag (het) me af [of ze komen vanavond].
I ask it me PRT if they come tonight
'I am wondering if they are coming tonight.'

b. *Ik vraag (het) me af [dat ze komen vanavond].
I ask it me PRT that they come tonight
Intended: 'I am wondering if they are coming tonight.'

4. Previous analyses of clausal prolepsis: an overview and discussion

Based on the empirical findings of the previous sections, this section examines which of the previous analyses can be a possible candidate for Dutch clausal prolepsis. These previous analyses differ in three respects having to do with (a) the semantic content of the proleptic pronoun, whether it is an expletive or a semantically contentful one, (b) the syntactic position of the proleptic pronoun, whether it enters the derivation in the argument position of the verb or in the specifier position of the embedded clause, and (c) the syntactic position of the prolepsed clause, whether it is Externally Merged in the argument position of the verb or in an adjunct position. I go through these different analyses, and show that they fail to account for one or more of the properties of Dutch clausal prolepsis. I begin with a short note on analyses that take the proleptic pronoun to be expletive. I then proceed with a strand of analyses that I call Base Generation because they take the prolepsed CP to be base generated in its surface position. I proceed next with analyses that involve a movement step either of the proleptic pronoun or the prolepsed clause.

4.1 *Het* is not an expletive

Looking at English, Rothstein (1995) shows that in contrast to plain clausal arguments, a clause linked to an object pronoun, as the one in (18), receives a different interpretation. Specifically, in the absence of *it*, Rothstein notes that the speaker '[...] simply regrets of falling asleep.' On the other hand, in the presence of *it*, the speaker regrets the '[...] particular event of falling asleep during the dinner party going on around her.'

(18) I regret (it_i) [that I am falling asleep]$_i$. Rothstein (1995:(67b))

Rothstein argues that the proleptic pronoun in (18) has semantic content, and is responsible for the different interpretation a clausal argument has in the presence of the pronoun.[4] Given this, the English proleptic pronoun parallels Dutch *het*, which, as shown, also has semantic content. Since a proleptic pronoun has semantic content, accounts like Postal and Pullum (1988), Authier (1991) and Stroik (1996) that treat the proleptic pro-form as expletive, are ruled out both for Dutch and English. This said, let us now proceed to the first strand of analyses in which the proleptic pro-form is a contentful pronominal and the prolepsed clause is base-generated in an adjunct position.

[4]See Angelopoulos (2022) for similar observations on the interpretation of prolepsed clauses in Dutch.

4.2 Base generation

4.2.1 Bennis (1986)

The earliest base generation account was proposed in Bennis (1986) for clausal prolepsis in Dutch. Under this analysis, *het* is a true pronominal, and is merged in the complement position of the verb. The prolepsed CP is base generated as a VP adjunct, just as illustrated in (19). Since the embedded clause is not merged in the argument position of the verb, Bennis (1986:104) argues that it is not a direct argument of the verb, '[...] but only an 'indirect' argument by virtue of coindexation with the preverbal object *het*.'

(19) $[_{VP}\ [_{VP}\ V\ het_i\ ]\ CP_i]$

Bennis's analysis cannot account for the fact that the demonstrative *dit* cannot be used in clausal prolepsis (cf. 16b). This is so because, as shown in (16a), *dit* can be co-indexed with a clause that follows it, and, thus, it should be able to occupy the verb's internal argument position in (19), and be co-indexed with a prolepsed CP in the VP-adjunct position, just like *het*. Secondly, an additional issue arises with selection. Specifically, selection is standardly assumed to be satisfied in the most local configuration that is, Head-Comp or Spec-Head. Given this, the fact that the matrix V stands in a selectional dependency with the prolepsed clause (cf. Section 3.5) does not follow under Bennis's analysis because in (19), V and the prolepsed CP do not stand in a local configuration. With this in mind, we now turn to analyses in which either the pronoun undergoes movement or the prolepsed clause.

