

# Phase-Edge Features and the Syntax of Polarity Particles

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In this article, I argue that the phase edge in the C field shares features via Agree with an intermediate layer (FinP) and with a lower projection ( $\Sigma$ P), allowing it to determine the type of clause and its polarity. I adopt a feature-sharing relation of Agree that connects all of the polarity features present on heads (be they  $\Sigma$ , Fin, and, in some cases, VFoc) to a polarity feature in Force, the relevant phase-edge position for clausal typing. This explains, among other things, why embedded clauses containing a polarity feature can only satisfy the selectional properties of a particular class of (matrix) verbs.

*Keywords:* clausal typing, feature sharing, polarity particles, polar questions, exclamatives

## 1 Introduction

The goal of the present article is to defend a view of clause structure according to which the phase edge in the C field (ForceP) shares features via Agree with an intermediate layer (FinP) and with a lower projection ( $\Sigma$ P), allowing it to determine the type of clause and its polarity. The arguments provided in favor of this hypothesis revolve around the lexical status and syntactic behavior of the French polarity particles *oui/si* ‘yes’ and *non* ‘no’, which have a much wider distribution than their English counterparts. Indeed, while both languages make use of such particles at the leftmost edge of reactive assertions occurring in the discourse immediately after a polar question or a previous assertion (see (1) and (2)), only French allows polarity particles to appear after complementizers (see (3) and (4)) and in elliptical conjuncts with contrastive polarity (see (5) and (6)).<sup>1</sup>

I am indebted for helpful comments to Donka Farkas, Ljiljana Progovac, Lisa Reed, and two anonymous *LJ* reviewers. I also wish to thank my Canadian French informants, Julie Auger and Yves Roberge, for their assistance. Any remaining errors are my own.

<sup>1</sup> French polarity particles behave in this respect like their Spanish (Laka 1990) and Hungarian (Farkas 2009) counterparts. German, on the other hand, differs minimally from French and Hungarian in that while it uses polarity particles in embedded contexts, these particles are not preceded by a complementizer.

- (i) Ich glaube ja.  
I believe yes  
'I think so.'
- (ii) Wahrscheinlich ja.  
apparently yes  
'Apparently so.'

See section 3.3 for further discussion.

- (1) Q: Did Jason fall?  
 A: Yes, he fell.  
 A': No, he didn't fall.
- (2) Q: Est-ce que Jason est tombé?  
 A: Oui, il est tombé.  
 A': Non, il n'est pas tombé.
- (3) a. Je crois que oui/non. (Lit. I think that yes/no.)  
 b. Peut-être que oui/non. (Lit. Maybe that yes/no.)
- (4) a. \*I think that yes/no. (cf. I think so/not.)  
 b. \*Maybe that yes/no. (cf. Maybe so/not.)
- (5) a. Julie veut se marier, mais Anne, non.  
 b. Julie n'aime pas les moules, mais les huîtres, oui/si.
- (6) a. ??Julie wants to get married, but Anne, no. (cf. . . . but Anne doesn't.)  
 b. \*Julie doesn't like mussels, but oysters, yes. (cf. . . . but she does oysters.)

The article is organized as follows. In section 2, I give some background information about polarity particles in general, and English and French ones in particular. More specifically, I introduce several notions that are at the heart of the analysis defended here: relative and absolute polarity features (Farkas 2009), clausal typing (Cheng 1991), and the feature-sharing version of Agree argued for by Pesetsky and Torrego (2007). I conclude with a brief overview of how these notions can be used to account for the properties of English polarity particles and the ellipsis they sometimes license in echo assertions. In section 3, I first examine the distribution of polarity particles in elliptical embedded clauses and elliptical right conjuncts expressing contrastive polarity, and I argue that such particles lexicalize phase-edge clausal-typing features. I then address the question of why languages like French, Hungarian, Polish, and Romanian can effect clausal typing in embedded contexts via *yes/no*-type polarity particles but English cannot. This, I argue, follows from the inability of English-type languages to license embedded TP-ellipsis, leaving English with two options to express embedded polarity in a reduced form: *so*-pronominalization and VP-ellipsis. In section 4, I argue that the position of French polarity particles in the C field is the head of FinP, a projection that closes the C domain downward. I then show how the sharing version of Agree as applied to clausal-typing features explains how a French polarity particle located in Fin can inherit the (positive or negative) value of Laka's (1990)  $\Sigma$  and "pass it on" to Force, allowing a matrix verb to "see" whether the clause it has merged with satisfies its selectional properties. In section 5, I consider special uses of French polarity particles in polar questions and propositional exclamatives. With respect to polar questions, I argue that in addition to the values Pos and Neg, the head  $\Sigma$  can be the locus of alternative polarity (AltPol), a type of polarity that can be lexicalized by *oui ou non* 'yes or no' in French. I then show how, in French interrogative *if*-clauses, clausal typing and (the sharing version of) Agree conspire to produce a valued AltPol present at three locations:  $\Sigma$ , Fin, and Force. With respect to polarity particles in

French propositional exclaimatives, I present arguments that these are structurally higher than ForceP and seem therefore to be a good candidate to head the kind of high  $\Sigma$ P called Verum Focus Phrase (VFocP) by Van Craenenbroeck (2010). Finally, in section 6, I lay out the general conclusions that emerge from the present discussion.

## 2 Polarity Particles in Echo Assertions

In this section, I discuss the featural makeup of polarity particles in contexts that are directly linked to the previous discourse and argue that this featural makeup determines clausal typing via Agree (section 2.1). I also address the question of how polarity particles license ellipsis in such contexts (section 2.2).

### 2.1 Polarity Particles and the Clausal-Typing Hypothesis

Before we consider the full range of data in (1)–(6), it seems crucial to make a preliminary attempt at defining, as specifically as possible, the notion of *polarity particle*. To do so, I will first focus on the “simple case” exemplified by (1)–(2), which I will refer to as *echo assertions*, a term that I borrow from Farkas (2009). Echo assertions are reactions to a previous assertion or a polar (yes/no) question. Such assertions either keep the polarity of their discourse “antecedent” or reverse it. In order to make sense of the function and distribution of polarity particles in echo assertions, I will adopt the view, developed by Farkas (2009) and Farkas and Roelofsen (2011), that polarity particles can be the lexical realization of two types of polarity features: relative polarity features ([SAME] and [REVERSE]) and absolute polarity features ([+] and [–]). That is, polarity particles are characterized by the relationship between the polarity of the antecedent and that of the response (confirming/[SAME] or reversing/[REVERSE]) and by the polarity of the response (positive or [+] or negative or [–]). From this it follows that crosslinguistically, polarity particles have the potential to instantiate the four possible feature combinations given in (7).

