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French clausal ellipsis: types and derivations

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Abstract: This article confirms the existence in French of an overt morphological correlate to Merchant’s abstract E-feature, which I call special *le*. Taking as a point of departure my claim in previous work that special *le* is, in Modern French, the obligatory phonological realization of the E-feature in French predicate ellipsis, I undertake a close examination of a different type of ellipsis, namely, clausal ellipsis. I first show that, with the exception of sluices, both overt and covert versions of the E-feature in clausal ellipsis are available, although the choice between the two versions varies along register and construction specific lines. Second, I establish that there are, in French, two distinct types of clausal ellipsis. Type 1, exemplified by so-called modal ellipsis, only requires the pairing of an E-feature with a modal verb that takes a phasal complement. Type 2, exemplified by sluices and the ellipsis of the complement to a bridge verb, is instantiated by the pairing of an E-feature with the higher C-projection (C_1) of a CP-recursion structure licensed by the presence of a speech act. It is further argued that when C_1 is endowed with an E-feature, it must also be associated with an EPP feature, which is but one example of feature clustering among many others. A direct consequence of this is that type 2 clausal ellipsis requires, rather than allows, *wh*-extraction of a remnant in order to be licensed. Finally, it is shown that relative clauses that embed a bridge verb license type 2 clausal ellipsis only when they are of the ACD type. Regardless of any analysis, this observation entails that standard and ACD relatives undergo distinct derivations. I assume that, in order to avoid infinite regress, ACD relatives force a more complex/costly derivation: they must be late merged, and I argue that late merged ACD relatives contain a full copy of the DP relative head which constitutes, in the specifier of C_1 , the type of remnant that licenses type 2 clausal ellipsis; that is, a remnant merged with fully valued ϕ -features. In standard relatives, on the other hand, relative pronouns are minimal pronouns that bear unvalued ϕ -features that are valued in the course of the derivation via Agree between the head noun and the relative pronoun. As such, run-of-the-mill relative pronouns, having unvalued features when they transit through the specifier of C_1 , are not appropriate remnants for type 2 clausal ellipsis.

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1 Introduction

Like many other languages, French has, in its lexicon, pro-forms that substitute for a proposition. The most common of these is *le* ‘it/so’, a weak (clitic) pronoun that refers back to a previously introduced proposition. This type of anaphora can only be effected by means of an overt pronoun; that is, *le* never alternates with *pro* or with an elided CP or TP category in such cases. This is illustrated in (1) where the material within brackets is taken to be the pronoun’s antecedent.

- (1) a. Xavi concède [qu’ils ne sont pas à la hauteur]. C’est la
Xavi admits that-they Neg are not at the height it’s the
première fois qu’il *(le) dit.
first time that-he it says
‘Xavi admits that they don’t measure up. It’s the first time he says it.’
- b. [Axel est un skieur expert]; en tous cas, il *(le) prétend.
Axel is a skier expert in any case he it claims
‘Axel is an expert skier; or so he claims.’
- c. Êtes-vous sûr [qu’Axel est un skieur expert], ou est-ce que Vous *(le)
are-you sure that-Axel is a skier expert or Q-part you it
supposez?
assume
‘Are you sure Axel is an expert skier, or do you just assume so?’
- d. Est-ce que [les océans se réchauffent] ? Ces nouveaux résultats
Q-part the oceans are-getting-warmer these new results
semblent *(le) suggérer/indiquer.
seem it to-suggest/to-indicate
‘Are the oceans getting warmer? These new results seem to suggest/prove it.’

In addition to the clitic *le*, the strong demonstrative pronoun *ça* ‘that’ can substitute for a proposition given the proper context, for example when the speaker experiences negative affect towards the referent, as in (2). Like *le*, *ça* does not alternate with a silent category.

- (2) A: Donc, vous pensez [que tout va pour le mieux].
so you think that all goes for the best
‘So, you think that things are going well.’

- B: Non, je n'ai pas dit *(ça) !
 no I Neg-have not said that
 'No, I didn't say that.'

Given these properties, it is somewhat surprising that there are contexts in which *le* does alternate with a silent category and never alternates with the strong pronoun *ça*. One such context (others will be discussed below) is that involving a propositional complement to a modal verb. This is illustrated in (3).¹

- (3) a. Ils n'ont pas réagi, mais ils (l')auraient pu/*ils auraient pu ça.
 they Neg-have not reacted but they (LE)would-have been-able
 'They didn't react, but they could have.'
 b. Il a vendu la mèche. Il ne (l')aurait pas dû/*il n'aurait pas dû ça.
 he has sold the fuse he Neg (LE)would-have not must
 'He spilled the beans. He shouldn't have.'

Regarding the paradigm in (3), some preliminary remarks are in order. First, the examples in (3) have the same interpretation with *le* as they do without *le*. Second, as is often the case when the linguistic grammar of a language makes two options available, speakers vary as to which option is to be preferred over the other in a particular sentence/construction according to factors that are not always clear. There does seem, however, to be a tendency for speakers to prefer the use of *le* in

1 A reviewer points out that although the claim that clausal *ça* is not grammatical with French modals is solid, it does not extend to *falloir* 'be necessary' or to *vouloir* 'want', as the examples in (i) would seem to suggest.

- (i) a. Il faut bien ça.
 it is-necessary well that
 'That's what it takes.'
 b. Ils parlent de fermer l'école maternelle, mais personne ne veut ça.
 they are-talking about to-close the-school maternal but nobody Neg wants that
 'They're talking about closing the preschool, but nobody wants that.'

I do not think, however, that it is coincidental that the two modal verbs that can take *ça* as a complement in (i) are those that can also take NP/DP complements, as (ii) illustrates.

- (ii) a. Il faut du temps pour identifier une nouvelle souche virale.
 it is-necessary some time to identify a new strain viral
 'It takes time to identify a new viral strain.'
 b. Elle veut ce rapport demain.
 she wants this report tomorrow
 'She wants this report tomorrow.'

In other words, it is not clear to me that the *ça* that appears in the example in (i) substitutes for a clause.

formal styles of speech (so-called *français soutenu*) and to favor not using *le* in colloquial speech (so-called *français familier*).² On the syntactic side, such sentences, when used without *le*, have been argued by Dagnac (2010) and Authier (2011) to involve ellipsis of an infinitival complement to the modal head, giving (3a) without *le*, the structure illustrated in (4), where the crossed-out material is structurally present but remains unpronounced in PF.

- (4) ... ils auraient pu [TP ~~PRO~~ réagir].
they would-have been able to-react

A possible interpretation of the paradigm in (3) would then be that the absence of *le* signals clausal ellipsis, while the presence of *le* signals that propositional anaphora is achieved pronominally, just like it is in (1). There are, however, two facts that militate against this view. First, it does not explain why the use of the strong pronoun *ça* is sharply ungrammatical in (3). Second, one of the main reasons to assume that sentences like (3) involve ellipsis is that extraction is possible out of the ellipsis site, as shown in (5).

- (5) a. Elle joue avec qui elle peut.
she plays with who(ever) she is-able
'She plays with whoever she can.'

2 This is just a tendency since, as pointed out by a reviewer, the use of *le* in modal ellipsis is attested in text messages/twitter postings and conversely, modal ellipsis without *le* is attested in classic literary works. Register can nevertheless have a strong influence on judgements, even to the point that for some speakers, one option is selected to the exclusion of the other. For example, as is well-known, French comparative standards contain expletive negation *ne* in formal registers (ia) and are introduced by *ce que* 'what' only in more colloquial styles (ib).

- (i) a. Elle gagne plus d'argent que vous **ne** croyez qu'elle en gagne.
she earns more of-money than you Neg think that-she of-it earns
b. Elle gagne plus d'argent que **ce que** vous croyez qu'elle en gagne.
she earns more of-money than what you think that-she of-it earns
'She makes more money than you think she makes.'

As I will show below (cf. (7)), clausal ellipsis can then apply to the propositional complement of *croyez* in (i). Interestingly, a reviewer comments that s/he needs *ne* in most comparatives with clausal ellipsis when *le* is present and does not accept *le* with clausal ellipsis in comparatives introduced by *ce que*. The examples in (ii) reflect the reviewer's judgements. These judgements are, however, not shared by those speakers with a more "liberal" dialect, who accept both *le* and its silent counterpart in both examples though they may still express a preference for *le* in formal contexts.

- (ii) a. Elle gagne plus d'argent que vous ne ***(le)** croyez.
she earns more of-money than you Neg ***(LE)** think
b. Elle gagne plus d'argent que **ce que** vous ***(le)** croyez.
she earns more of-money than what you ***(LE)** think
'She makes more money than you think.'

- b. Il a pas dit lesquels il veut évaluer, et lesquels
 he has not said which-ones he wants to-evaluate and which-ones
 il (ne) veut pas.
 heNeg wants not
 'He didn't say which ones he's willing to evaluate, and which ones he isn't.'

On the pronominal analysis of the *le* that appears in (3), we thus predict that such extraction operations should be incompatible with the presence of *le* since pronouns have no internal structure. This, however, turns out to be the incorrect prediction: *le* can, in fact, be used in sentences involving *wh*-extraction like (5), as (6) shows.³

- (6) a. Et vous lui reprochez de s'allier avec qui elle **le**
 and you her blame of to-join-forces with whoever she LE
 peut pour défendre chèrement ses acquis menacés ?
 can to defend dearly her assets threatened
 'And you blame her for joining forces with whoever she can to vigorously
 defend her assets under threat?'
 (Le Droit, 10 avril 2019)
- b. Pour cela, les types de Goldman Sachs éliminent qui il
 for that the guys from Goldman Sacks eliminate whoever it
le faut.
 LE is-necessary
 'To achieve that, the Goldman Sachs guys eliminate whoever they have to.'
<https://la-chronique-agera.com/page/300/>
- c. Elle ne sait pas encore à qui elle en parlera, et à
 she Neg knows not yet to whom she of-it will-speak and to
 qui elle ne **le** pourra jamais.
 whom she Neg LE will-be-able never
 'She does not yet know to whom she'll talk about it, and to whom she'll
 never be able to.'

Thus, the examples in (6) strongly argue against treating *le* in modal ellipsis contexts as a propositional weak pronoun. While this might explain why the strong pronoun *ça* remains unavailable in such examples, namely because they disallow any kind of pronominal anaphora, it leaves the syntactic status of what I will from now on call

³ A reviewer, who graciously provided me with the example in (6c), accepts *le* + modal ellipsis sentences with an extracted prepositional *wh*-phrase, but rejects examples like (6b), which involve *wh*-extraction of a direct object. I will not attempt here to account for this dialectal variation but will instead note that the fact that some extractions are possible in the reviewer's dialect is enough to justify the claim that *le* cannot be pronominal in such examples.

‘special *le*’ in (3) and (6) unexplained. In this article, I first argue that special *le* is the overt realization of the E-feature hypothesized by Authier (2023) to occur in French predicate ellipsis.⁴ I then provide evidence for the existence of two types of clausal ellipsis in French and propose an analysis that accounts for their distribution. The rest of this article is organized as follows. Section 2 establishes that the presence of special *le* systematically correlates with contexts in which clausal ellipsis occurs. In Section 3, I take stock of the evidence uncovered in Sections 1 and 2 and I establish the existence of two distinct types of clausal ellipsis: Type 1, which may, but need not, involve the extraction of an ellipsis remnant, and type 2, which must involve extraction of a remnant to be licensed. Section 4 lays out the dynamic derivational theory of ellipsis assumed in this article. In Section 5, I propose a new analysis of French modal ellipsis (type 1 clausal ellipsis) that accords with the assumptions made in Section 4. Sections 6 and 7 propose an account of the properties that characterize type 2 clausal ellipsis found in comparative standards and sluices. Section 8 seeks to provide an explanation of why type 2 clausal ellipsis is licensed in ACD relatives, but not in standard relatives. Finally, in Section 9, I provide a summary of the findings and proposals made in this article.

2 The distribution of special *le*

In this section, I will provide evidence that the special *le* whose existence was uncovered in Section 1 is not restricted to modal ellipsis sentences. Specifically, I will show that the presence of special *le* generalizes to contexts in which clausal ellipsis occurs. These include the standard of comparatives, Antecedent Contained Deletion (ACD) sentences, and sluicing with long distance *wh*-extraction.

2.1 Special *le* in comparatives

The pattern exemplified by (3), (5) and (6) is also found in the standard of those comparatives that contain a phonologically unexpressed but semantically understood proposition. The examples in (7)–(8), which (optionally) feature special *le* and disallow *ça*, are of this type.

⁴ Bentzen et al. (2013) and Houser et al. (2011) make proposals for what appears to be similar (predicate ellipsis) constructions in German and Danish respectively. It is beyond the scope of the present work to assess whether the German and Danish counterparts to examples like (37) below can be made to follow from the analysis of special *le* argued for in this article.