4.3 Movement

4.3.1 Stroik (1996)

Looking at clausal prolepsis in English (cf. 20a), Stroik (1996) presents an analysis according to which the proleptic pronoun, that is, *it*, is analyzed as an expletive. (20b) also shows that the proleptic pronoun enters the derivation in Spec,CP of the embedded clause, and undergoes movement into the matrix clause, for formal reasons, e.g. case. The position to which *it* undergoes movement in clausal prolepsis, Spec,Agr_OP, is situated above the matrix VP. Under this view, the prolepsed clause stays in the argument position. Furthermore, the matrix V undergoes movement into a position higher than AgrOP identified as PredP.

(20) a. I should resent it_i greatly [that you did not call]$_i$.

b. I should $[_{PredP}\ resent_j\ [_{AgrOP}\ it_i\ [...\ greatly\ t_j\ [_{CP}\ t_i\ [_{C'}\ that_C$ you did not call]]]]]

Gluckman (2021) proposes a similar analysis to the one in Stroik (1996), although in Gluckman's analysis expletive movement does not take place for case. Instead, it arises through an Agree relation between T and the expletive. Under these analyses, merger of

the proleptic pronoun in Spec,CP is unconstrained. In other words, a proleptic pronoun is always free to be merged in Spec,CP, unless this position is occupied e.g. by a *wh*-item in an embedded question. Given this, a prediction which would be expected if their analysis were to hold in Dutch as well is that clausal prolepsis should be allowed with all verbs which can take a CP-complement. This prediction is not borne out because of predicates like *blij zijn* 'be happy' which, as was shown in table 1, can take a CP-complement, yet, they fail to license clausal prolepsis. Secondly, if the verb in Dutch undergoes movement to Pred, an additional prediction is that the verb and the proleptic pronoun cannot form a constituent to the exclusion of the embedded clause, and, thus, the verb and the pronoun will not be able to undergo fronting. This prediction is not borne out because, as shown in (13c), fronting of the pronoun and the embedded clause is possible. If the verb does not undergo movement to Pred in Dutch, then a different prediction is that the prolepsed clause and the matrix verb will form a constituent, which, thus, should be able to undergo fronting to the exclusion of the proleptic pronoun. Again, this prediction is not borne out because fronting of the verb and the embedded clause is not allowed (cf. 13e). To sum up, besides the idea that *it* in object clausal prolepsis is an expletive, we saw that the analysis in Stroik (1996) cannot be extended to Dutch clausal prolepsis because it cannot account for several other of its properties.

4.3.2 Ott and De Vries (2016)

In this section I go through the bi-clausal analysis of clausal prolepsis proposed in Ott and De Vries (2016), and show the issues it faces in regard to the constituency structure of clausal prolepsis discussed in Section 3.3. This work focuses primarily on right dislocated DPs although Ott and De Vries argue that their proposed account can be extended to the cases of clausal prolepsis we examine here where a clause that occupies a right clause edge is linked to a pro-form. Under this analysis, the verb and the pronoun, identified as correlate in the structure below, are contained in CP1. The prolepsed clause is hosted in a different CP, CP2 below, and undergoes movement into the left periphery where it is interpreted as a Topic. The structure below the CP undergoes PF-deletion giving rise to the surface order.

(21) a. $[_{CP1}$ . . .V correlate . . .] $[_{CP2}$ CP_i [. . . t_i . . .]] $\rightarrow$ PF-deletion

b. [$_{CP1}$ . . .V correlate . . .] $[_{CP2}$ CP_i ~~[. . . t_i . . .]~~]

The correlate is realized by *het* in Dutch, and like all pronouns, it undergoes scrambling out of the VP. Given this, the account above predicts that after scrambling of *het*, there is a VP containing only the verb which may undergo fronting. As we saw, fronting can affect a constituent larger than a VP that may also contain a scrambled object. This can be accounted for in (21b) because being in the same CP, the verb and the correlate may form a constituent and thus, undergo fronting. On the other hand, the verb and the correlate do not form a constituent with the prolepsed clause, as a result of the fact that the prolepsed clause is contained in a different CP. So, the bi-clausal analysis of Ott and De Vries (2016)

falls short in accounting for the fact in (13d) where it was shown that that the verb, *het* and the prolepsed CP do in fact form a constituent which as such, can undergo fronting.