- (7) a. [SAME, +]  
 b. [SAME, –]  
 c. [REVERSE, +]  
 d. [REVERSE, –]

Further, to make this picture complete, one must take into account the fact that some features are more marked than others and that crosslinguistically, features that are more marked have higher “realization needs” than unmarked ones. With respect to absolute polarity, it is standard to assume that [–] is marked relative to [+] (see Horn 2001). With respect to relative polarity, Farkas (2009) argues that [REVERSE] is marked relative to [SAME], and Farkas and Roelofsen (2011) argue that the absolute polarity of a [REVERSE, +] or [REVERSE, –] combination is marked because it contrasts with the polarity of the antecedent. With this in mind, let us determine the feature realization rules for French, a language with the polarity particle inventory *oui*, *non*,

*si*. In a nutshell, *oui* realizes [+], *non* realizes [–], and *si* realizes [REVERSE, +]. Thus, in French, according to Farkas and Roelofsen's featural characterization of polarity, absolute features must be realized, [SAME] is never realized, and [REVERSE] is always realized in [REVERSE, +] responses but never realized in [REVERSE, –] responses. This is illustrated by the paradigm in (8)–(10).

- (8) *oui* realizes [+]  
 [SAME, +]  
 A: Il a téléphoné./Est-ce qu'il a téléphoné? 'He called./Did he call?'  
 B: Oui/\*Non, (il a téléphoné). 'Yes/\*No, (he called).'
- (9) *non* realizes [–]  
 a. [SAME, –]  
 A: Il n'a pas téléphoné./Est-ce qu'il n'a pas téléphoné? 'He didn't call./Did he not call?'  
 B: Non/\*Oui, (il n'a pas téléphoné). 'No/\*Yes, (he didn't call).'
- b. [REVERSE, –]  
 A: Il a téléphoné./Est-ce qu'il a téléphoné? 'He called./Did he call?'  
 B: Non/\*Si, (il n'a pas téléphoné). 'No he DIDN'T./No, he didn't.'
- (10) *si* realizes [REVERSE, +]  
 A: Il n'a pas téléphoné./Est-ce qu'il n'a pas téléphoné? 'He didn't call./Did he not call?'  
 B: Si/\*Oui, (il a téléphoné). 'Yes, he DID.'

At first blush, the French polarity particle system seems to differ from its English counterpart only by the presence of a dedicated [REVERSE, +] particle: *si*. However, there is another, more fundamental difference between the two languages pointed out by Farkas and Roelofsen (2011): namely, unlike French *oui* and *non*, English *yes* and *no* do double duty in the sense that they can be used to realize both absolute and relative polarity features. Specifically, the realization of English polarity features can be characterized as in (11).

- (11) *Realization of polarity features in English*  
 a. Both [SAME] and [+] can be realized by *yes*.  
 b. Both [REVERSE] and [–] can be realized by *no*.

That (11) is the proper characterization of English polarity particles can be demonstrated via the predictions it makes. Indeed, according to (11), while the feature combinations [SAME, +] and [REVERSE, –] should only be realized by *yes* and *no*, respectively, the other two possible combinations, [SAME, –] and [REVERSE, +], contain features with opposite potential realizations and should therefore be realizable via either *yes* or *no*. As Farkas and Roelofsen point out, this is indeed the situation that obtains in English, though the fact that [REVERSE] and [–] are marked features relative to [SAME] and [+] creates a preference for *no* in the case of [SAME,

–] and, in the case of [REVERSE, +], an obligatory *verum focus* component (i.e., auxiliary stress) encodes the contrastive polarity of the response. The full paradigm for English, which I borrow from Farkas and Roelofsen (2011:6), is given in (12)–(15).<sup>2</sup>

- (12) [SAME, +]  
 A: Vince saw the car./Did Vince see the car?  
 B: Yes, he did./\*No, he did.
- (13) [REVERSE, –]  
 A: Vince saw the car./Did Vince see the car?  
 B: \*Yes, he didn't./No, he didn't.
- (14) [SAME, –]  
 A: Vince didn't see the car./Did Vince not see the car?  
 B: Yes, he didn't./No, he didn't. (preference for *no*)
- (15) [REVERSE, +]  
 A: Vince didn't see the car./Did Vince not see the car?  
 B: Yes, he DID./No, he DID. (contrastive stress obligatory)

Thus, one important difference between English and French concerning polarity particles in echo assertions is that English *yes* and *no* can be used to encode relative polarity features ([SAME] and [REVERSE]) but French *oui* and *non* cannot.

Finally, before we examine an extended data set, it seems necessary to discuss the nature of what Farkas and Roelofsen call absolute polarity features. Absolute features are defined by Farkas (2009:105) as encoding “the polarity of the sentence radical asserted by the echo. Echo assertions whose sentence radical is positive have the absolute polarity feature [+], while echo assertions whose sentence radical is negative have the absolute polarity feature [–].” Should we conclude from this that English *no*, which may encode [–], and French *non*, which always encodes [–], encode semantic negation? The answer is clearly no. To see why, consider first the case of English *no*. As Laka (1990) discusses, there are two types of answers introduced by *no* in English. These are illustrated in (16a–b).

- (16) Q: Do you play the drums?  
 a. No I don't.  
 b. No, I sing.  
 c. #No I don't, I don't.  
 d. No I don't, I sing.

<sup>2</sup> Needless to say, the *yes* response in (14) and the *no* response in (15) require both the proper context and the proper intonation. For experimental evidence that both *yes* and *no* can be used in English in a confirming response to a negative assertion, Farkas and Roelofsen (2011) refer the reader to Brasoveanu, Farkas, and Roelofsen 2011.

Laka points out that while answers like (16b) require a pause between *no* and the rest of the sentence, answers like (16a) do not. Second, while removing *no* from (16b) leads to an indirect answer to the question in (16),<sup>3</sup> removing *no* from (16a) does not alter the answer, which remains a direct answer to the question in (16). Third, one can add *I don't* following *no* to (16b), forming (16d), without modifying the meaning of the answer, but modifying (16a) in the same manner to form (16c) results in semantic redundancy. Such facts lead Laka to conclude that while (16a) is a single sentence, (16b) consists of two juxtaposed independent sentences: the first one consists of a functional head in the C field lexicalized by *no* and followed by a TP that has undergone PF deletion, while the second one is the TP [*I sing*]. Thus, according to her, the representations corresponding to (16a) and (16b) are as in (17a) and (17b), respectively.