- (7) a. J'ai dépensé plus d'argent que je (ne) (le) pensais/escomptais.
I-have spent more money than I (Neg) (LE) thought/expected
'I spent more money than I thought/expected.'
- b. Le maïs consomme moins d'eau que vous (ne) (l')imaginez.
the corn needs less water than you (Neg) (LE)imagine
'Corn needs less water than you imagine.'
- c. Il n'a pas effectué autant d'heures supplémentaires qu'il (le)
he Neg-has not done as-many hours overtime as-he (LE)
prétend.
claims
'He didn't put in as many overtime hours as he claims.'
- d. Les océans Se réchauffent moins vite que ces mesures (le)
the oceans are-warming less rapidly than these measures (LE)
suggéraient.
suggested
'Oceans aren't warming up as fast as these measurements suggested.'
- (8) a. *J'ai dépensé plus d'argent que je pensais/escomptais ça.
b. *Le maïs consomme moins d'eau que vous imaginez ça.
c. *Il n'a pas effectué autant d'heures supplémentaires qu'il prétend ça.
d. *Les océans se réchauffent moins vite que ces mesures suggéraient ça.

The classical syntactic analysis of comparative standards posits the extraction of a degree/number phrase to a position in the left periphery (cf. Chomsky 1977; Kennedy 2002; Bacskai-Atkari 2014, among others). The first-merge position of this degree/number phrase is, in examples like (7), located in the silent propositional complement to a verb (e.g., *penser* 'think', and *escompter* 'expect' in (7a)). This is schematically illustrated in (9), where the whole chain headed by the degree/number operator remains silent (Bresnan's (1973) so-called comparative deletion).

- (9) J'ai dépensé plus d'argent que [_{CP} [_{QP} ~~x quantité d'argent~~] je pensais
I-have spent more of-money than ~~x amount of money~~ I thought
[_{CP} [_{QP} ~~x quantité d'argent~~] que [j'avais dépensé [_{QP} ~~x quantité d'argent~~]]]
~~x amount of money that I had — spent x amount of money~~

Since the degree QP [*x quantité d'argent*] 'x amount of money' in (9) is extracted from the missing propositional complement to *pensais* 'thought', the latter must be assumed to be structurally present but phonologically silent at PF (i.e., subject to ellipsis). That successive-cyclic movement of a *wh*-type degree QP is involved in such examples is supported by the fact that this *wh*-element can, in French, be phonologically realized by *ce que* 'what', as shown in (10a), and that it obeys island constraints, as the contrast between (10b) and (10c) illustrates.

- (10) a. J'ai dépensé plus d'argent que (ce que) je pensais.
 I-have spent more money than (what) I thought
 'I spent more money than I thought.'
- b. J'ai gagné moins d'argent que (ce que) le fisc semble croire.
 I-have earned less money than (what) the IRS seems to-believe
 'I earned less money than the IRS seems to believe.'
- c. *J'ai gagné moins d'argent que (ce que) j'ai parlé à
 I-have earned less money than (what) I-have spoken to
 un agent du fisc qui croit.
 an agent of-the IRS who believes
 '*I earned less money than I talked to an IRS agent who believes.'

Remarkably, the paradigm in (10) remains unchanged when special *le* is used, as shown in (11).

- (11) a. J'ai dépensé plus d'argent que (ce que) je **le** pensais.
 b. J'ai gagné moins d'argent que (ce que) le fisc semble **le** croire.
 c. *J'ai gagné moins d'argent que (ce que) j'ai parlé à un agent du fisc qui **le** croit.

Thus, the generalization that seems to emerge is that the (optional) presence of special *le* is contingent upon clausal ellipsis. However, before I further discuss what the connection between the two might be, I must first consider an alternative view of sentences like (10a) and (11a) which would ascribe to such examples the analysis proposed by Kennedy and Merchant (2000) (hereafter K&M) for similar English sentences like (12).

- (12) I spent more money than (what) Ella said/thought/predicted/expected.

While K&M also assume that sentences like (12) involve *wh*-movement, they argue that they do not involve clausal ellipsis. Instead, they propose that *what* (or its silent version) in the standard of (12) is an anaphoric nominal operator that is semantically a proposition containing a variable over degrees/amounts. The value of this variable is, they contend, contextually determined; that is, anaphoric to the open degree term given by the main clause. Thus, K&M give sentences like (13a) the syntactic representation in (13b) and further assume that the semantics of the overt (or covert) *what* in (13b) is as in (13c).

- (13) a. Gianna spent more money than {Op/what} Peter thought.
 b. Gianna spent more money than [{Op_i/what_i} Peter thought t_i].
 c. || Op/what || = $\exists x$ [money (x) & |x| = d & spent (Gianna, x)]

K&M's analysis faces a number of serious challenges, however. First, as they themselves acknowledge, by appealing to a more interpretive analysis of some

comparative constructions, they depart from the null hypothesis that English comparatives can be given a uniform analysis. Second, as they point out, their analysis makes the prediction that the *Op/what* in comparatives like (13a), being categorially nominal and therefore associated with a Case feature, should be barred from configurations in which non-*wh*-NPs fail to have their Case feature valued. However, contrary to what they claim, this prediction is not borne out, as the paradigm in (14) illustrates.⁵

- (14) a. Anthony Mantha is performing better than it appears.
b. *It appears his low-key performance.

Similar counterexamples exist in French as well, as the paradigms in (15) and (16) make clear.

- (15) a. Le cuivre coûte moins cher que (ce que) je (l')aurais parié.
the copper costs less than (what) I (LE)would-have bet
'Copper costs less than I would have bet.'
b. *J'aurais parié le coût élevé du cuivre.
I-would-have bet the cost high of-the copper
- (16) a. Cette forêt abrite moins de prédateurs que (ce qu')il (le) paraît.
this forest harbors less of predators than (what)-it (LE) appears
'This forest is home to fewer predators than it appears.'
b. *Il paraît un grand nombre de prédateurs.
it appears a large number of predators

Third, and most importantly, assuming a K&M-style analysis for French sentences like (11a) leaves us with unanswered questions regarding the distribution of special *le*. Chief among them is the question of how we should account for contrasts such as that in (17), given that *ce que* 'what' in (17b) can elicit possible answers that are propositional in nature, as (18) shows.

- (17) a. Justine mange plus de frites qu'elle le dit.
Justine eats more of fries than-she LE says
'Justine eats more fries than she says.'

⁵ Note that the overt phonological realization of the *wh*-operator as *what* in (14) is possible for many, but not all, speakers. This is illustrated by the examples in (i), which I obtained through a Google search.

- (i) a. %Early in the film, we learn that Max is hiding more than what it first appears.
b. %With car accident victims, always assume that a bruise might involve more than what it appears.

- b. Je ne sais pas ce que Justine (*le) dit.
 I Neg know not what Justine (*LE) says
 'I don't know what Justine says.'

- (18) A: Sais-tu ce que Justine dit ?
 know-you what Justine says
 'Do you know what Justine says?'
 B: Qu'elle mange très peu de frites.
 that-she eats very few of fries
 'That she eats very little fries.'

In order for K&M's analysis to account for the contrast in (17), we would have to stipulate that special *le* is only compatible with a subset of those *wh*-operators that are semantically propositional; namely, those that also (semantically) contain a variable over amounts/degrees. However, by doing so, we seem to be drifting further and further away from arriving at an explanation of the connection between special *le* in comparatives and special *le* in modal ellipsis. If, on the other hand, we steer away from an H&M-style analysis of comparatives such as (17a) and assume instead that comparatives with special *le* involve the ellipsis of a proposition, then the connection is clear: special *le* can only appear in sentences that involve clausal ellipsis.⁶

⁶ Provided that the appropriate focus semantic notion of contrast is met (cf. Heim 1997; Rooth 1992, among others), whole comparative standards can, in fact, be elided, as shown in (i). It is not clear to me how H&M would deal with such cases if not by positing propositional ellipsis.

- (i) a. Quand on va à la plage, on mange plus de poisson que ~~[on en mange]~~
 when we go to the beach we eat more of fish than we of-it eat
 quand on reste chez nous.
 when we stay at home
 'When we go to the beach, we eat more fish than ~~[we do]~~ when we stay home.'
 b. Hugo était aussi gêné que ~~[il serait]~~ gêné si on lui avait
 Hugo was as embarrassed as he would-be embarrassed if we to-him had
 découvert une maîtresse.
 discovered a mistress
 'Hugo was as embarrassed as ~~[he would be]~~ if we discovered he had a mistress.'
 c. On n'a jamais autant de traction qu'~~[on en a]~~ avec les pneus Michelin.
 one Neg-has never as-much of traction as one of-it has with the tires Michelin
 'You'll never have as much traction as ~~[you will]~~ with Michelin tires.'

Special *le* is barred from such contexts presumably because, being a clitic, it needs to attach to an appropriate (verbal) host. However, since it is optional (i.e., has a silent counterpart), ellipsis remains possible.

2.2 Special *le* in ACD sentences

Since it was first discovered by Bouton (1970), the phenomenon of Antecedent Contained Deletion (ACD), which refers to a situation in which an ellipsis site is properly contained within its antecedent, has been discussed at length in the literature on English VP ellipsis (see May 1985; Kennedy 1997; Hackl et al. 2012 among many others). This type of ACD is illustrated with free relatives in (19). There is, however, a less familiar type of ACD first noted by Vergnaud (1975) (see also Haik 2017; Larson 1999) that appears to involve a larger ellipsis; namely, clausal ellipsis. The examples in (20) are of this type.

- (19) a. She invited exactly who_i you'd expect her to [~~invite t_i~~].
 b. St. Petersburg City Council candidates don't live where_i they claim they do [~~live t_i~~].
 c. Kelly didn't contact who_i she says she did [~~contact t_i~~].
- (20) a. She invited exactly who_i you'd expect [~~her to invite t_i~~].
 b. St. Petersburg City Council candidates don't live where_i they claim [~~they live t_i~~].
 c. Kelly didn't contact who_i she says [~~she contacted t_i~~].

Interestingly, the type of ACD illustrated in (20) for English exists in French (cf. (21)) and here also we find an optional *le* that does not alternate with the strong pronoun *ça* (cf. (22)); that is, the now familiar special *le*.

- (21) a. Emma n'a pas téléphoné à qui elle (le) prétend/dit/pense.
 Emma Neg-has not called to who she (LE) claims/says/thinks
 'Emma didn't call who she claims/says/thinks.'
- b. Il n'habite pas du tout où je (l')imaginai.
 he Neg-lives not at all where I (LE)imagined
 'He doesn't live at all where I imagined.'
- c. Ils n'ont pas engagé qui je (l')escomptais.
 they Neg-have not hired who I (LE)expected
 'They didn't hire who I expected.'
- d. Elle n'a pas voté pour qui je (l')aurais parié.
 she Neg-has not voted for who I (LE)would-have bet
 'She didn't vote for who I would have bet.'
- e. Ce costume est loin de coûter ce que la qualité de son étoffe (le)
 this suits is far from costing what the quality of its cloth (LE)
 suggère.
 suggests
 'This suit is far from costing what the quality of the cloth it's made of suggests.'

- (22) a. *Emma n'a pas téléphoné à qui elle prétend/dit/pense ça.
 b. *Il n'habite pas du tout où j'imaginai ça.
 c. *Ils n'ont pas engagé qui j'escomptais ça.
 d. *Elle n'a pas voté pour qui j'aurais parié ça.
 e. *Ce costume est loin de coûter ce que la qualité de son étoffe suggère ça.

The first thing to note is that the missing material in sentences like those in (20) and (21) cannot, contra Larson (1999), be attributed to Null Complement Anaphora (NCA). This is because verbs like *expect* in (20a) or *prétendre* 'claim' in (21a) do not license NCA, as (23) makes clear.

- (23) a. *Liam passed the bar exam, and as far as I know, only his mother expected.
 b. *Je ne sais pas si Kylian parle le japonais couramment, mais sa
 I Neg know not if Kylian speaks Japanese fluently but his
 mère prétend.
 mother claims
 Intended: 'I don't know if Kylian is fluent in Japanese, but his mother
 claims he does.'

Second, since the ACD examples in (20) and (21) involve free relatives, they must, on any analysis of free relatives, involve syntactic movement to the C-domain of the relative clause CP of a *wh*-element that was first merged as an argument in the 'missing' clause. If so, we are led to the conclusion that this clause is structurally present but fails to be spelled out at PF. That is, the missing clause in such examples can reasonably be viewed as the combination of a silent intermediate *wh*-copy with TP ellipsis. The ungrammaticality of (23) then follows from the fact that, French modal ellipsis aside, clausal ellipsis appears to require the co-occurrence of *wh*-movement. This type of requirement is, in fact, at the heart of the characterization of sluicing and we therefore expect clausal ellipsis (and French special *le*) to occur in sluicing involving long distance *wh*-movement. In the next section, I show that this expectation is indeed fulfilled.

2.3 Special *le* in sluicing

Sluicing, first discussed in Ross (1969), is commonly analyzed as an instance of TP ellipsis occurring under a *wh*-filled C projection. This is illustrated in (24).

- (24) a. Manon a engagé quelqu'un, mais je sais pas
 Manon has hired someone but I know not
 [CP qui_i [TP ~~elle~~ a engagé t_i]].
 who she has hired
 'Manon hired someone, but I don't know who.'
- b. A: J'ai entendu dire que Manon avait engagé quelqu'un.
 'I heard that Manon hired someone.'
- B: Ah bon ? [CP qui_i [TP ~~a-t-elle~~ engagé t_i]]?
 really who has-she hired
 'Really? Who?'

In Merchant's (2001) theory of ellipsis phenomena, the syntactic licensing of sluicing involves the presence of an abstract morphological ellipsis feature [E] on the C-head that selects the TP that undergoes elision. This sluicing-type [E] feature is 'special' in that it must be associated with uninterpretable [*uw*h*, *uQ**] on C. Additionally, Merchant proposes the Sluicing-COMP Generalization, according to which, in sluiced sentences, no non-operator material may appear in C. This has the effect of ruling out TP ellipsis in sentences like (25).