4.4 Longenbaugh (2019)

Longenbaugh (2019) proposes an analysis of clausal prolepsis, which builds on the idea that CPs denote predicates of individuals with propositional content (cf. Moulton 2015 i.a.). This denotation allows the CP and the matrix verb to compose via Chung and Ladusaw's (2003) Restrict (cf. Kratzer 2006. Restrict yields a complex predicate of individuals with propositional content, type <e,<s,t>>, subject to the constraint that this individual must satisfy the denotation of both the CP and the verbal predicate. In clausal prolepsis, this complex predicate comprising the VP and the CP is saturated by the proleptic pronoun. (22) shows that the VP and the CP are merged together before merger of the proleptic pronoun. The surface order is derived via postsyntactic movement of the CP.

(22) [$_{VP}$ [$_{VP}$ regret CP] it]

The issue with Longenbaugh's analysis is that it wrongly predicts that all verbs that can combine with a CP and, thus, form a complex predicate should be able to license clausal prolepsis. This is so because there is nothing that can prevent the complex predicate from taking a pronominal argument, just as in (22). However, it is definitely not the case, as we saw with predicates like *blij zijn* (cf. table 1), that all verbs that can take a clausal argument can also license clausal prolepsis. Similarly, the verb *sigh* of English, which can combine with an embedded clause, cannot license clausal prolepsis, e.g. *Mary sighed (*it) that she didn't want the award*, contrary to what is predicted by Longenbaugh's account. Secondly, because the prolepsed CP does not stand in syntactic dependency with the proleptic pronoun in Longenbaugh's account, only the complex predicate VP+CP does, an additional issue of this account is that it cannot predict the fact that clausal prolepsis cannot be formed with the demonstrative *dit* (cf. 16b). This is so because just like *het*, *dit* is of type e, and so, there is nothing in principle which can prevent *dit* from merging as an argument of the complex predicate formed by the verb and the CP.

5. Discussion and conclusion

This paper established the following five properties of Dutch clausal prolepsis: (i) *het* in (1) is a semantically contentful pronoun, (ii) selection of a clausal complement is neither a necessary nor a sufficient condition for licensing clausal prolepsis, (iii) the verb and the prolepsed clause do not form a constituent to the exclusion of proleptic pronoun, (iv) the proleptic pronoun and the prolepsed CP are related underlyingly via a syntactic dependency, and (v) the matrix V and the prolepsed clause stand in a selectional dependency. Property (i) poses a challenge for analyses of clausal prolepsis of English, such as Postal and Pullum (1988) and Authier (1991), treating the proleptic pronoun as expletive. Property (ii) rules out analyses, like the one in Stroik (1996), as a result of the fact that these analyses cannot predict which clause embedding predicates allow clausal prolepsis. Property

(iii) is problematic for a bi-clausal analysis of clausal prolepsis, as this in Ott and De Vries (2016). Property (iv) does not follow from analyses, like the one in Bennis (1986) or Longenbaugh (2019), where the prolepsed CP does not stand in a syntactic dependency with the proleptic pronoun. Similarly, property (v) poses a challenge for Bennis (1986), because in this analysis, the matrix verb and the prolepsed clause are not local. On the other hand, under the nominalization analysis in (2), clausal prolepsis is propositional *het* underlyingly. This accounts for the fact that clausal prolepsis is allowed in all contexts where propositional *het* is possible (property ii), as well as for the fact that the proleptic pronoun is not an expletive (property i). Furthermore, because the proleptic pronoun and the prolepsed CP stand in a syntactic dependency, mediated via Merge, property (iv) can be accounted for. Properties (iii) and (v) are shown in Angelopoulos (2022) to follow from the underlying structure through extraposition of the CP. Given that properties (i)-(v) are accounted for by a nominalization account, the paper concludes that this account is superior to previous ones.

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