- (17) a. [<sub>CP</sub> no [I don't [<sub>VP</sub> e]]]  
 b. [<sub>CP</sub> no [<sub>TP</sub> e]] // [<sub>TP</sub> I sing]

The conclusion is therefore that English *no* (as well as French *non*, given that similar facts obtain in French) is a functional element in the C field that introduces either a phonologically spelled out or an elided TP. With this in mind, consider the following paradigm:

- (18) Q: Did you see anyone?  
 a. No I didn't see ~~anyone~~.  
 b. No, no one.  
 c. No, I ~~didn't see anyone~~. I saw no one.  
 d. No, I ~~didn't see anyone~~, (but) I heard someone.  
 e. \*No, I didn't see anyone, but I saw no one.

According to the discussion above, *no* in (18a) is part of the same clause as the sentential negation *not*. Yet *no* and *not* combined yield a single semantic negation (rather than a double negation logically equivalent to an assertion). A similar argument can be based on the fragment answer in (18b), assuming that *no* and the negative quantifier *no one* are clausemates. This assumption is challenged by a reviewer, who suggests that (18b) could be argued to be biclausal with ellipsis, like (18c), in which case *no* could still be taken as encoding interpretable negation. However, there are two problems with this alternative interpretation of the facts. First, unless we assume that elided sentential negation can be semantically vacuous, the first sentence in (18c) simply duplicates the double negation problem encountered in (18a), an example for which a biclausal analysis seems entirely unmotivated. Second, recall that Laka (1990) assumes that biclausal answers introduced by *no*, such as the one in (18d), are composed of an elliptical sentence introduced by *no*, which constitutes a direct answer to the polar question, followed by a second sentence

<sup>3</sup> An indirect answer is an assertion that is interpreted as a response to the question via Gricean pragmatic principles. A typical example is this:

- (i) Q: Don't you think it's hot today?  
 A: It's still summer, you know.

that constitutes an elaboration on the actual direct answer to the question. The optional presence of *but* in (18d) signals that the right conjunct is such an elaboration, as the information it introduces runs contrary to the questioner's expectation that the answer should say no more than is required. Interestingly, the nonelliptical version of (18c) under a biclausal analysis, given in (18e), disallows the presence of *but*. This suggests that the second clause in (18c) is not an elaboration on the direct answer provided by the first one and therefore, if Laka's line of reasoning is correct, that (18c) is in fact not biclausal. Thus, in (18c), a monoclausal structure, *no* and *no one* combine to yield a single semantic negation, which again suggests that *no* is not semantically negative. This in turn raises the question of what the nature of the absolute polarity feature [-] might be, if not semantic negation.

A possibility that Kramer and Rawlins (2008) argue for regarding English *no* in echo assertions is that any echo assertion containing *no* involves a negative concord chain, and exactly one member of the chain is interpretable (i.e., encodes semantic negation). According to them, *no* is an adverb that carries an uninterpretable negative feature, is syntactically adjoined to a (high)  $\Sigma$ P dominating TP, and enters into a negative concord chain with the (null) head of  $\Sigma$  and Neg. As far as I can see, this analysis has at least two drawbacks: first, it uses adjunction, an option whose status remains unclear under Minimalist assumptions; and, second, it must stipulate that Standard English does not license negative concord chains *except* in the case of the polarity particle *no*.<sup>4</sup> On the other hand, Kramer and Rawlins's idea that the polarity particle *no* and sentential negation form some sort of chain appears to be on the right track. Intuitively, it seems as if *no* is a polarity marker in the left periphery that introduces a clause containing sentential negation in a way reminiscent of the way the complementizer *that* introduces a finite (as opposed to nonfinite) clause. Laka (1990:160), who assumes that *yes* and *no* head CP, expresses a somewhat similar intuition: "[C]omplementizers like *that*, *whether*, etc. . . . do not modify the event of the clause they head, but rather, they establish a connection between the main clause and the embedded one. They are also selected by the matrix verb, in a way similar to which the elements *yes* and *no* have to be licensed by a question." Such intuitions can, in fact, be made more precise by extending ideas proposed by Moscati (2006:chap. 3), who argues that a negative feature can be a clausal-typing feature.

The idea that every clause needs to be typed, a requirement that can be met by the presence of an appropriate feature in the topmost clausal projection, goes back to Cheng 1991. It is based among other things on the simple observation that matrix verbs are selective with respect to the type of clause they introduce and that clausal typing is usually expressed lexically in the left periphery of that clause. So, for instance, as shown in (19), the verb *think* selects clauses introduced

<sup>4</sup> I also note that Kramer and Rawlins's (2008) conception of  $\Sigma$  is radically different from that envisaged by Laka (1990), for whom the values of  $\Sigma$  are emphatic affirmation and sentential negation and are spelled out in English as *so* and *not*, respectively. I will return to this issue later.

by a complementizer lexicalizing the feature [+declarative]—namely, *that*—while *wonder* calls for a complementizer expressing the feature [+Q(uestion)].

- (19) a. I think *that*/\*if they liked it.  
 b. I wonder if/\**that* they liked it.

Thus, the C field in general (and Rizzi's (1997) Force projection in particular) represents the interface between a propositional content corresponding to the TP and the superordinate context, be it a matrix clause, if the TP is embedded, or the discourse, if the TP is a main clause. While I take Force to be crucial to the determination of clause type, following Rizzi, I do not equate clausal typing with the notion of sentence type introduced by Sadock and Zwicky (1985). According to Sadock and Zwicky, sentence types (such as *declarative*, *interrogative*, *imperative*) are pairings of a particular pragmatic illocutionary force corresponding to a speech act with a particular morphosyntactic sentential form. In other words, sentential typing in this sense is a universal component of nonembedded natural language sentences.

In contrast, I assume a distinction among three concepts: syntactic clause type, semantic sentence mood/attitude, and illocutionary force. Syntactic clause types correspond to language-specific syntactic devices that mark a clause for a specific function; semantic sentence moods/attitudes are the semantic representations/denotations corresponding to the functions syntactically encoded by various clause types; and illocutionary forces are pragmatic interpretations restricted to root clauses that result from combining sentence moods with possible speech acts tied to particular communicative situations. To give a concrete example, Morin (2006) reports that in both root and embedded contexts, Bearnese Gascon uses so-called enunciative particles that syntactically mark clause types. These are *que*, corresponding to declarative affirmative clauses; *e*, corresponding to interrogative clauses; and *be*, corresponding to exclamative clauses. (Interestingly, these particles are in complementary distribution with *ne*, the negation, in addition to being in complementary distribution with one another, as one would expect.) On the assumptions made here, such particles are clausal-typing particles—that is, syntactic devices that encode how sentence moods/attitudes are to be construed. In other words, both matrix and embedded interrogative clause types yield the sentence mood/attitude *question*. The latter is a semantic object that will be anchored in the context of discourse in the case of a root clause or will have to be selected by a matrix speech act verb such as *ask* or *wonder* in the case of an embedded clause. In a matrix context, a sentence mood like *question* will link to an illocutionary force. However, this is not necessarily a one-to-one relation. For example, the interrogative clause type signaled by the fronting of the auxiliary verb in *Can pigs fly?* yields the semantic mood *question* and may have, in addition to a request-for-information type of illocutionary force, the force of an assertion (of the negative variety) if used in the discourse as an answer to a question like *Can John swim?* Thus, to sum up, I assume that illocutionary force should be treated as external to syntax and that clausal typing is to be understood as a set of features merged in the C field that encode information crucial to the determination of semantic mood/attitude.