- (25) a. *Oscar ne parle pas japonais, mais il dit [CP que [TP ~~il parle japonais~~]].
 Oscar Neg speaks not Japanese but he says that he speaks Japanese
 Intended: 'Oscar doesn't speak Japanese, but he says he does.'
- b. *Clément dit qu'il me remboursera, mais je me demande [CP si
 Clément says that-he me will-reimburse but I wonder if
 [TP_a ~~il me remboursera~~]].
 he me will-reimburse
 Intended: 'Clément says he'll reimburse me, but I wonder if he will.'

Albrecht (2010) goes a step further in restricting TP ellipsis in sluicing to clausal complements to C-heads with interrogative force. However, as shown in Radford and Iwasaki (2015), doing so leads to undergeneration because long-distance sluicing is, in fact, possible. They show this by using data involving Swiping (Sluicing With Inverted Prepositions in Northern Germanic), a phenomenon known to only occur in sluicing constructions (Culicover 1999; Merchant 2002; Rosen 1976, among many others).⁷ The sentence in (26) exemplifies Swiping.

- (26) Moira took a trip to Memphis, but I don't know **who with**.

Although the proper derivation of swiping constructions is still being debated, one popular type of analysis (often referred to as the "intermediate stranding" analysis)

7 Swiping is, however, not restricted to Northern Germanic. As Ott and Therrien (2020) show, it is also present in a variety of French spoken in Lafontaine, Ontario.

involves movement of the PP to a functional projection below CP but above the ellipsis site, followed by sub-extraction of the *wh*-word (cf. Hartman and Ai 2009; Radford and Iwasaki 2015; van Craenenbroeck 2010).⁸ A sluice like (26) is thus assumed to involve a derivation along the lines of (27).

(27) ... but I don't know [_{CP} who_i C [_{FP} [_{PP} with t_i] [_{TP} ... t_j ...]]]]

An advantage of this type of analysis is that it can be used to derive examples of Swiping with long distance *wh*-extraction. As pointed out by Hasegawa (2006: 436) and van Craenenbroeck (2010: 105, fn. 124), and discussed at length in Radford and Iwasaki (2015), the *wh*-word and the preposition of a swiped PP can find themselves in two different clauses when the *wh*-word moves long distance. Hartman and Ai (2009: 26) provide the examples in (28) (from an internet search) and Radford and Iwasaki (2015), the ones in (29).⁹

- (28) a. Besides, Jisao was 'invited' here. **Who** do you think **by**?
 b. Will I get married, and if so, **who** do you think **with**?
 c. He wants us. –**What** do you suppose **for**?
- (29) a. A recent poll is predicting the Socialists will win, but I'm not sure **how much** it is predicting **by**.
 b. You'll never believe it! She told me she's getting married again. And **who** do you think she said **to**?

On Radford & Iwasaki's (R&I) account, the bolded swiped clause in (29a) is derived as in (30). The PP [*by how much*] is merged in the (to-be-elided) clausal complement to the verb *predicting* and moves to the edge of FinP (which they assume to be a phase) in that clause. The preposition *by* then adjoins to a Focus head immediately above FinP, and the *wh*-expression *how much* moves to the specifier position of the ForceP projection in the embedded clause. From there, *how much* moves again to become the specifier of the interrogative ForceP projection in the superordinate clause. Finally, at PF, the embedded FinP undergoes ellipsis.

(30) [_{ForceP} how much [_{TP} it is predicting [_{ForceP} ~~how much~~ [_{FocP} [_{Foc} by] [_{FinP} ~~by how much~~ [_{TP} they will win by how much]]]]]]

⁸ But see Reich (2007), Ott and Struckmeier (2018), and Ott and Therrien (2020) for a different view, as well as Gotowski (2022) for a rebuttal of that view.

⁹ I refer the reader to Radford and Iwasaki (2015: 734–735) for arguments against the view that long-distance Swiping examples like those in (28) and (29) involve parenthetical material and for possible explanations as to why there appear to be constraints on the types of predicates that license long-distance Swiping.

As R&I emphasize, a consequence of their analysis of long-distance swiping is that FinP ellipsis can be licensed by a declarative Force head (contra Albrecht 2010) as long as this head is associated with a Wh-Q feature that allows a *wh*-element to transit through its specifier. In fact, as R&I point out, the existence of long-distance sluicing (without swiping) confirms this. They illustrate this point with examples like (31) (their (61)), to which I add some of my own in (32).

- (31) a. SPEAKER A: Where is he going?
 SPEAKER B: *Where do you think ~~he is going~~?*
 b. The chef told us we should put salt in the soup, but I can't remember
 how much he said ~~we should put in the soup~~.
- (32) a. SPEAKER A: I can't believe they promoted Bill to manager!
 SPEAKER B: Really? *Who did you expect ~~they would promote to manager~~?*
 b. The suspect admitted that he murdered several homeless men and was asked
 how many he remembered ~~that he had murdered~~.

Although in French, like in English, it is often difficult to build up a context that renders a long-distance sluice natural, examples of such sluices are attested, as the sentences in (33) show. Further, in such sluices, special *le* can appear on the verb that embeds the elided proposition.

- (33) a. Roxane a consulté plusieurs livres sur le sujet et je me rappelle pas
 Roxane has consulted several books on the topic and I remember not
 lequel elle (l')a dit, mais il y en avait un que tu devrais lire.
 which-one she (LE)has said but there was one that you should read
 'Roxane consulted several books on the subject and I don't remember
 which one she said, but there is one you ought to read.'
- b. Je sais pas qui tu (l')espérais, mais ils ont engagé Sonia pour
 I know not who you (LE)were-hoping but they have hired Sonia for
 le poste en syntaxe.
 the position in syntax
 'I don't know who you were hoping they would, but they hired Sonia for
 the position in syntax.'
- c. Je sais pas combien tu (le) croyais/pensais, mais ces
 I know not how-much you (LE) had-in-mind/thought but these
 skis coûtent plus de 700 €.
 skis cost over €700
 'I don't know how much you had in mind/thought, but these skis cost over
 €700.'

We thus come to the following conclusion: ‘Missing clauses’ in comparatives, ACD constructions, and long-distance sluicing are the product of the same syntactic process. In all of these constructions, clausal ellipsis occurs under a C-projection that harbors the silent copy of a *wh*-operator.¹⁰

3 Empirical synopsis

In the preceding sections, two main empirical patterns involving special *le* have been uncovered. First, special *le* must co-occur with ellipsis. Contrasts like those in (34) and (35) show this very clearly.

- (34) a. Imprime ces documents si tu le peux [~~PRO imprimer ces documents~~]!
 print-out these documents if you LE are-able ~~to print these documents~~
 ‘Print out these documents if you can.’
 b. Imprime ces documents si tu (*le) peux les imprimer!
 print out these documents if you (*LE) are-able them to-print
 ‘Print out these documents if you can print them.’
- (35) a. Les océans se réchauffent moins vite que ces mesures le
 the oceans are-warming less fast than these measurements LE
 suggéraient [~~qu’ils se réchaufferaient~~].
 suggested ~~that they would warm~~
 ‘Oceans aren’t warming up as fast as these measurements suggested.’

10 There is a use of *croire* ‘believe’ and *penser* ‘think’ in examples like (i) and (ii) that would seem to contradict this descriptive generalization in that they appear to involve a ‘missing clause’ in the absence of *wh*-extraction.

- (i) Margaux a déjà contacté le doyen, je crois/pense.
 Margaux has already contacted the dean I believe/think
- (ii) A: Margaux a probablement contacté le doyen.
 Margaux has probably contacted the dean
 B: Tu crois/penses?
 you believe/think

Such examples are quasi-idiomatic, or at least not productive, however, as evidenced by the fact that they are restricted to first and second person, as (iii) shows.

- (iii) A: Théo dit que Margaux a probablement contacté le doyen.
 ‘Théo says that Margaux probably contacted the dean.’
 B: *Il croit/pense?
 he believes/thinks?

- b. Les océans se réchauffent moins vite que ces mesures (*le)
 the oceans are-warming less fast than these measurements LE
 suggéraient qu'ils se réchaufferaient.
 suggested that-they would-warm
 'Oceans aren't warming up as fast as these measurements suggested they
 would warm up.'

Second, special *le* co-occurs with what appears to be two distinct types of clausal ellipsis. The first type (hereafter type 1) may, but need not, involve *wh*-extraction out of the ellipsis site. French modal ellipsis is of this type. The second type (hereafter type 2) is exemplified by clausal ellipsis in comparatives, ACD constructions, and long-distance sluicing, all of which must involve *wh*-extraction to be licensed. Before proposing an analysis that accounts for the presence of *le* in both type 1 and type 2 clausal ellipsis, however, I will first lay out the theoretical assumptions regarding ellipsis that I will be using throughout the remainder of this article.

4 A theoretical framework for ellipsis

The approach to ellipsis phenomena I will adopt here is that spelled out in Authier (2023). This approach draws heavily from Albrecht (2010) and Bošković (2014), both of which start with the premise that, in a derivation by phase framework, ellipsis occurs at the point of transfer, which leads us to expect that the target of ellipsis is always a phasal domain. Additional assumptions are listed in (36).¹¹

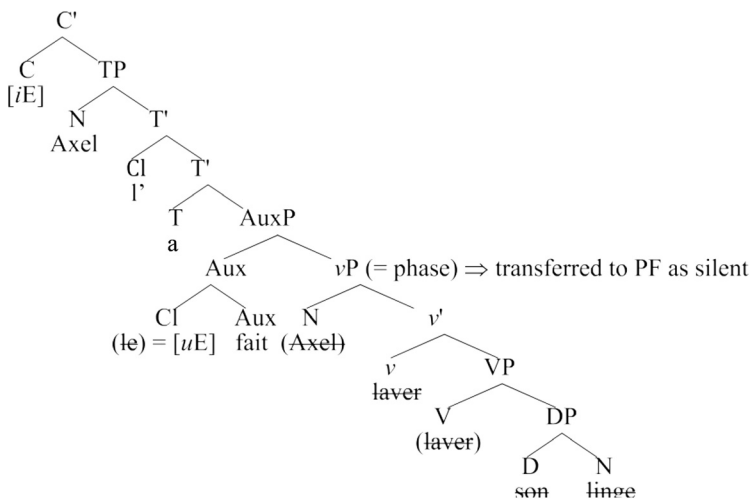
- (36) a. Ellipsis occurs in the course of the derivation.
 b. There is a distinction between the ellipsis licensing head, endowed with Merchant's (2001) E-feature and the ellipsis trigger, which is the first phase head that dominates the licensing head.
 c. An ellipsis licensing head, which is a head endowed with an E-feature, can either be a phasal head or a head taking a phasal complement.
 d. Ellipsis involves Agree between the ellipsis trigger and the licensing head. That is, the ellipsis trigger values the unvalued E-feature on the licensing head.

¹¹ I am indebted to a reviewer for pointing out the necessity of (36c) as a locality condition on ellipsis marking by a licensing head. That is, without (36c), we would wrongly predict that a licensing head could take a non-phasal complement, say, a raising infinitive, and then mark for non-pronunciation a phasal projection lower in the structure (e.g., a *vP*). As the data below will show, however, that this prediction is not borne out.

- e. The role of the unvalued E-feature on the licensing head is to ‘paint’ the target of ellipsis, which is the phasal complement to the licensing head. This E-feature contains instructions for non-pronunciation at Spell-out as well as instructions as to whether the target is to be the complement to the relevant phasal head or the entire phasal projection.

Authier (2023) combines these assumptions with the view that the *le* clitic that appears in French predicate ellipses like (37) is the phonological realization of an unvalued E-feature on *faire* ‘do’, which is argued to be a low semi-auxiliary that selects a vP phasal complement and serves as the licensing head for predicate ellipsis. The ellipsis in question, which Authier argues is vP ellipsis, is thus assumed to proceed as illustrated in (37).¹²

- (37) (Manon n’a pas lavé son linge, mais) **Axel l’a fait.**
 Manon Neg-has not washed her clothes but Axel Cl-has done
 ‘(Manon didn’t wash her clothes, but) Axel did.’



¹² Authier’s analysis explains, among other things, why French predicate anaphora can be used in comparatives (i) while English *do it/so* anaphora, which involves a pronominalized VP, cannot (ii).

- (i) Louise a mangé plus de frites que l’a fait sa sœur.
 Louise has eaten more fries than LE-has done her sister
 ‘Louise ate more fries than her sister did.’

- (ii) *Louise ate more fries than her sister did it/so.

As in Authier's analysis of French predicate ellipsis, I will assume that the special *le* that appears in the clausal ellipsis phenomena under discussion here is the phonological realization of an E-feature on an ellipsis licensing head, and I will further assume that the same E-feature can also exist without a phonetic matrix.¹³ In what follows, I will explore the consequences of the assumptions laid out in this section for the syntax of special *le* and the licensing of the two types of French clausal ellipsis.

5 Type 1: French modal ellipsis

Authier (2011: 202) argues that French modal ellipsis is licensed by topicalization. That is, elided infinitival clauses in modal ellipsis contexts are silent copies of infinitival clauses standing in a topic position, with the copy occupying the first-merge position being silent as well. This is illustrated in (38b).

- (38) a. (Je ne sais pas s'il peut prédire l'avenir, mais) il prétend pouvoir.
 (I don't know if he can predict the future, but) he claims to-be-able
 b. [~~PRO prédire l'avenir~~]_i, il prétend pouvoir [~~PRO prédire l'avenir~~]_i.
 to-predict the-future he claims to-be-able to-predict the-future

As Authier (2011: 203) points out, this hypothesis correctly predicts that French modal ellipsis is possible under deontic but not epistemic modals, namely because infinitival clausal complements to deontic modals can be topicalized but infinitival clausal complement to epistemic modals cannot, as shown in (39).

- (39) a. [PRO vous amener jusque là]_i, je peux t_i; mais pas plus loin.
 you to-get up-to there I can but not more far
 'Get you there, I can, but no further.'
 b. *[PRO arriver à tout moment]_i, la police pourrait t_i; alors accélère.
 to-arrive at any moment the police could so hurry

While this analysis works well for clausal ellipsis under modals, it does not appear to be extendable to the other type of clausal ellipsis under investigation in the present work. For example, when clausal ellipsis occurs in a comparative sentence like (40a), the elided clause has no grammatical topicalized counterpart like (40b) that could serve to justify such an analysis.

¹³ Unlike the cases of special *le* considered here, *le* in predicate ellipsis does not have a silent counterpart. However, as Authier (2023: 21–22) points out, predicate ellipsis without *le* existed up to the middle of the twentieth century. I refer the reader to his paper for discussion and examples.

- (40) a. Les océans se réchauffent moins vite que ces mesures
 the oceans are-warming less fast than these measurements
 suggéraient [~~qu'ils se réchaufferaient~~].
 suggested ~~that they would warm~~
- b. *Les océans se réchauffent moins vite que [qu'ils se réchaufferaient],
 the oceans are-warming less fast than that-they would-warm
 ces mesures suggéraient.
 these measures suggested

I would therefore like to suggest a reinterpretation of the fact that deontic but not epistemic modals license clausal ellipsis in French; that is, as I will argue, clausal complements to deontic modals are phasal but clausal complements to epistemic modals are not and, given that ellipsis can only target phasal projections (cf. (36d)), it follows that only clausal complements to deontic modals can be elided.

There is a tradition going back to Jackendoff (1972) that takes epistemic modals to be raising predicates and deontic modals (a.k.a. root modals) to be control predicates. In the syntactic literature on modals, epistemic modals are uncontroversially assumed to be raising predicates. However, the claim that deontic modals are control predicates is not universally accepted. Nauze (2008) offers evidence that deontic modals are often control predicates, but he also points out that the syntactic properties of modals differ significantly cross-linguistically. In the syntactic literature on French, the traditional view argued for in Dubois (1969: 119), Kayne (1975: 259), and Huot (1974: 171–172) takes epistemic modals selecting an infinitival clause to be raising verbs, and deontic modals to be control verbs. This view is largely substantiated by the work of Reed (2016, 2019), but she shows that unlike deontic *falloir* 'be necessary', deontic *devoir* 'must' does not fit the traditional mold in that it is ambiguous between a control and a raising entry. The latter allows deontic *devoir*, but not *falloir*, to merge with infinitival complements headed by a verbal element that is not theta-associated, as (41) illustrates.¹⁴

¹⁴ Note that *falloir* can take an infinitival complement provided that its subject is understood as thematic, as shown in (i). This corresponds to the control entry of *falloir*.

(i) Il (me) faut bien [PRO emprunter ce terme au vocabulaire des psychiatres]
 it (for-me) is-necessary to-borrow this term from-the vocabulary of psychiatrists
 puisque c'est le mot propre.
 since it's the word proper

As Reed (2016, 2019) argues, the controller in such cases is the understood indirect object of *falloir*, the phonologically realized version of which is the clitic *me* 'for me' in (i).

- (41) De par la loi, il devrait/*faudrait y avoir du savon dans les
 as per the law there must/be-necessary to-have some soap in the
 toilettes publiques.
 restrooms public
 ‘By law, there must be soap in public restrooms.’

Reed analyzes the raising option for deontic *devoir* in (41) with a structure in which *devoir* takes a bare *vP* infinitival as its complement. Since *vP* is standardly assumed to be phasal, we therefore expect ellipsis to be possible. This expectation is fulfilled as shown in (42).

- (42) Il n’y a pas de savon dans ces toilettes, et pourtant il (le) devrait.
 there is no soap in these bathrooms and yet there (LE) should
 [_{Non-thematic vP} ~~y avoir du savon dans ces toilettes~~].
~~to-be soap in these bathrooms~~
 ‘There is no soap in these restrooms and yet, there should be.’

As Reed shows, deontic *devoir* also participates in a control structure and since control infinitives, unlike raising infinitives, are standardly assumed to be phases (see e.g., Chomsky 2000: 105) we again predict ellipsis to be possible. This prediction is borne out, as (43) illustrates.

- (43) Soline n’utilise jamais cette expression, et pourtant elle (le) devrait
 Soline uses never this expression and yet she (LE) should
 [_{PRO} ~~utiliser cette expression~~].
~~to-use this expression~~
 ‘Soline never uses this expression and yet she should.’

While the assumed size of control infinitives like that elided in (43) varies from author to author, depending on the particular theory of control they assume, what is important for the view of clausal ellipsis defended here is that control infinitives be phasal.¹⁵ Raising infinitives of the TP variety, on the other hand are headed by

¹⁵ In Chomsky’s (2000) phasal system, control infinitives fall together with finite clauses, headed by C selecting non-defective T and thus are phases. Chomsky (2000) notes that, like other CPs, they are generally movable/cleftable, which is one of the criteria associated with phasehood (see also Chomsky 2008). Other categories have been proposed for control infinitivals, however. Reed (2016, 2019), for example, takes them to be FinPs while she adopts the standard assumption that raising infinitives complements to epistemic modals are TPs. Note finally that at least in some cases, control infinitives must be assumed to be CPs since they feature a *wh*-element moved to the left periphery.

(ii) Lucie ne sait pas [à qui_i PRO se fier t_i].
 Lucie Neg knows not on whom to-rely

defective T, a non-phasal category, from which it follows that modals that embed them; namely epistemic modals, do not license clausal ellipsis, as illustrated in (44).

- (44) (Il est midi.) *Jade doit être allée manger, et Solange_i (le) doit
 it is noon Jade must to-be gone to-eat and Solange (LE) must
 [TP t_i ~~être allée manger~~] aussi.
 to-be gone to-eat too

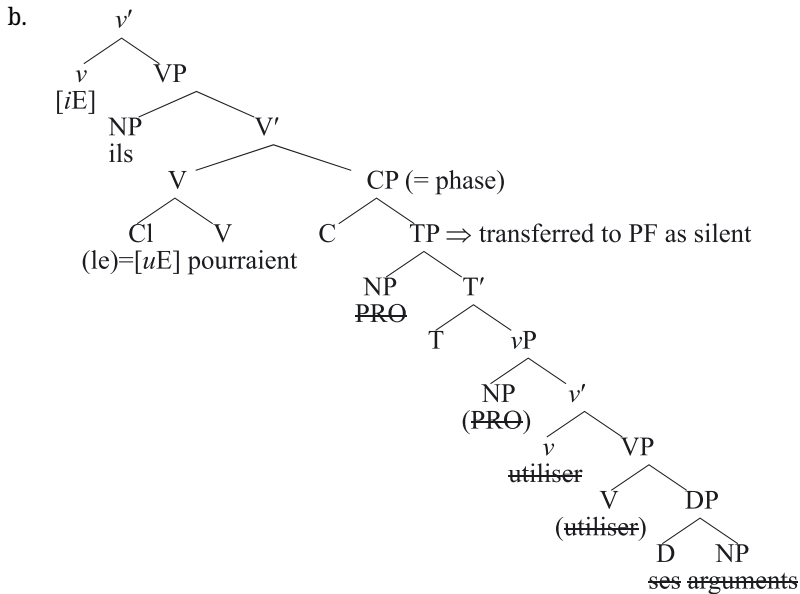
Thus, French modal ellipsis requires two ingredients. First, the modal verb must be associated with an E-feature (either covert or phonologically realized as special *le*) and second, the clausal complement targeted for ellipsis by this modal verb must be phasal. The latter requirement in fact extends beyond modal ellipsis (i.e., type 1 ellipsis). Consider, for example, the case of a raising predicate like *paraître* ‘appear’, which belongs to the class of verbs that license type 2 clausal ellipsis in comparatives. As shown in (45), *paraître* can take as a clausal complement either a tensed CP, or a raising infinitival TP. Assuming that ellipsis only targets phases, we then expect their tensed CP complement, but not their raising infinitival complement to be elidable. That this is, in fact, what happens, was noted by Vergnaud (1975). The relevant contrast is illustrated in (46).

- (45) a. Au premier abord, il paraît [CP que ces boulangeries vendent
 at first blush it appears that these bakeries sell
 beaucoup de pain].
 a-lot of bread
 ‘At first blush, it seems that these bakeries sell a lot of bread.’
 b. Ces boulangeries_i paraissent [TP t_i vendre beaucoup de pain].
 these bakeries appear to-sell a-lot of bread
 ‘These bakeries seem to sell a lot of bread.’
- (46) a. Ces boulangeries vendent moins de pain qu’il (le) paraît
 these bakeries sell less of bread than-it (LE) appears
 [CP ~~qu’elles vendent x quantité de pain~~] au premier abord.
 that-they sell x quantity of bread at first blush
 ‘These bakeries sell less bread than it first appears.’
 b. *Ces boulangeries vendent moins de pain qu’elles_i (le) paraissent
 these bakeries sell less of bread than-they (LE) appear
 [TP t_i ~~vendre x quantité de pain~~] au premier abord.
 to-sell x quantity of bread at first blush
 ‘*These bakeries sell less bread than they first appear.’

Thus, we now have a strong connection between type 1 and type 2 clausal ellipsis. Both display a closed set of verbs that act as ellipsis licensors, both involve the

optional spell out of an E-feature on the licenser as special *le* and both involve ellipsis affecting a phasal projection. My assumptions regarding modal ellipsis are illustrated by the (partial) derivation in (47b), which corresponds to the bracketed portion of the sentence in (47a). I follow Chomsky (2000) in assuming that control infinitives project up to CP, but my analysis is compatible with other projections proposed for control infinitives as long as such projections are assumed to be phasal.

- (47) a. Ils n'utilisent pas ses arguments, mais [ils (*le*) pourraient].
 they Neg-use not these arguments but they (LE) could
 'They don't use these arguments, but they could.'



In (47b), the ellipsis licenser, which is the modal *pourraient* 'could', bears an E-feature (optionally realized as *le*) and tags for ellipsis the complement to the phasal head of the infinitival CP it selects.¹⁶ However, the actual transfer of this TP to the PF component as unpronounced is not triggered until the next phase head (the higher *v* in (47b)), is introduced in the derivation and values the E-feature on *pourraient*. Consequently, elements that move to the edge of CP prior to the valuation of the

¹⁶ As the reader will recall from (36e), I am assuming, following Authier (2023), that an E-feature not only contains instructions for non-pronunciation of a phasal category at Spell-out but also instructions as to whether the target of ellipsis is to be the complement to the relevant phasal head or the entire phasal projection. See Bošković (2014) for arguments that both options should be available.

E-feature on the licensing head can escape the ellipsis site. This correctly predicts that *wh*-extraction out of the TP elided in French modal ellipsis is allowed, yielding sentences like (5b), repeated here for convenience.

- (5b) Il a pas dit lesquels il veut évaluer, et lesquels
 he has not said which-ones he wants to-evaluate and which-ones
 il (ne)veut pas.
 he (Neg)wants not
 ‘He didn’t say which ones he’s willing to evaluate, and which ones he isn’t.’

Note finally, that the overt option of the E-feature, namely special *le*, is to be understood as its morphological realization on the licensing head in very much the same way overt case morphology on a noun realizes the abstract Case feature it is associated with. Special *le* is, however, slightly different in that it is additionally a clitic and as such, it must attach to the highest verbal element in its clause.

In the next section, I turn to a closer examination of clausal ellipsis in comparative constructions.

6 Type 2: clausal ellipsis in comparatives

Type 2 clausal ellipsis, found in comparatives standards, has three basic properties that any analysis should account for. First, it requires the movement of a phrase to the left edge of the elided clause. This is illustrated by contrasts like (48).

- (48) a. Elle gagne moins d’argent que (ce que) tu (le) crois.
 she earns less of-money than (what) you (LE) believe
 ‘She makes less money than you think.’
 b. Gagne-t-elle beaucoup d’argent? Hugo *(le) croit.
 earns-she a-lot of-money Hugo *(LE) believes
 ‘Does she make a lot of money? Hugo thinks so.’

In (48a), the *le* that may appear in the comparative standard has a silent counterpart and is therefore special *le*. In (48b), on the other hand, we see that in the absence of *wh*-movement, the *le* that occurs in the second sentence has no silent counterpart and is therefore a pronoun. Thus, special *le* on a verb like *croire* ‘believe’ signals clausal ellipsis only when there is a remnant (*ce que* ‘what’ or its silent counterpart in (48a)) that has escaped the ellipsis site.

A second property of this type of ellipsis is that it cannot follow an overt complementizer, as shown in (49).