This being said, in addition to complementizers lexicalizing [+declarative] and [+Q] in (19), we find morphologically distinct negative complementizers such as *enik* in Basque, which



can be selected by matrix verbs with inherently negative meaning, like the Basque equivalent for ‘deny’ in (20), from Laka 1990:205.

- (20) Amaiak [inork gorrotoa di-**onik**] ukatu du.  
 Amaia anyone hatred has-that denied has  
 ‘Amaia denied that anyone hated her.’

Thus, in (20), the element *enik*, merged in ForceP, carries (or encodes) a typing feature [+neg], thereby typing the embedded clause as meeting the selectional properties of the adversative predicate *ukatu*. But at this point, an interesting problem surfaces: there is evidence that typing features do not always occupy the topmost projection in the C field or, to put it slightly differently, that clausal typing can take place “at a distance.” Consider in this respect the paradigm in (21), from Authier and Reed 2010:2208.

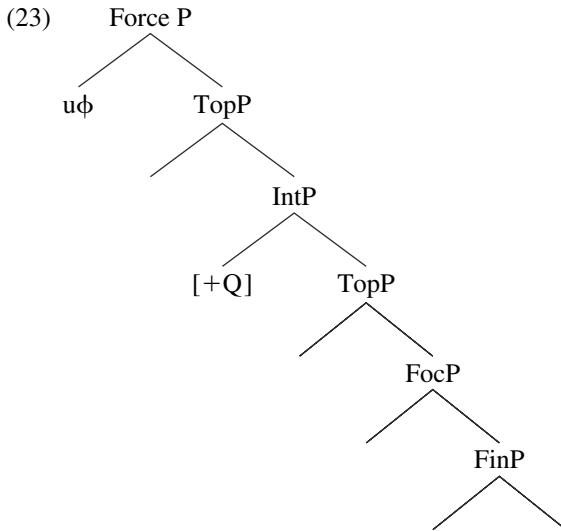
- (21) a. As-tu vérifié si ta courroie, on te l’a changée?  
 have-you checked if your belt they for.you it-have replaced  
 ‘Did you check to see if they have replaced your belt?’  
 b. As-tu vérifié ta courroie, si on te l’a changée?  
 c. Tu as intérêt à ce que ton chien, il me morde pas.  
 you have interest to it that your dog he me bite not  
 ‘You’d better make sure that your dog doesn’t bite me.’  
 d. Tu as intérêt, ton chien, à ce qu’il me morde pas.  
 e. Je crois qu’Annie, on aurait dû lui dire la vérité.  
 I think that-Annie we should have to.her to.tell the truth  
 ‘I think we should have told Annie the truth.’  
 f. \*?Je crois Annie, qu’on aurait dû lui dire la vérité.

The examples in (21) illustrate the fact that while the complementizer *que* ‘that’ can only be followed by a topic, the complementizers *si* ‘if’ and *à ce que* ‘that’ can be either preceded or followed by a topic. On the basis of Italian data that mirror the French examples in (21a–b), Rizzi (2001:289) argues that *si* occupies a position distinct from, and lower than, the one occupied by *que*, a position that is higher than FocP but can be preceded by a topic, and that Rizzi labels Int(errogative). A similar argument is made by Authier and Reed (2010) for French *à ce que*, a “complementizer” that they assume occupies the head of IntP (rather than that of ForceP) in the following classical Rizzian hierarchy of functional C field heads (Rizzi 1997, 2001).

- (22) Force > (Top) > Int > (Top) > Foc > (Top) > Fin > T

Now, on the basis of examples like (21b), I follow Rizzi (2001) in rejecting the hypothesis that clauses introduced by *si* (or *à ce que*) project no further than IntP since in these examples IntP is dominated by additional clausal structure—minimally a TopP hosting the topic in its specifier—and it is unlikely that such propositions are closed upward by a TopP given that the matrix verb selects for an indirect question rather than a clause with a topic. The same reasoning applies to *à ce que*, given examples like (21d). Consequently, in these examples there must be a null

Force head whose projection closes the structure upward, and it is this head that satisfies the selectional restrictions of the matrix verb.<sup>5</sup> Thus, we are now forced to address the question of how to type a sentence with a manifest typing feature that appears on a head lower than Force (e.g., [+Q] in Int). One way of resolving this issue, proposed by Moscati (2006), is to allow a Force head to probe its search domain, looking for a typing feature, as schematically illustrated in (23).



Given the configuration in (23), an unvalued uninterpretable feature in Force initiates an Agree operation, taking as goal the typing feature [+Q] in Int. It is further assumed that Agree results in copying the [+Q] value where the probe originates, thereby fulfilling the clausal typing requirement that satisfies the selectional restrictions of the matrix verb. As it stands, however, the feature-copying mechanism in question introduces a redundancy in the representation, generating two copies of the same feature, possibly both interpretable. Moscati proposes to resolve this problem by using the feature-sharing version of Agree argued for by Pesetsky and Torrego (P&T) (2007).

<sup>5</sup> Two remarks are in order here. First, the Int head *à ce que* appears in clauses selected by verbs (such as *s'attendre* 'to expect') whose subjects prospectively evaluate (or are advised to prospectively evaluate) the proposition denoted by the embedded clause. See Authier and Reed 2010:2203 for details.

Second, a reviewer suggests that since the Top head is not a selectable head, it is transparent to selection and there is therefore no need to assume a higher (null) Force head in such structures. However, as first pointed out by Plann (1982:300), in a closely related language, Spanish, some indirect questions overtly express both the Int head and the Force head as a *que si* 'that if' sequence (see (i)). Biloa (2009) reports a similar phenomenon in Tuki (Bantu), illustrated in (ii). In such cases at least, it is obvious that IntP is not directly selected by the matrix predicate.