- (49) *Elle gagne moins d'argent que (ce que) tu (le) crois que.
 she earns less of-money than (what) you (LE) believe that
 Intended: 'She makes less than you think she does.'

Finally, the class of verbs that can embed this type of ellipsis is restricted. This class seems to correspond to so-called 'bridge verbs', a class that includes verbs like *penser* 'think', *croire* 'believe', *imaginer* 'imagine', *escompter* 'expect', *supposer* 'suppose', *prétendre* 'claim', *prévoir* 'anticipate', *parier* 'bet', *espérer* 'hope', etc. Verbs that are incompatible with clausal ellipsis (cf. (50)) include 'manner of speech' verbs like *murmurer* 'murmur', factive verbs like *savoir* 'know', *découvrir* 'discover', or *être surpris/content* 'be surprised/happy', and so-called 'response stance' verbs like *nier* 'deny', *accepter* 'accept', or *être d'accord* 'agree'.

- (50) *Elle gagne moins d'argent que (ce que) Léa (le) murmure/a
 she earns less of-money than (what) Léa (LE) murmurs/has
 découvert/nie.
 found-out/denies
 '*She makes less than Léa murmurs/found out/denies.'

Interestingly, the distinction between these two classes of verbs is not just relevant to the licensing of embedded clausal ellipsis. Indeed, it has been shown to affect the availability of verb-second word order in the subordinate clauses of some Germanic languages. For example, Vikner (1991) argues that embedded verb-second in Danish and the other Mainland Scandinavian languages is limited to the complements of bridge verbs, and de Hann and Weerman (1985) make similar observations regarding embedded verb-second in Frisian. These authors argue that bridge verbs are special in that they license CP-recursion, and this recursion provides an additional embedded C head and [Spec, CP] positions to which the finite verb and the topic phrase can move (see also Iatridou and Kroch 1992). The idea that clausal complements to bridge verbs are cross-linguistically structurally more complex than those of non-bridge verbs has been echoed by many since (see de Cuba and Ürögdi 2010; Haegeman 2006; McCloskey 2006; Weir 2014; Yasui 2021; among others). Why this should be so has received various explanations, but a leading idea is that bridge verbs embed a speech act and therefore a double complementizer (a.k.a. CP-recursion) structure, which I will represent, following Weir (2014), as in (51).

- (51) [CP₁ [CP₂ [TP ...]]]

In (51), CP₂ denotes a proposition without illocutionary force. CP₁, on the other hand, is required to create a speech act and only it can license ellipsis (i.e., can be endowed with a E-feature). For de Cuba and Ürögdi (2010: 45), CP₁ (which they call cP) corresponds to a non-referential semantic object denoting a speech act, which they

define as an unresolved proposition or an open question. Weir (2014) simply states that non-bridge verbs denote relations between individuals and propositions, while bridge verb embed an assertion speech act syntactically encoded by C1. I will assume here that C1 contains ASSERT, a silent category that denotes a speech act in which a state of affairs is claimed by the speaker to hold. Thus, if *p* is a proposition, then ASSERT *p* puts *p* as true in the Discourse Commitment Set of the speaker and puts it up for ‘discussion’ in the QUD (Question under Discussion). Only C1 can be associated with an E-feature. Whenever this happens, C1 becomes a licensing head for ellipsis and, being a phasal head, it targets its complement CP2 for non-pronunciation at PF. The E-feature on C1 is then valued by the ellipsis trigger, which is the first *v* dominating CP1, at which point CP2 is sent to PF as unpronounced. This allows *wh*-elements to move to [Spec, CP1] to escape ellipsis and, assuming with Weir (2014) that complementizers head C2, we correctly predict that this type of ellipsis can never be preceded by an overt complementizer (cf. (49)).¹⁷ Finally, I assume that the overt realization of the E-feature as *le* originates on C1 but, being a clitic, special *le* must move to attach to a verbal element, in this case the bridge verb that selects CP1.¹⁸ Note that this is an instance of head movement that obeys the Phase Impenetrability Condition (PIC) because the first merge position of special *le* is C1, which stands at the edge of a phasal projection and is therefore available for further computation. A partial derivation that sums up my analysis of CP2 ellipsis with special *le* is provided in (52).

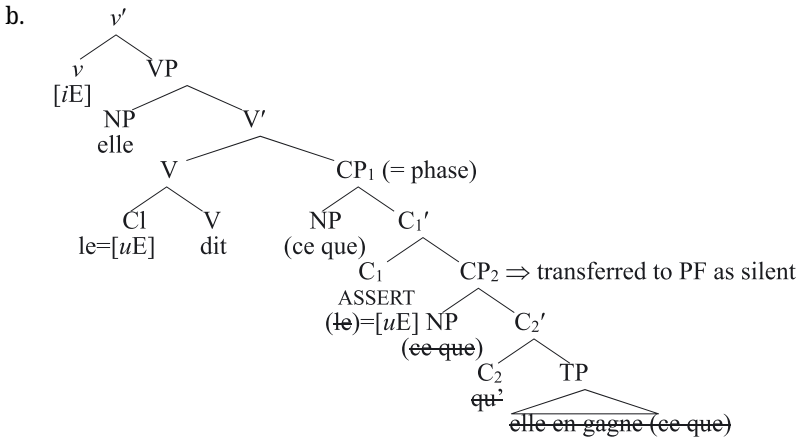
17 As noted by Weir (2014), a seemingly simpler alternative would consist in saying that (a) CP ellipsis requires the movement of a phrase to the left edge of the elided clause, (b) non-bridge verbs do not allow such movement from their clausal complement as easily as bridge verbs, and therefore (c) only bridge verbs are compatible with CP ellipsis. As he points out, however, this is not a viable alternative because while *wh*-extraction out of the complement to a non-bridge verb yields mildly degraded results, clausal ellipsis under such verbs leads to a much stronger violation. That Weir’s reasoning is equally valid for French is illustrated by the contrast in (i).

- (i) a. (?)Combien a-t-il découvert/nié que Manon avait payé ?
 ‘How much did he discover/deny that Manon had paid?’
 b. *Manon gagne plus d’argent que (ce que) Léo (l’)a découvert/nié.
 Manon earns more of-money than (what) Léo (LE)-has discovered/denied

18 I assume, following Matushansky (2006: 85–86), Gribanova and Harizanov (2019), and Authier (2023), that clitics can undergo Merge with a head in the syntax but do not undergo morphological amalgamation and are thus able to undergo head movement to higher projections. As Authier (2023: 235) notes, this is true even of a so-called intrinsic clitic like the *le* in *l’emporter* ‘prevail’ which, although it is semantically indivisible from the verb, undergoes movement to T independently of its verbal host in sentences like (i) (Authier’s (38)).

- (i) En finale du Tournoi des 6 nations, l’Irlande l’a emporté.
 in final of-the tournament of-the 6 nations the-Ireland LE-has prevailed
 ‘In the final round of the Six Nations Championship, Ireland prevailed.’

- (52) a. Soline gagne plus d'argent que (ce qu') elle le dit [~~qu'elle en gagne~~].
 Soline earns more of-money than (what) she LE says that-she of-it earns
 'Soline makes more money than she says.'



The only remaining question is why ellipsis, when licensed by C_1 , requires the movement of a phrase to the edge of its licenser. Requiring that the E-feature on C_1 be accompanied by the insertion of an EPP feature (as Merchant 2001, 2004 does for fragment answers and sluicing) may seem like a move that just restates the problem. However, there are other cases in which two features function in tandem (i.e., introducing one in the derivation cannot be achieved in the absence of the other). For example, whatever feature triggers V to T movement in French can only be associated with T if the latter also has a tense feature. I will therefore assume that features sometimes cluster in this manner on particular heads, the clustering of an E-feature and EPP on C_1 being just one example of a larger phenomenon.

7 Clausal ellipsis in sluiced sentences

Sluiced sentences license type 2 clausal ellipsis in two distinct contexts. The first context is that of long distance *wh*-movement and only applies to the embedded clause when the latter is selected by a bridge verb. The example in (53) illustrates this phenomenon.

- (53) Je ne sais pas combien tu (le) croyais [~~que coûte une bonne paire de skis~~], mais une bonne paire de skis coûte un minimum de 700 euros.
 I Neg know not how-much you (LE) believed that costs a good pair of skis but a good pair of skis costs a minimum of 700 euros.
 ‘I don’t know how much you thought it would, but a decent pair of skis costs a minimum of 700 euros.’

The ellipsis that occurs in (53) straightforwardly falls out of the analysis developed in the previous section, the only difference being that the *combien* ‘how much’ number *wh*-operator that transits through the specifier of CP₁ in (53) cannot be silent or be spelled out as *ce que* ‘what’ in the superordinate clause as it does in comparatives.

The second context in which clausal ellipsis occurs in sluiced sentences is what is commonly known as (non-matrix) sluicing. The examples in (54) illustrate two potentially distinct facets of this phenomenon.

- (54) a. Je me demande/ai demandé qui [~~il a contacté~~].
 I wonder/have asked who he has contacted
 ‘I wonder/asked who [~~he contacted~~].’
 b. Je sais/ai découvert/ai deviné/ai révélé qui [~~il a contacté~~].
 I know/have discovered/have guessed/have revealed who he has contacted
 ‘I know/discovered/guessed/revealed who [~~he contacted~~].’

Indeed, in the literature on indirect questions, some authors have argued that the examples in (54a) and (54b) have distinct semantic and syntactic properties (e.g., Berman 1990; Matos and Brito 2013; Plann 1982; Suñer 1999), while others (e.g., Ginzburg and Sag 2000; Karttunen 1977; Lahiri 2002) do not share this view. At the heart of the controversy is whether indirect questions like (54a) (called ‘proper indirect questions’ by Suñer 1999) differ semantically from indirect questions like (54b) (called ‘improper indirect questions’ by Suñer 1999) and whether this difference is reflected in their syntax. Berman (1990) espouses the view that *wh*-complements of predicates like *se demander* ‘wonder’ and *savoir* ‘know’ differ semantically as well as syntactically. The former are questions (i.e., denote Hamblin sets) and are syntactically realized with a Q-morpheme in their C position while the latter are propositions and lack such a morpheme. A similar characterization is offered in Matos and Brito (2013). The assumption is mainly based on the fact that paraphrases of proper indirect questions include the expression *ask the question*, but paraphrases of improper indirect questions include *know/discover/guess/reveal the answer*. In what follows, however, I will present evidence that this view is misguided.

As pointed out by Matos and Brito (2013), the strict view advocated by Plann (1982) and Suñer (1999) that only verbs with an inquiring content like *ask* and *wonder* can select proper indirect questions is untenable because predicates that normally

select improper indirect questions like *know* (cf. (55a)) may license proper indirect questions when they are in the scope of modal verb like *want* or *would like*, as (55b), which is nearly synonymous with (55c), shows.

- (55) a. Je sais [qui il a contacté]. (improper indirect question)
 'I know who he contacted.'
 b. Je veux/aimerais savoir [qui il a contacté]. (proper indirect question)
 'I want/would like to know who he contacted.'
 c. Je (vous) demande [qui il a contacté]. (proper indirect question)
 'I'm asking you who he contacted.'

The problem exhibited by (55a) versus (55b) is that, given that syntactic selection is local, at the stage when the *wh*-complement merges with *savoir*, both derivations must be syntactically identical and this means that if the semantic distinction between proper and improper indirect questions is indeed warranted, it has no syntactic correlate. In fact, Berman's (1990) claim that only proper indirect questions contain a Q-morpheme can be falsified by observing the distribution the overt French Q-morpheme *est-ce que*. As shown in (56), *est-ce que* can appear in both proper and improper indirect questions, suggesting that they undergo similar derivations.¹⁹

- (56) a. Je me demande où est-ce qu' Adélie est partie en vacances.
 I wonder where Q Adélie has left on holidays
 'I wonder where Adélie went on vacation.'
 b. Eh bien moi, je sais où est-ce qu' Adélie est partie en vacances !
 well me I know where Q Adélie has left on holidays
 'As for me, I know where Adélie went on vacation.'

Additional evidence that proper and improper indirect questions are syntactically the same is provided by Lahiri (2002) who points out that Right Node Raising does not distinguish between the two types of predicates. This is illustrated for French in (57).

- (57) Adélie se demande, mais Léo sait depuis longtemps, pour qui
 Adélie wonders but Léo knows for long for whom
 Félix travaille.
 Félix works
 'Adélie wonders, but Léo has known for a long time, who Félix works for.'

Finally, Krifka (2001) argues that both proper and improper questions embed question acts, but that verbs like *know* (or *savoir* in French) type-shift this question act to the set of true answers. An advantage of this view is that it can account for phenomena relating to quantification into embedded interrogatives. To explain,

¹⁹ Though frequent, the use of *est-ce que* in embedded questions is confined to colloquial French.

Krifka (2001) proposes that the pair list reading of questions with quantifiers, as expressed by the paraphrase of (58), reduces to quantification into speech acts.

- (58) What did every guest bring to the birthday party?
 ‘For every guest *x*: What *y* is such that *x* brought *y* to the birthday party?’

As he argues, the interpretation of quantifiers rests on conjunction, and we should therefore expect universal quantifiers, which are generalized conjunctions, to be able to scope over speech acts. With this background in mind, consider the contrast between (59a), in which *know* embeds a *that*-clause and (59b), in which *know* embeds an improper indirect question.

- (59) a. Some librarian or other knows that every student needs help.
 *‘For every student *x*, there is a librarian who knows that *x* needs help.’
 b. Some librarian or other knows which book every student needs.
 ‘For every student *x*, there is a librarian who knows which book *x* needs.’

As (59) makes clear, the apparent wide-scope reading of the universal quantifier is possible when *know* embeds an improper question, but not when *know* embeds a *that*-clause. The contrast can be explained if we assume that when *know* embeds a *that*-clause, it embeds a proposition/sentence radical and therefore a single CP-layer, but when *know* embeds an improper indirect question, it additionally embeds a speech act, syntactically encoded via CP-recursion (i.e., an improper question involves *C*₁ containing QUEST and *C*₂ either covert or phonologically realized as *est-ce que* in French).²⁰ If this is on the right track, then ellipsis in embedded questions falls

²⁰ One argument often used in the literature to argue that proper indirect questions, but not improper indirect questions, involve CP-recursion is that in Irish English, V2 is only possible with the former (McCloskey 1992).

- (ii) a. I wonder what should we do.
 b. *I found out/know what should we do.

However, as pointed out by McCloskey (2006), verbs like *find out* and *know* can, in Irish English, subcategorize for improper indirect questions with V2 behavior in certain cases, including modal contexts and imperatives.

- (iii) a. I just wanted to know/am dying to find out who did you marry.
 b. Find out who did they feed the mud cake to!
 c. You need to find out who did they meet.

Krifka (2014) further points out that German allows root-modal *denn* in improper indirect questions in the same contexts. This leads to a puzzling question: If one assumes that *know* and *find out* do not allow for speech-act objects, then why would *want to know* and *be dying to find out*? Here I will assume, following McCloskey (2006), that V2 behavior in Irish English embedded questions ultimately depends on semantics: it is possible only if the issue of the question is an open one for the matrix subject. This is in line with proposals like those of Ginzburg and Sag (2000) and Lahiri (2002), who

under the same type of analysis developed in the previous section; that is, ellipsis of an embedded clausal complement is possible only in the context of CP-recursion. The higher C (i.e., C_1) is phasal and is associated with an E-feature, which allows ellipsis of the lower CP projection.²¹

There is, however, one last remaining issue to be addressed, namely why clausal ellipsis of embedded questions does not, in French, allow the E-feature on C_1 to be overtly realized as the clitic *le*, as (60) shows.

- (60) a. Adélie a contacté quelqu'un, mais je ne (*le) sais pas qui.
 Adélie has contacted someone but I Neg (*LE) know not who
 'Adélie contacted someone, but I don't know who.'
- b. Adélie a contacté quelqu'un. Je me (*le) demande qui.
 Adélie has contacted someone I myself (*LE) ask who
 'Adélie contacted someone. I wonder who.'

This may appear surprising in view of the fact that the (argumental) pronominal *le* can substitute for an embedded interrogative, as (61) shows, from which it follows that the restriction observed in (60) cannot be due to a constraint on cliticization with verbs like *savoir* 'know' and *se demander* 'wonder'.

- (61) A: Qui est-ce qu'Adélie a contacté?
 'Who did Adélie contact?'
- B: Je me le demandais justement. Peut-être que Christine le sait ?
 I LE wondered just maybe that Christine LE knows
 'That's what I was just wondering. Maybe Christine would know?'

argue for a uniform type-assignment for embedded questions but also assume a 'repair mechanism' for the type-clash that arises when a resolutive predicate (e.g., 'bare *know*') finds an object of the wrong type.

²¹ This is essentially the view put forth in Weir (2014) who argues that the link between embedded ellipsis with non-*wh*-remnants like (i) and sluicing is the presence of a higher C projection.

- (i) What did Chad eat?
 a. I believe/hope/suspect the cookies.
 b. *I know/regret/am surprised the cookies.

Non-*wh*-remnant ellipsis is also possible in French, but the remnant must move all the way up to the matrix, as shown in (ii).

- (ii) (Qu'est-ce que Louise a mangé? 'What did Louise eat?')
 a. *Je crois/espère/pense les biscuits.
 I believe/hope/think the cookies
 b. Les biscuits, je crois/espère/pense.
 the cookies I believe/hope/think

Accounting for this difference between the two languages is beyond the scope of the present work.

Before we resort to invoking general grammatical principles to account for the constraint illustrated in (60), however, we'd best remember that, as Authier (2023) points out, the E-feature now obligatorily spelled out as *le* in French predicate ellipsis, used to be phonologically unrealized up to the first half of the XXth century (see also Eriksson 2006 for a variety of examples involving predicate ellipsis without *le*). In other words, the availability of the overt versus covert realization of E-features in French appears to be subject to time and construction specific fluctuations. Thus, I will assume that the absence of *le* in elided interrogative contexts like (60) is the result of an idiosyncratic choice favoring the use of a silent E-feature in sluiced constructions rather than a grammatical constraint on the overt realization of an E-feature dictated by a particular syntactic derivation. When the grammar of a language allows two options, as French does with overt and covert E-features, arbitrary choices of this type are not uncommon. A case in point is the competing derivations found in French causatives with the matrix verbs *laisser* 'let', *faire* 'make', *entendre* 'hear' and *voir* 'see'. In European French, up to the first half of the XXth century, all four verbs could embed both an ECM infinitival and a structure in which the infinitival verb raises over the embedded subject, as (62) illustrates.

- (62) a. J'ai laissé/entendu/vu les oiseaux s'échapper.
 I-have let/heard/seen the birds escape
 b. J'ai laissé/entendu/vu s'échapper les oiseaux.
 I-have let/heard/seen escape the birds
 'I let/heard/saw the birds escape.'

The ECM option in (62a) has, however, been abandoned for *faire* in Modern European French, though it subsists in some Canadian French dialects (see Reed 1992). The most natural explanation for this is that modern speakers of European French reject sentences like (63) not because they violate some principle of the linguistic grammar of French, but rather because their dialect arbitrarily restricts the two options made available by the grammar to one for this particular verb.

- (63) %J'ai fait les enfants chanter.
 I-have made the children sing
 'I made the children sing.'

What I would like to suggest is therefore that a similar arbitrary restriction applies to sluices. That is, the E-feature that licenses clausal ellipsis can, in principle, be silent or phonologically realized as the clitic *le*. However, when it appears on a higher C corresponding to QUEST, the overt option is arbitrarily discarded, hence the E-feature is always silent.

8 Clausal ellipsis in ACD relatives

In Section 2.2, it was established that type 2 clausal ellipsis (with and without special *le*) can be found in ACD free relatives that embed a bridge verb. This is illustrated in (64).

- (64) a. Lucie n'a pas communiqué avec qui elle (le) prétend/croit/pense.
 Lucie Neg-has not communicated with who she (LE) claims/believes/thinks
 'Lucie didn't communicate with who she claims/believes/thinks (she did).'
- b. Il n'habite pas du tout où je (l')imaginai.
 he Neg-lives not at all where I (LE)imagined
 'He doesn't live at all where I imagined.'

Clausal ellipsis in ACD contexts is not, however, limited to free relatives; it can also occur with headed relatives, as shown in (65).

- (65) a. Votre contact travaille-t-il effectivement pour l'entreprise qu'il
 your contact works-he actually for the-company that-he
 (le) prétend ?
 (LE) claims
 'Does your contact actually work for the company he claims?'
- b. Le Président n'a pas obtenu tous les pouvoirs qu'il (l')espérait.
 the President Neg-has not secured all the powers that-he (LE)anticipated
 'The President did not secure all the powers he anticipated (he would).'
- c. Cette maison de location est pourvue de tous les appareils intelligents
 this house of rental is provided of all the appliances smart
 qu'on pourrait (l')imaginer.
 that-one could (LE)imagine
 'This rental property is equipped with all the smart appliances you could imagine.'

The sentences in (64) and (65) all involve the ellipsis of the clausal complement to a bridge verb embedded in the ACD relative. That the presence of this bridge verb is crucial to the licensing of type 2 clausal ellipsis in such cases is evidenced by the fact that so-called relative sluicing is prohibited in French, as shown in (66).

- (66) a. (Aline a peint plusieurs tableaux exceptionnels.)
 Aline has painted several paintings exceptional
 *En fait, toutes les tableaux que ~~[elle a peints]~~ sont exposés
 in fact all the paintings that she has painted are exhibited
 dans des galeries d'art.
 in some galleries of-art
 '(Aline has painted several exceptional paintings.) In fact, all the paintings that she painted are exhibited in art galleries.'

- b. (Je croyais que personne n'aimait les rutabagas jusqu'à ce que ...)
 I thought that nobody Neg-liked the rutabagas until
 *je rencontre quelqu'un qui [~~aimait les rutabagas~~].
 I meet-subj someone who liked the rutabagas
 Intended: 'I thought nobody liked rutabagas until I met someone who did.'

The ungrammaticality of sluices like those in (66) can be attributed to the fact that relatives do not encode a speech act and do not, therefore, have a recursive CP structure. This correctly filters out sentences like (66) while predicting the grammaticality of sentences like (64) and (65). That is, in a sentence like (65a), clausal ellipsis is licensed by the presence of a higher CP-projection selected by *prétend* along with the presence of a silent copy of the relative pronoun in its specifier.²²

As it stands, this explanation is, however, unable to explain why relatives with embedded ellipsis like (64) and (65) are contingent upon the presence of an ACD configuration. That is, standard relatives do not license clausal ellipsis even when they embed a bridge verb, as (67) shows. This is so despite the fact that the bridge verbs in (67) provide the requisite double CP structure for type 2 ellipsis to take place.

²² This hypothesis leads us to expect that all languages prohibit relative sluicing. However, Lipták (2015) provides empirical evidence that Hungarian relatives do license relative sluicing. An example of this phenomenon is given in (i).

- (i) Ki-ki megcsókolta azt, [_{CPrel} akit [_{TP} ~~pro~~ megcsókol(t)]].
 each kissed that-ACC REL-who-ACC
 'Everyone kissed who(ever) they did.'

She argues that relative sluicing is possible in Hungarian because (a) universally, ellipsis remnants must bear stress/focal accent and (b) Hungarian relative pronouns can bear stress when they are in a clause-final position, as is the case in relative sluicing. While discussing the merits and shortcomings of Lipták's analysis is beyond the scope of the present work, it is interesting to note that, as she puts it, Hungarian relative sluicing "shows traits of *antecedent contained deletion*, most specifically traits of *antecedent contained sluicing*, and as such it must be affected by the elliptical process." Among these traits is the fact that English antecedent contained sluicing and Hungarian relative sluicing "feature the same kind of breakdown of strict identity in exactly the same environments." The breakdown in strict identity she refers to is illustrated in (ii).

- (ii) a. John must love someone without knowing who (he loves/*he must love).
 b. John does not love someone without knowing who (he loves/*does not love).

It thus appears that Hungarian allows relative sluicing only in those relatives that display properties of ACD relatives. Why this should be the case has not, as far as I am aware, received a satisfactory explanation.

- (67) a. *Je ne sais pas si Martin a écrit tous ces livres, mais Manon
 I Neg know not if Martin has written all these books but Manon
 a une liste de tous ceux qu'elle (le) croit [~~qu'il a écrit~~].
 has a list of all those that-she (LE) believes that-he has written
Intended: 'I don't know if Martin wrote all of these books, but Manon has a
 list of all those that she believes he did.'
- b. *Le chef de département a proposé plusieurs dates, mais
 the head of department has proposed several dates but
 malheureusement, aucunes des dates que sa secrétaire (le) dit
 unfortunately none of-the dates that his secretary (LE) says
 [~~qu'il a proposées~~] ne me conviennent.
 that-he has proposed Neg to-me are-suitable
Intended: 'The department head suggested several dates, but
 unfortunately, none of the dates his secretary says he did work for me.'

It thus appears that ACD relatives differ from standard relatives in such a way that they create the proper environment for clausal ellipsis to be licensed under a bridge verb. Importantly, this cannot be assumed to follow from a general condition on ellipsis licensing because type 1 (modal) ellipsis turns out to be perfectly acceptable within standard relatives, as shown in (68).

- (68) a. Essaie de réparer ma voiture, et si tu n'y arrives pas, trouve-moi
 try of to-fix my car and if you Neg-manage not find-me
 quelqu'un qui (le) peut [~~PRO réparer ma voiture~~] !
 someone who (LE) can to-fix my car
 'Try to fix my car, and if you can't manage, find me someone who can!'
- b. On déconseille d'utiliser un ordinateur toute la journée.
 they discourage of-to-use a computer all the day
 Les personnes qui (le) doivent [~~PRO utiliser un ordinateur~~]
 the persons who (LE) must to-use a computer
 s'exposent à des risques de santé.
 self-expose to some risks of health
 'Using a computer all day is discouraged. Those who must expose
 themselves to health risks.'

As compared to standard relatives, ACD relatives have two unique properties which could potentially help us solve this puzzle. I will use the rest of this section to examine each of them in turn and assess whether they play a role in the restricted distribution of clausal ellipsis in relatives under a bridge verb.

The first special property attributed to ACD relatives is that they cannot be interpreted in situ. It is well known that ellipsis of a phrase XP is only possible if the

elided XP is identical to its antecedent XP at LF.²³ This parallelism requirement suggests that ACD relatives must vacate the VP that contains them at LF, as first proposed by Sag (1976). To see why, consider the sentence in (69), which illustrates the case of an English ACD relative with an elided VP.