- (i) María preguntaba **que si** no debiéramos dejarlas en paz.  
 María was.asking that if not we.should leave.them in peace  
 'María wondered if we shouldn't just let them be.'
- (ii) Viroo asesam **ee ngi** Mbara amakusa matuwa.  
 Viroo asks that if Mbara bought the.car  
 'Viroo wants to know if Mbara bought the car.'

To understand P&T's version of Agree, let us first consider Chomsky's (2001) assumptions regarding this notion. Chomsky assumes that the interpretability of a feature *F* is a semantic notion to which the syntactic system has no direct access. Since the syntax must nevertheless be able to deliver only the relevant information to this component, interpretable features also carry a value and that value alone is visible to the computational system. Thus, for Chomsky, Agree is blind to interpretability and only unvalued features can act as probes looking for an appropriate valued goal. However, the *raison d'être* of Agree is that it deletes uninterpretable features (24c), this being a requirement imposed by the interface between syntax and semantics. Thus, there must be a connection between valuation and interpretability. This connection is assumed to be as in (24d).

(24) *Chomsky's (2001) notion of Agree*

- a. An unvalued feature *F* on a head is a probe that scans its c-command domain for another instance of *F* (its goal) with which to agree.
- b. If a goal has a value, this value becomes the value of the probe.
- c. Uninterpretable features, once valued, must delete.
- d. A feature is uninterpretable if and only if it is unvalued.

P&T's proposal concerning Agree differs from Chomsky's in two crucial respects. First, P&T adopt Chomsky's view that it is unvalued features that act as probes but without assuming the valuation/interpretability biconditional in (24d). This allows unvalued interpretable features to act as probes, an option that (P&T argue) is empirically motivated, but one that will have little impact on the proposals made here. Second, and more important for our purposes, P&T do not assume with Chomsky that once two instances of a feature, *F*<sub>1</sub> and *F*<sub>2</sub>, have undergone Agree, the syntax can no longer see that the valuation of *F*<sub>2</sub> is due to Agree with *F*<sub>1</sub>. Instead, they adopt the feature-sharing version of Agree given in (25).

(25) *P&T's notion of Agree*

- a. An unvalued feature *F* (a probe) at syntactic location  $\alpha$  (*F* $\alpha$ ) scans its c-command domain for another instance of *F* (a goal) at location  $\beta$  (*F* $\beta$ ) with which to agree.
- b. Replace *F* $\alpha$  with *F* $\beta$ , so that the same feature is present in both locations.

Under (25), two instances of a feature that have undergone Agree not only share the same value but also are instances of the same feature. Further, to ensure that deletion does not apply to entire features (i.e., multiple instances of features created by Agree), thereby deleting interpretable instances that are relevant to the syntax/semantics interface, P&T adopt Brody's (1997) Thesis of Radical Interpretability in (26).

(26) *Thesis of Radical Interpretability (Brody 1997)*

Each feature must receive (exactly one; see Moscati 2006) semantic interpretation in some syntactic location.

As Moscati (2006) explains, P&T's system allows us to view Agree as a last resort option that connects a value component [*val*] to an interpretable component [*i*] to create a full-fledged feature

$F = \{i[\text{val}]\}$  via one of the configurations in (27) when such a combination is unavailable in the lexicon.

- |      |   |  |
|------|---|--|
| (27) | <i>Agree between instances of F</i>     | <i>Results of Agree</i>                        |
| a.   | $F\ i[\ ] \rightarrow F\ u[\text{val}]$ | $F\ i[\text{val}] \leftarrow F\ u[\text{val}]$ |
| b.   | $F\ u[\ ] \rightarrow F\ i[\text{val}]$ | $F\ u[\text{val}] \leftarrow F\ i[\text{val}]$ |

But then, what is the use of the probe  $u[\ ]$  in (27b), called an expletive feature by P&T? Why would Agree connect it to an already full-fledged feature  $i[\text{val}]$ ? Moscati suggests that the presence of  $u[\ ]$  features is required by certain constraints imposed by the syntax. Specifically, constraints on cross-clausal dependencies such as cyclicity and clausal typing require the presence of a  $u[\ ]$  feature in phase-edge position. In the case of cyclic *wh*-movement, an unvalued uninterpretable  $[wh]$  feature will provide the escape hatch needed to build the chain encoding  $i[wh]$  across several ForceP phases. In the case of clausal typing, the presence of a  $u[\ ]$  feature in the Force head (i.e., the phase edge) of an embedded clause will allow the matrix verb to “see” whether the clause it has merged with satisfies its selectional properties. We are now in a position to determine how these mechanisms can concretely be used to account for the properties of polarity particles in echo assertions. Consider an exchange such as the one in (28).

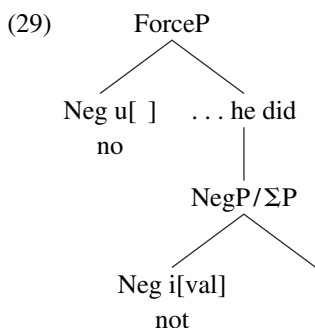
- (28) [REVERSE, -]  
 A: Vince saw the car./Did Vince see the car?  
 B: No, he didn't see it.

Recall that we are assuming, following Farkas and Roelofsen (2011), that the polarity particle *no* in (28B) does double duty. First, through its [REVERSE] feature, it provides a link to the previous discourse, in effect giving this utterance the illocutionary force of an answer or a reaction to a previous statement/question. This is why (28B) cannot be uttered out of the blue. Second, the polarity particle, through its negative feature (henceforth Neg), marks the clause as having negative polarity. More specifically, I will assume that the relative feature [REVERSE] introduced by *no*, being linked to external material, is both valued and interpretable, and that *no* occupies the head of ForceP.<sup>6</sup> The absolute feature Neg on *no*, on the other hand, cannot bear the semantic weight of negation on its own but marks the negative polarity of the clause by virtue of being linked to the sentential negative marker *not* that heads NegP/ $\Sigma$ P. In the theory that I have sketched, as head of NegP/ $\Sigma$ P, *not* already has clausal scope and can be interpreted in the syntactic position it occupies. I will therefore assume that it is the realization of a valued interpretable Neg feature. However, the clausal-typing requirement first hypothesized by Cheng (1991) needs to be satisfied; that is, Force must contain an appropriate valued typing feature. This, I would like to propose,

<sup>6</sup> The preliminary assumption that polarity particles occupy the head of ForceP is made here for ease of exposition. Examples like (iA) suggest that they in fact appear lower in the structure since they can be preceded by a topicalized VP. I will come back to this issue in section 3.