(69) Bob [_{antecedent VP} read every book Maureen did [_{elided VP} ~~read~~ t]].

If the relative headed by *every book* were interpreted in its base position, the antecedent VP would contain the elided VP and the two VPs would not be identical. Further, replacing the elided VP with the antecedent VP would lead to infinite regress; that is, a regress into an infinite sequence of propositions in an attempt to interpret the sentence. If, however, the ACD relative is interpreted in a VP-external position, the parallelism requirement is satisfied (cf. (70)) and the infinite regress problem disappears.

(70) [every book Maureen did [*read* t]]
 Bob *read* t

The classical analysis of ACD (cf. Sag 1976 and much subsequent work) implements this idea by assuming that the DP hosting the relative clause undergoes covert movement to create an LF configuration where the elided VP is no longer contained inside the antecedent VP and both VPs have traces in their object position. However, while this movement has frequently been assimilated to QR, it is important to note, as Hackl et al. (2012) do, that the movement of an object relative clause hosting an ACD site is independent of the quantificational status of its DP head, as evidenced by the fact that it can occur even when the head of the relative hosting the ACD site is a definite DP. This is illustrated in (71), where (71b) is a possible LF representation of (71a).²⁴ Thus, the LF movement of ACD relatives cannot be QR in its usual sense.

(71) a. Bob read the book Maureen did.
 b. [_{TP} [_{DP} the book [_{RC} OP_j Maureen did [~~read~~ t_j]]]_i [_{TP} Bob read t_i]]

This has led to analyses that share the assumption that ACD relatives undergo late merger to circumvent a violation of Parallelism and avoid the problem of infinite regress (and thus “antecedent contained deletion does not exist”, as first argued in Baltin 1987). The details of such analyses vary, however. Fox (2002) proposes that the first step in the derivation of an ACD relative is rightward movement of the relative head. This movement is followed by the late merger of the ACD relative as an adjunct,

²³ Identical modulo negation and modals for clausal ellipsis in ACD contexts (see examples in (ii) in footnote 22).

²⁴ I refer to the representation in (71b) as a ‘possible’ LF representation because both leftward adjunction (akin to QR) and rightward (late merge) adjunction of ACD relatives have been proposed in the literature, as we will see shortly.

an operation which is needed to eliminate antecedent containment. In other words, ACD relatives involve a special, more complex derivation of relative clauses so as to ensure convergence at LF. Fox's (2002) derivation of ACD relatives is schematically illustrated in (72).

- (72) [_{VP} Bob read every book] > DP-movement
 [[_{VP} Bob read every book] *every book*] > adjunct merger
 [[_{VP} Bob read every book] every book *Maureen did <read book>*]

A slightly different version of this type of analysis is Ding's (2013) Split Relative Clause Account. As illustrated in (73), Ding's proposal does not involve rightward movement of the external head of the ACD relative. It assumes instead that the relative head is merged within the antecedent vP while the relative clause containing the ACD site is late merged as a vP-adjunct.

- (73) [_{VP} Bob read every book] > adjunct merger
 [[_{VP} Bob read every book] [_{CP} ~~book~~ *Maureen did <read book>*]]

Thus, late merger approaches to ACD structures eliminate antecedent containment and satisfy Parallelism, but do they predict clausal ellipsis in examples like (64) and (65)? It seems possible to argue that they do if we assume with Sakamoto (2016) and Takahashi (2024) that (a) different clauses can be constructed independently within the workspace, (b) the elements used in a phase that undergoes Transfer can be reused to construct another phasal category which is then merged countercyclically, and (c) reused elements do not have phonetic content because they have been transferred. Under such assumptions, a sentence like (74a) could plausibly be derived in the fashion schematically illustrated in (74b).

- (74) a. Il a obtenu tous les livres qu'il (l')espérait [~~qu'il obtiendrait~~].
 he has gotten all the books that-he (LE)expected that-he would-get
 'He got all the books he expected.'
 b. (construction of the main clause)
 [_{CP1} [_{TP} il a [_{VP} obtenu tous les livres]]]. → Transfer
 c. (construction of the ACD relative clause where CP₁ contains reused material)
 [_{CP} OP_i qu'[__{TP} il (l')espérait [_{CP1} ~~qu'il obtiendrait~~ t_i]]]

In this derivation, the step in (74c) is the crucial one. The occurrence of the embedded CP₁ is reused and therefore remains phonologically unrealized when the structure in (74c) is countercyclically merged with that in (74b). Thus, clausal ellipsis in sentences like (74a) can be made to follow from a derivational copying view of ellipsis. I will, however, discard this type of analysis on grounds that it makes use of an ellipsis mechanism that both undergenerates and overgenerates: It undergenerates because

it says nothing about clausal ellipsis in sluiced sentences, which do not involve late merger, and it overgenerates because, assuming that clausal adjuncts in general must (Stepanov 2001), or at least may (Abe 2018), undergo late merge, it wrongly predicts that sentences like those in (75) should license clausal ellipsis. That is, as we have seen in previous examples, type 2 clausal ellipsis under a bridge verb is only licensed if a remnant is extracted from the ellipsis site. As this is not the case in (75), clausal ellipsis is prohibited, as evidenced by the fact that the *le* that appears in such examples must be overt and is therefore a pronoun.

- (75) a. Ma commande est arrivée six semaines après qu'ils *(l')aient
 my order has arrived six weeks after that-they LE had
 dit [~~qu'elle arriverait~~].
 said that-it would-arrive
 'My order arrived six weeks after what they said.'
- b. Mon cadeau a été envoyé des mois après qu'elle *(l')ait
 my present has been sent some months after that-she LE had
 promis [~~qu'elle l'envverrait~~].
 promised that-she it-would-send
 'My present was mailed months after what she promised.'

I conclude that late merge alone cannot correctly predict clausal ellipsis under bridge verbs in ACD relatives. However, ACD relatives exhibit a second unique property, which I will argue plays a role in licensing type 2 ellipsis. I am referring here to the quantifier scope constraints unique to ACD contexts discussed in Koster-Moeller and Hackl (2008) (hereafter KM&H).

KM&H start with the observation that in standard relatives, both surface scope and inverse scope are possible for a matrix subject (*a professor* in (76)) and what they call the host DP object (*every article*) regardless of the scope properties of the subject DP inside the relative. This is illustrated in (76).

- (76) A professor read every article that a student/Julie published.
Surface scope: A single professor read every article that a student/Julie published.
Inverse scope: Every article that a student/Julie published is such that some professor read it.

However, in ACD relatives containing an elided VP, while the inverse scope reading remains available if the subject inside the relative is an existential DP, it becomes difficult to access if the subject is a proper name or a universal DP. This is shown in (77), where the # symbol indicates that the inverse scope reading is much more difficult to access than it is in (76).

(77) A professor read every article that a student/#Julie/#every student did.

As it turns out, the facts uncovered by KM&H are not specific to VP-ellipsis. Similar facts obtain in French ACD relatives containing an elided clause complement to a bridge verb, as illustrated by the contrast between (78a) and (78b–c).

- (78) a. Un pianiste s'est produit dans tous les bars que Chloé fréquente.
 a pianist performed in all the bars that Chloé attends
 'A pianist performed in all the bars Chloé hangs out.'
 (Both surface and inverse scope are possible)
- b. Un pianiste s'est produit dans tous les bars qu'un recruteur de talent/
 a pianist performed in all the bars that-a scout of talent
 #Chloé (l')avait prédit.
 Chloé (LE)had predicted
 'A pianist performed in all the bars that a talent scout/Chloé had predicted.'
- c. Un pianiste s'est produit dans tous les bars que #tous les recruteurs
 a pianist performed in all the bars that all the scouts
 de talent (l')avaient prédit.
 of talent (LE)had predicted
 'A pianist performed in all the bars that every talent scout had predicted.'

As KM&H point out, paradigms like (76) versus (77) support the generalization that the factor that determines the presence versus absence of the inverse scope restriction in ACD relatives is whether the host DP is scopally commutative or non-commutative with the subject DP inside the relative clause.²⁵ They state this as the (slightly reworded) ACD-scope generalization in (79).

- (79) In a sentence of the form [...QP₁ ... DP [_{RC} ...QP₂ ... <XP>]], where QP₁ is a matrix quantificational phrase, DP is the host of the relative clause (RC), and QP₂ is a quantificational phrase inside the relative, the DP (if quantificational) can have scope over QP₁ only if the DP and QP₂ are scopally non-commutative.

As they point out, this generalization hinges on the fact that the host DP interacts scopally with QP₂, something that can only happen if the quantificational determiner of the host DP is also found inside the relative. This, they argue, suggests that ACD relatives are derived via an amended version of the matching analysis of relatives in which there is a full copy of the host DP inside the relative that raises to [Spec, CP] and

²⁵ Quantifiers of the same type are said to be commutative in the sense that $\forall x \forall y \emptyset \equiv \forall y \forall x \emptyset$ but quantifiers of two different types are not since $\exists x \forall y \emptyset$ and $\forall y \exists x \emptyset$ are not logically equivalent.

undergoes deletion under identity when the relative is countercyclically merged with the external copy of the host DP. Further, as they point out, the presence of an ACD seems to be the ‘driving force’ behind the special structure exhibited by this type of relative.²⁶ Before discussing the details of KM&H’s derivation of ACD relatives, let us consider the implications of their proposal in view of reaching a better understanding of the difference between standard relatives, which do not license ellipsis under a bridge verb, and ACD relatives, which do. Let us begin by discussing the nature of the so-called relative pronoun in standard relatives like (80), abstracting away from whether (80) is the result of a raising or a matching derivation.²⁷

- (80) la fille [_{RC} OP que j’ai vue].
 the girl that I-have seen

First, we must assume that *que* ‘that’ in (80) is a complementizer rather than a *wh*-element as the contrast between (81a) and its interrogative counterpart, given in (81b), suggests.

- (81) a. la fille que/*qui j’ai vue.
 the girl that/who I-have seen
 b. Qui as-tu vu ?
 who have-you seen

However, assuming the presence of a silent *wh*-operator (OP) in (80) is crucial because this operator is a necessary ingredient to explain the interpretation of the relative: only via its movement can a trace/variable be created that turns the CP relative clause into an unsaturated expression; that is, a predicate of type $\langle e, t \rangle$. This predicate is then semantically conjoined with the head noun (cf. Heim and Kratzer 1998) and the conjunction of these two predicates results in an intersection such that the restrictor of the head noun is enriched with more semantic content. Finally, semantically, connecting the relative clause to its head amounts to making an identity claim; that is, a sentence like *John knows the girl that I saw* says that the girl John knows is the same girl as the one I saw. I will assume that this identity relation is

²⁶ KM&H combine this assumption about the syntactic derivation ACD relatives with a theory of ellipsis licensing that relies on a focus semantic notion of contrast to derive the ACD-Scope Generalization in (79). It is beyond the scope of the present paper to evaluate their specific proposal. What is relevant for our purposes is that in order for the quantifier corresponding to the gap in the relative clause to scopally interact with the relative clause subject, the quantificational determiner that selects the head noun must also be present inside the relative. This is true regardless of how (79) is ultimately derived.

²⁷ There is a consensus in the literature that standard relatives can have both raising and matching derivations though not necessarily in the same environments (see e.g., Hulse and Sauerland 2006 and references cited there).

encoded by a feature on C, as suggested by the fact that it can be explicitly realized as *as* in e.g., the English dialect of Somerset County in Southwest England (cf. 82).²⁸

- (82) a. % the man *as* was driving
 b. % all the firewood *as* you wanted

Concerning the operator/relative pronoun in (80), several remarks are in order. First, it is standardly assumed to move from an argument position to the [Spec,CP] position in the relative. Second, and more importantly, relative pronouns are minimal pronouns in the sense of Landau (2015: 23); that is, they bear unvalued ϕ -features in addition to their *wh*-feature. These unvalued features are then valued in the course of the derivation via Agree between the head noun and the relative pronoun (cf. Heck and Cuartero 2013 among others). Morphologically, this translates into their being silent (as in (80)), or displaying an invariant form – *what* in the English dialect of Somerset (cf. (83)), or fully reflecting the result of featural valuation as illustrated for French in (84).

- (83) a. % the shovels *what* they used to remove the snow with
 b. % this blacksmith *what* I was talking about

- (84) la personne [à laquelle j'ai parlé].
 the(*fem*) person to which-one(*fem*) I-have spoken
 'the person to whom I spoke'

Thus, the picture that emerges is that while binders generally bear unique indices, in standard relatives, relative pronouns bear unvalued features that are valued by the features of the DP relative head via Agree in the syntactic component. In contrast, the evidence uncovered by KM&H suggests that in ACD relatives, the full host DP of the relative clause is scopally active and must therefore be part of the internal derivation of the relative, or to put it slightly differently, the fully valued determiner of the host DP needs to be present in both the ellipsis antecedent and the elided constituent. In view of this crucial difference between standard and ACD relatives, I would like to propose that type 2 clausal ellipsis requires that the *wh*-remnant that transits through [Spec, CP₁] be fully valued and that this is the case in ACD relatives, but not in standard relatives. Why this should be so can then be made to follow from the assumptions in (85).

- (85) a. Relatives can undergo late merge as last resort.
 b. ACD relatives must undergo late merge because this is necessary for convergence; that is, without late merge, the elided constituent and its antecedent will not satisfy the conditions on ellipsis at LF.