- (i) Q: Did you rake the leaves and take out the trash?  
 A: Rake the leaves, no I didn't, but take out the trash, I did.

is achieved via P&T's feature-sharing version of Agree as follows. The polarity particle *no* in Force lexicalizes an unvalued uninterpretable Neg  $u[ ]$  feature that probes its *c*-command domain and agrees with a goal, the Neg  $i[val]$  feature represented by *not*, in the manner illustrated in (29).



As the result of feature-sharing Agree, *no* in ForceP and *not* in NegP/ΣP share a single occurrence of (valued) Neg. However, given Brody's (1997) Thesis of Radical Interpretability, only the lower instance (i.e., feature-location pair) of Neg is an interpretable one at the interface with semantics. A similar account can be devised for [SAME, +] answers containing the positive polarity item *yes*, assuming that *yes* in Force lexicalizes Pos  $u[ ]$  and that the null head of ΣP contains Pos  $i[val]$ . The (dispreferred but nevertheless possible) *yes* answer in (14B) (repeated here as (30B)), however, calls for additional assumptions.

(30) [SAME, −]

A: Vince didn't see the car./Did Vince not see the car?

B: Yes, (you're right), he didn't. (Note: preference for *No*, *he didn't*)

Clearly, *yes* in (30B) encodes [SAME] alone, yet the polarity of the clause is negative since it contains the sentential negation item *not*, an item that realizes Neg  $i[val]$ . Given that all clauses must be typed, however, we are led to the conclusion that ForceP contains, in addition to the [SAME] feature realized by *yes*, an expletive Neg  $u[ ]$  feature that remains phonologically unrealized and undergoes Agree with the Neg  $i[val]$  feature lexicalized by *not*.<sup>7</sup> This conclusion is in fact a welcome one, since it is independently needed to account for negative answers like (31B), which are not prefaced by a polarity particle yet presumably fall under the clausal-typing hypothesis as well.

(31) A: Did you see that car?

B: I didn't.

We are also led to the conclusion that given the nature of *no* as encoding a Neg  $u[ ]$  feature, answers like (32B) are truly elliptical in that they must include a (phonologically unrealized)

<sup>7</sup> In other words, since *yes* in (30B) only encodes a relative polarity feature, there is no Pos  $u[ ]$  in ForceP. Note that relative and absolute features can be overtly realized independently in languages like Romanian, as shown in examples (35) and (36) in the next section.

clause harboring a Neg i[val] feature in the head of  $\Sigma$ P with which the Neg u[ ] feature can undergo Agree. Thus, Laka's (1990) analysis of examples like (32B) as instances of TP-ellipsis seems warranted.<sup>8</sup>

- (32) A: Did you see that car?  
 B: No, [~~I did not see that car~~].

## 2.2 Polarity Particles in Elliptical Answers

As a reviewer points out, the assumption that the polarity particle *no* in (32B) is unvalued for polarity and receives its negative value from the interpretable polarity head  $\Sigma$  within the elided TP is potentially at odds with the traditional view that ellipsis must be an LF copy of some antecedent. Indeed, since no negation is present in the TP of the question in (32A), it would appear that the (LF) identity condition is not satisfied. The reviewer suggests two potential answers to this problem that I will discuss in turn. The first one consists in making use of the [REVERSE] feature that *no* can encode. The hypothesis is that by virtue of this feature, *no* assigns interpretable negative value to  $\Sigma$  in TP by reversing its inherent positive value, permitting ellipsis of the TP, and then *no* receives this interpretable negative value back because it also has an unvalued negative feature. However, as the reviewer points out, this view leaves unanswered the question of why, given these assumptions, the TP in (32B), if spelled out, must contain negation since *no* now has interpretable polarity. Thus, we are left wondering how the reversal could apply before Spell-Out but after the LF identity condition is satisfied. Additionally, there are empirical facts that indicate that this approach is on the wrong track. I draw these from Farkas's (2010) discussion concerning the lexicalization of absolute and relative features in Romanian. As illustrated in (33)

<sup>8</sup> Additional evidence for this exists in French, a language in which elliptical conjuncts of the form *et XP non plus* 'and XP neither' must be licensed by expressions carrying the semantic weight of (sentential) negation.

- (i) a. Tu n'es pas cohérent, et ton ami non plus.  
 you are not coherent and your friend not either  
 'You're not coherent, and neither is your friend.'  
 b. \*Tu es incohérent et ton ami non plus.  
 you are incoherent and your friend not either

The difference between (ia) and (ib) is that while *pas* encodes 'logical' negation, *incohérent* does not. With this in mind, consider (ii).

- (ii) Q: Lis-tu Camus?  
 read-you Camus  
 'Do you enjoy reading Camus?'  
 A: Non, et Breton non plus.  
 no and Breton not either  
 'No, and neither do I enjoy reading Breton.'

Since the elliptical conjunct *et XP non plus* is licensed in (iiA), we must conclude that there is a licenser that carries interpretable sentential negation in this sentence. Since we cannot assume that this licenser is *non* for reasons given in the text, a logical place for it is somewhere in the structure embedded under *non*, a structure that can only exist if we assume that *non* is the remnant of clausal ellipsis.

and (34), in Romanian, absolute polarity features are morphologically encoded via the particles *da* 'yes' and *nu* 'no'. Further, as shown in (35) and (36), this language also uses the particle *ba* to mark assertions that contradict a previously made assertion. In other words, Romanian *ba* lexicalizes the feature [REVERSE].

- (33) A: Ana a plecat.  
 Ana has left  
 'Ana left.'  
 B: Da, (a plecat).  
 yes has left  
 'Yes, (she did).'
- (34) A: Ana nu a plecat.  
 Ana not has left  
 'Ana didn't leave.'  
 B: Nu, nu a plecat.  
 no not has left  
 'No, she didn't.'
- (35) A: Ana a plecat.  
 Ana has left  
 'Ana left.'  
 B: Ba nu, nu a plecat.  
 BA no not has left  
 'You're wrong, she didn't.'
- (36) A: Ana nu a plecat.  
 Ana not has left  
 'Ana didn't leave.'  
 B: Ba da, a plecat.  
 BA yes has left  
 'You're wrong, she did.'

Interestingly, however, *ba* can never be used in a negative answer to a positive polar question, as (37) makes clear.

- (37) A: Ana a plecat?  
 Ana has left  
 'Did Ana leave?'  
 B: Nu, (nu a plecat).  
 no not has left  
 'No, (she didn't).'
- C: \*Ba nu, (nu a plecat).  
 BA no not has left  
 'No, she didn't.'