²⁸ As reported in Ihalaïnen (1980).

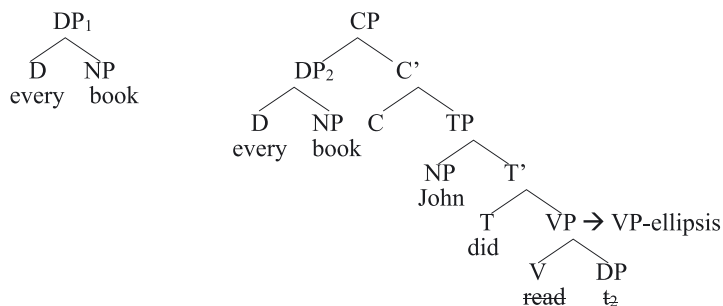
- c. Standard relatives do not undergo late merge due to economy; that is, because late merge is a grammatical operation that is not necessary for convergence in standard relatives, it is prohibited.²⁹
- d. Because they undergo late merge, ACD relatives are built separately in the work space and consequently, the remnant that undergoes A-bar movement must be fully valued as it cannot rely on cyclic merge to have its features valued through Agree.
- e. Thus, given that the *wh*-remnant in type 2 ellipsis must be fully valued, we observe that ACD remnants but not standard relative pronouns license ellipsis.

With this in mind, I now turn to a critical evaluation of KM&H's derivation of English ACD relatives with VP-ellipsis, the steps of which are sketched in (86). In (86a), the matrix object, DP₁, is built separately from the ACD relative, which also contains a copy of DP₁, labeled DP₂. HM&K argue that it is at this point in the derivation that ellipsis is licensed, giving both the antecedent constituent and the elided constituent access to identical copies the host DP/relative head. As shown in (86b) the relative clause is then late merged into the host DP, giving rise to a single tree in which the relative clause internal copy, DP₂, is deleted under identity with DP₁. Finally, to produce a coherent semantic interpretation, further operations must take place, namely trace conversion of DP₂ (cf. Fox 2002), going from type <et,t> to e, followed by type shifting of the converted DP₂ from type e to type <e,t>, a predicate.

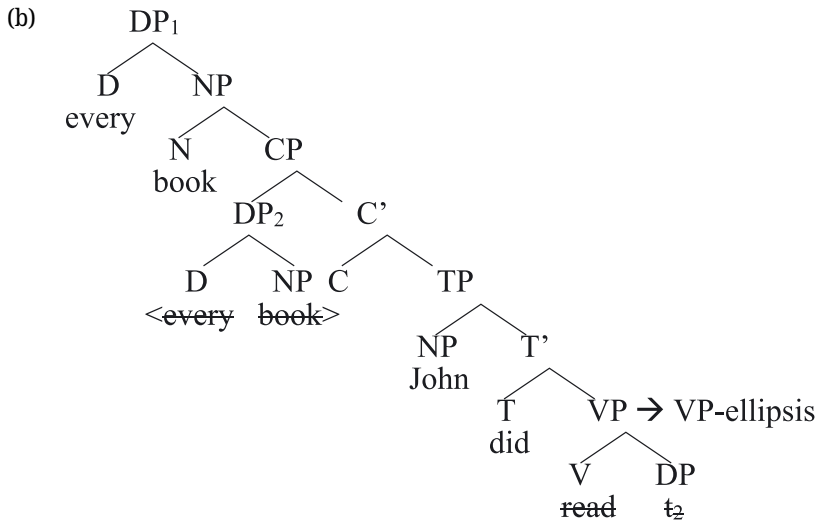
(86) Mary read every book John did.

(a) Host DP/Relative head:

RC:



²⁹ Standard relatives have been argued to be late merged in some cases (cf. Lebeaux 1988 among others). If what I am suggesting is correct, such cases should be possible only when late merge is necessary for convergence. A full discussion of this issue is beyond the scope of this article.



HM&K's proposed derivation of ACD relatives raises some unanswered questions, however.

Consider first the process by which PF-deletion of DP₂ occurs in (86b) under identity with DP₁. This process of deletion under identity is not implausible. It is, in fact, reminiscent of Bresnan's (1973) so-called Comparative Deletion. This similarity is not entirely surprising since comparatives of equality equate the degrees to which an object possesses a property (*I ate as many fries as you did*) and relatives equate the elements for which properties hold. However, given the structure in (86b), DP₂ and DP₁ cannot plausibly be identical (under any definition of identity) because DP₁ does not form a constituent that excludes DP₂ or, to put it slightly differently, DP₁ and DP₂ cannot be identical because the former contains the latter.

A second issue concerns the movement (internal merge) of DP₂ to the specifier of CP in (86a). Given that DP₂ is, in this particular case, a universally quantified DP, such movement is surprising because it can create unbounded dependencies, as (87) suggests, yet DP₂ does not overtly display the morphological marking of a *wh*-element.

(87) May read every book John said she did.

A more accurate representation of DP₂ in (86) might therefore be as in (88), that is, a *wh*-phrase headed by a silent *wh*-determiner (OP) that takes the universally quantified DP₂ as its complement.

(88) [_{WhP} OP [_{DP2} ~~every book~~]]

The overall makeup of what I labeled WhP in (88) may seem unusual in that it contains both a *wh*-element (OP) and a quantificational determiner. There is evidence, however,

that this syntactic combination is, in principle, allowed by UG. This evidence comes from *wh*-questions in those dialects of English that display the so-called *what/who/where* all phenomenon. These include dialects of Northern Ireland (McCloskey 2006) as well as American dialects found in North Carolina and the Ozarks (Lindemann 2008). Lindemann's (2008) examples include the ones in (89), both of which overtly display the syntactic sequence '*wh*-Q-restriction' posited for the WhP in (88).

- (89) a. % What all ice cream flavors do you like?
 b. % I don't know what all jobs she's had in the last year.

I therefore would like to propose that ACD relatives are countercyclically adjoined to VP and that the relative clause internal copy (DP₂ in (86a)) is deleted by the operation Form Copy (FC) argued for in Chomsky (2021). FC is an operation that selects an element X and searches its c-command domain for a structurally identical element Y. As it identifies Y, it assigns the relation <X, Y> and Y deletes. Because FC has no access to the derivational history of a phrase marker, it applies to identical elements regardless of how they were introduced in the derivation, and it can therefore apply to identical elements that were independently introduced into the derivation by external merge. I will further assume with Saito (2024) (and contra Chomsky 2021) that if FC selects an element X in an A-position, its search for Y is not restricted to A-positions and that it can therefore be connected by FC to an element Y in an A'-position. Finally, I will assume that direct objects undergo internal merge to form [Spec, VP] so that VP can be properly labeled, as proposed in Chomsky (2015).³⁰ Given these assumptions, the (partial) derivation of a French ACD relative like (74a), repeated here as (90a), is assumed to be as in (90b).

- (90) a. Il a obtenu tous les livres qu'il (l')espérait [~~qu'il obtiendrait~~].
 he has gotten all the books that-he (LE)expected that-he would-get
 'He got all the books he expected (he would).'

30 This is needed to establish a c-command relation between [tous les livres₁] and [tous les livres₃] in (90b) so that FC can apply. Note that there is independent evidence that supports the assumption that direct objects can c-command into VP adjuncts. For example, Green (2019) shows that so-called subject-gap purpose clauses like (i) are strict OC adjuncts and since OC is standardly assumed to require c-command, it follows that the object controller *ça* in (i) must be able to c-command into the clausal adjunct.

- (i) J'ai acheté ça_i [pour PRO_i m'aider à m'endormir].
 I-have bought that for me-to-help to fall-asleep
 'I bought that to help me fall asleep.'

- b. $[_{VP} \text{ il } [_{V^*} [_{VP} \text{ tous les livres}_1 \text{ obtenu } \text{tous les livres}_2] [_{CP} \text{ OP } \text{tous les livres}_3 \text{ qu'}]$
 $\uparrow$
 $[_{TP} \text{ il espérait } [_{CP1} \text{ OP-tous les livres } [_{CP2} \text{ qu'il obtiendrait OP-tous les livres}]]]]]$

In (90b), [OP tous les livres] in the relative clause externally merges as the object to *obtiendrait* then internally merges in [Spec, CP₁] and finally, internally merges in the specifier of the CP relative clause. After two applications of FC, the lower copies delete, leaving [OP tous les livres₃]. In the main clause, *tous les livres* externally merges as the object to *obtenu* ([tous les livres₂]), then internally merges in [Spec, VP] as [tous les livres₁], at which point FC applies and deletes [tous les livres₂]. Finally, once the relative is late merged, FC applies to [tous les livres₁] in the matrix and [tous les livres₃] in the relative and the latter deletes.³¹

In summary, my goal, in this section, was to provide an answer to the question of why ACD relatives, but not standard relatives, allow clausal ellipsis under an embedded bridge verb. I argued that, in order to avoid infinite regress, ACD relatives force a derivation that differs from both the raising and matching derivations that have been shown to be available for standard relatives. Specifically, ACD relatives are late merged. This more complex derivation is necessary for convergence; that is, to avoid an LF crash due to infinite regress, and is not available to standard relatives for economy reasons; that is, it is not necessary for convergence and therefore prohibited. I further argued that late merged ACD relatives contain a full copy of the relative head, a conclusion reached independently by KM&H based on evidence pertaining to quantifier scope. Finally, I argued that this full copy constitutes, in the specifier of C₁, the type of remnant that licenses type 2 clausal ellipsis; that is a remnant merged with fully valued ϕ -features. Because they undergo late merge, ACD relatives are built separately in the workspace and consequently, the remnant that

31 Needless to say, a number of issues remain. Chief among them is the question of why the relative clause internal copy can, in some cases, either be deleted by FC (ia) or remain overt if it is pronominalized (ib). Additionally, not all speakers agree that ellipsis with ACD relatives with an overt prepositional internal copy like (ib) is possible. Abeillé and Godard (2021:1,483), for example, judge examples similar to (ib) to be ungrammatical.

- (i) a. Lucie n'a pas parlé à la personne [OP ~~la personne~~ qu'elle (le) prétend].
 Lucie Neg-has not spoken to the person that-she (LE) claims
 b. Lucie n'a pas parlé à la personne [à laquelle elle (le) prétend].
 Lucie Neg-has not spoken to the person to which-one she (LE) claims
 'Lucie hasn't spoken to the person she claims.'

Answering such questions is beyond the scope of this article. My goal here was simply to show that a coherent account of ACD relatives can be provided that includes a full copy of the host DP inside the late merged relative clause and to argue that this full copy is crucial to the licensing of clausal ellipsis under a bridge verb in relatives.

undergoes A-bar movement must be fully valued as it cannot rely on cyclic merge to have its features valued through Agree. In standard relatives, on the other hand, relative pronouns are minimal pronouns that bear unvalued ϕ -features (in addition to their *wh*-feature). These unvalued features are then valued in the course of the derivation via Agree between the head noun and the relative pronoun. As such, run-of-the-mill relative pronouns, having unvalued features when they transit through the specifier of C_1 , are not appropriate remnants for type 2 clausal ellipsis.

9 Concluding remarks

In this final section, I would like to take stock of the main findings of this article. First, an examination of French clausal ellipsis confirms the existence in French of an overt morphological correlate to the abstract E-feature argued for by Merchant and much subsequent work on ellipsis, namely, special *le*. Authier (2023) was the first to argue that *le* currently functions as an E-feature in French predicate ellipsis but used to be phonologically unrealized at previous stages of the language. An examination of clausal ellipsis has revealed that, with the exception of sluices, both overt and covert versions are available, though in different registers. This suggests that the overtness versus covertness of the E-feature in French ellipsis varies along register and construction specific lines. Second, it was established that there are, in French, two distinct types of clausal ellipsis. Type 1, exemplified by so-called modal ellipsis, only requires the pairing of an E-feature with a modal verb that takes a phasal complement. Type 2, exemplified by sluices and the ellipsis of the complement to a bridge verb, is instantiated by the pairing of an E-feature with the higher C-projection (C_1) of a CP-recursion structure that is licensed by the presence of a speech act. It was further argued that when C_1 is endowed with an E-feature, it must also be associated with an EPP feature, which is but one example of feature clustering among many others. A direct consequence of this is that type 2 clausal ellipsis requires, rather than allows, *wh*-extraction of a remnant in order to be licensed. Finally, it was shown that relative clauses that embed a bridge verb license type 2 clausal ellipsis only when they are of the ACD type. Regardless of any analysis, this observation entails that standard and ACD relatives undergo distinct derivations, a conclusion previously reached Koster-Moeller and Hackl (2008) on the basis of the quantifier scope restrictions exhibited by English ACD relatives involving VP-ellipsis. It was argued that, in order to avoid infinite regress, ACD relatives force a more complex/costly derivation: they must be late merged. It was further argued that late merged ACD relatives contain a full copy of the relative head which constitutes, in the specifier of C_1 , the type of remnant that licenses type 2 clausal ellipsis; that is, a remnant merged with fully valued ϕ -features. In standard relatives, on the other hand, relative

pronouns are minimal pronouns that bear unvalued ϕ -features that are valued in the course of the derivation via Agree between the head noun and the relative pronoun. As such, run-of-the-mill relative pronouns, having unvalued features when they transit through the specifier of C_1 , are not appropriate remnants for type 2 clausal ellipsis.

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