Now, since English (32B) also is a negative answer to a polar question, it is hard to see how *no* in this type of reply could encode a [REVERSE] feature when its Romanian counterpart morphologically signals that the feature [REVERSE] is absent in such contexts. From this I conclude that the ellipsis issue posed by (32B) must be resolved without appealing to relative features. For this reason, I now turn to an alternative analysis, one that takes as a point of departure the classical view, first defended by Hamblin (1973), that the meaning of a polar question resides in its answerhood conditions and is therefore best represented by the set of its possible answers. (Intuitively, to understand a question is to know what counts as an answer to it.) One way of making this type of interpretation derivable from the syntax of polar questions is to assume that such questions involve a  $\Sigma$  head with no fixed polarity in the sense that it contains a variable term that ranges over truth values. The elided TP of the answer then is an LF copy of the TP of the question, with the variable in  $\Sigma$  taking on a value, Neg or Pos, in a way not unlike that in which the pronoun *her* contained in a VP-deletion ellipsis site like (38) takes on various referential values, yielding strict and sloppy identity readings.

- (38) a. Suzie hates her car and Maureen does [~~hate-her-car~~] too.  
 b. Suzie and Maureen each hate their own cars. (sloppy)  
 c. Suzie and Maureen both hate Suzie's car. (strict)  
 d. Suzie and Maureen both hate some third person's car. (strict)

However, what determines which value, Neg or Pos, the  $\Sigma$  head contained in the elided TP of the answer must take is determined by the (overt) polarity particle with an unvalued polarity feature located in Force. For example, in (32B), the polarity particle *no* in Force is the realization of an unvalued uninterpretable Neg feature that probes its c-command domain and must agree with a goal. This goal is then provided by a value of  $\Sigma$ , which is the Neg i[val] feature realized by *not*. If  $\Sigma$  does not take on this value, the uninterpretable feature of *no* remains unvalued and the derivation fails to converge.<sup>9</sup> Note incidentally that on this view, we correctly predict that if the TP in (32B) is spelled out, it is spelled out with a negation. If this is on the right track, we also expect the elliptical (32B) to be ungrammatical as a reactive assertion to a positive statement since the elided TP in the reactive assertion takes as its antecedent (or LF copies) a TP with a  $\Sigma$  head containing a valued Pos feature, one that cannot value the unvalued uninterpretable feature of *no* in Force. This prediction is in fact borne out, as the discourse in (39) makes clear.

- (39) A: Anne has already left.  
 B: \*No.  
 C: No, she hasn't.

We are now ready to consider the case of French polarity particles. Before assuming that the analysis that I have proposed thus far, based on their English counterparts, straightforwardly

<sup>9</sup> As a reviewer points out, the proposal that the variable  $\Sigma$  must take on a negative value so that *no* can be interpreted amounts to saying that a variable can take on any value that converges. In other words, this hypothesis entails that (at least some) syntactic operations apply freely, but only derivations that converge ever surface.



extends to them, we must carefully examine their distributional properties in a wider range of contexts. It is to this task that I turn next.

### 3 Polarity Particles in Embedded Contexts and in Nonreactive Assertions

In this section, I first discuss the properties of polarity particles in those languages (e.g., French) in which they appear in embedded contexts and in contexts that are not directly linked to a polar question or a previous assertion, such as elliptical right conjuncts with contrastive polarity (section 3.1). I then offer an account of the mechanisms underlying ellipsis in right conjuncts introduced by a polarity particle (section 3.2). Finally, I consider why, although many languages can effect clausal typing in embedded contexts via *yes/no*-type polarity particles, English cannot do the same (section 3.3).

#### 3.1 Types of Licensing Contexts

Let us first examine the case of French embedded contexts illustrated in (3), repeated here.

- (40) a. Je crois que oui/non.  
           I think that yes/no  
           ‘I think so/not.’  
       b. Peut-être que oui/non.  
           may-be that yes/no  
           ‘Maybe so/not.’

The first important (and heretofore unnoticed) property that will help us characterize such contexts is that nonmatrix elliptical clauses containing a polarity particle cannot be unselected clauses, for example, sentential subjects (41B–C) or adjunct clauses (42B).

- (41) A: Il y en a qui disent que les sites de poker sont truqués.  
           there of.them has who say that the sites of poker are rigged  
           ‘Some say that poker sites are rigged.’  
       B: \*Que oui m’étonnerait beaucoup. (cf. Ça m’étonnerait que oui.)  
           that yes me-would.surprise a.lot it me-would.surprise that yes  
           ‘It would surprise me if that were true.’  
       C: \*Que oui est probable. (cf. Il est probable que oui.)  
           that yes is likely it is likely that yes  
           ‘That’s probably true.’
- (42) A: Les épinards, ça contient beaucoup de fer.  
           the spinach that has a.lot of iron  
           ‘Spinach is rich in iron.’  
       B: (Je le sais bien.) \*J’en fais manger à mes enfants justement  
           I it know well I-of.it make to.eat to my kids precisely  
           parce que oui.  
           because that yes  
           ‘(I know.) I make my kids eat it precisely for that reason.’

Second, elliptical embedded clauses with a polarity particle (hereafter EECPPs) cannot be selected by just any matrix predicate. Perhaps the most common class of predicates that allow them is that of verbs that denote belief-like/epistemic attitudes. Following Dietrich and List (2008), I define a belief-like attitude (also known as a doxastic attitude) toward a proposition as being one that captures the degree to which the agent cognitively represents that proposition as being true or false. Examples containing such predicates are given in (43).

- (43) a. Je crois/craains/espère/soupçonne/suppose que oui/non.  
I think/fear/ hope/ suspect/ suppose that yes/no
- b. J'ai l'impression que/Je suis sûr que oui/non.  
I-have the-feeling that/I am sure that yes/no
- c. Il semble que/Il est probable que oui/non.  
it seems that/it is likely that yes/no
- d. Je doute que oui.  
I doubt that yes
- e. J'ai bien peur que oui/non.  
I-have well fear that yes/no  
'I'm afraid so/not.'

Predicates of this class need not be verbs but also include epistemic attitude adverbs (44) (see Borillo 1976) and even nouns (45).

- (44) Evidemment/Probablement/Vraisemblablement/Sûrement/Certainement/  
obviously/ probably/ in.all.likelihood/ surely/ certainly/  
Peut-être/Assurément/Forcément/Apparemment/Bien sûr/ Sans doute/  
maybe/ assuredly/ inevitably/ apparently/ of course/no doubt/  
Bien entendu/Supposément/Visiblement que oui/non.  
of course/ supposedly/ visibly/ that yes/no
- (45) Est-ce que les sites de poker sont truqués? Lesage cherche à obtenir la preuve  
Q-PART the sites of poker are rigged Lesage seeks to obtain the proof  
que oui.  
that yes  
'Are poker sites rigged? Lesage is trying to prove that they are.'

As illustrated in (46), EECPPs also occur after proffering attitudes (see Anand and Hacquard 2009), which induce an objective stance on the proposition expressed by their complement and represent attempts to update the common ground.<sup>10</sup>

<sup>10</sup> The examples in (43)–(46) do not constitute an exhaustive list of the classes of predicates that license EECPPs. Taken in opposition to (47), they will suffice, however, to establish the fact that EECPPs, just like interrogative *if*-clauses, must meet the selectional restrictions of a matrix predicate.

- (46) a. Est-ce que l'anti-matière existe? Patrick dit que non.  
 Q-PART the-antimatter exist Patrick says that no  
 'Does antimatter exist? Patrick says it doesn't.'
- b. Je pense qu'il est possible de démontrer que oui.  
 I think that-it is possible of to.demonstrate that yes  
 'I think it's possible to demonstrate that it does.'
- c. Je lui demande si ça va; il me répond que non.  
 I to.him ask if it goes he to.me answers that no  
 'I ask him if he's OK; he replies that he's not.'
- d. Si je suis timide? Je dois avouer que oui, un peu.  
 if I am shy I must confess that yes a little  
 'Am I shy? I must confess that I am, a little.'
- e. Le gouvernement va-t-il se saisir de l'affaire? Plusieurs députés ont  
 the government go-it take-care of the-matter several representatives have  
 laissé entendre que oui.  
 let to.hear that yes  
 'Will the government get involved in this matter? Several representatives have  
 hinted that it will.'

On the other hand, EECPPs do not occur after verbs that denote a desire-like attitude (also known as bouletics), which I define, following Dietrich and List (2008), as being part of the agent's motivational state as to what the agent would like the world to be like.<sup>11</sup>

<sup>11</sup> The incompatibility of EECPPs with desire-like attitude verbs is noted by both Morin (1985:799) and Rowlett (2007). Both of these authors, however, attribute this incompatibility to the fact that EECPPs (called "pro-sentences" by Morin and "pro-assertive-clauses" by Rowlett) can substitute for indicative but not subjunctive clauses. That is, according to them, because *vouloir* 'want' and *falloir* 'be necessary' in (47) take nonelliptical sentential complements in the subjunctive, they do not allow EECPPs. This hypothesis, however, can be empirically falsified, as (i)–(iii) show.

- (i) a. Il se pourrait bien que Jean soit/\*est parti.  
 it could-be well that Jean be.SUBJ/\*be.IND left  
 'It could very well be that Jean left.'
- b. Il se pourrait bien que oui.  
 it could-be well that yes  
 'That might well be the case.'
- (ii) a. J'ai bien peur qu'il soit/\*est trop tard.  
 I-have well fear that-it be.SUBJ/\*be.IND too late  
 'I'm afraid it's too late.'
- b. Je ne sais pas au sûr si cette situation s'applique à toi, mais j'ai bien peur que oui.  
 I know not for sure if this situation applies to you but I-have well fear that yes  
 'I'm not entirely sure this applies to you, but I have a feeling it does.'
- (iii) a. Je doute qu'il ait/\*a fait ça.  
 I doubt that-he have.SUBJ/\*have.IND done that  
 'I doubt that he did that.'
- b. Est-ce que les vampires existent? Moi, je doute que oui.  
 Q-PART the vampires exist me I doubt that yes  
 'Do vampires exist? Personally, I doubt that they do.'

- (47) a. \*Je sais pas si les Bruins vont gagner, mais Céline veut que oui/non.  
 I know not if the Bruins will win but Céline wants that yes/no  
 ‘I don’t know if the Bruins will win, but Céline wants them to/wants them not to.’
- b. \*Est-il vraiment nécessaire qu’on dépense moins? A mon avis, il faut  
 is-it really necessary that-we spend less in my opinion it is.necessary  
 que oui.  
 that yes  
 ‘Do we really have to spend less? In my opinion, we do.’

The inescapable conclusion is therefore that EECPPs meet the selectional restrictions of some predicates but not others, a phenomenon that I argued in section 2 is to be explained via clausal typing and that reinforces the conclusion that polarity particles lexicalize phase-edge clausal-typing features.<sup>12</sup>

Another important property of EECPPs is that they are not restricted to occurring immediately after a polar question or a previous assertion, as (48) shows.

- (48) Bien que je soupçonne que oui, je ne peux pas vous garantir qu’elle  
 although I suspect that yes I can not to.you guarantee that-she  
 a reçu votre demande.  
 has received your application  
 ‘Although I suspect that she has, I cannot guarantee that she has received your application.’

<sup>12</sup> A reviewer points out that since the notion of selection holds of many elements that have nothing to do with clausal typing, the fact that EECPPs can only be embedded under certain predicates does not necessarily constitute evidence that they have clausal-typing features. Note, however, that the possibility/impossibility of having EECPPs in French depends not only on the matrix predicate but also on certain other properties of the matrix clause (i.e., this is not the kind of selectional restriction that can be encoded in the lexicon). Specifically, EECPPs are illicit under predicates that belong to the proper licensing class if the latter are negated by sentential (i.e., nonmetalinguistic) negation.

- (i) \*Je ne pense pas que oui. (cf. Je pense que non.)  
 I think not that yes I think that no  
 ‘I don’t think so.’ ‘I think not.’

This is reminiscent of embedded verb-second in Mainland Scandinavian. As pointed out by Iatridou and Kroch (1992: 7), embedded verb-second is found only in clauses complement to a *nonnegative*, nonirrealis bridge verb. Subject-auxiliary inversion in Irish English embedded clauses is also subject to a constraint of this type, as discussed by McCloskey (2006). In this dialect of English, embedded T-to-C movement is found in the complement to resolutive predicates (e.g., *find out*, *remember*) only if the matrix clause is negative or a question.

- (ii) a. \*I remember who did they hire.  
 b. ?Do you remember who did they hire?  
 c. ?I don’t remember who did they hire.

This is because, according to McCloskey, embedded T-to-C movement in Irish English signals that the issue defined by the sentential complement is not resolved and that this clashes with the semantics of the matrix clause in (iia) but not (iib) or (iic). What I would like to suggest here is that this type of phenomenon is due to clausal typing. Specifically, the clause type of the embedded sentential complement yields a semantic object construed on the basis of syntactic information (clausal-typing features/operators) that may or may not be compatible with the compositional semantics of the matrix clause as a whole.

Incidentally, this property holds also of polarity particles in elliptical right conjuncts with contrastive polarity, as (49) illustrates.

- (49) a. Si je me rappelle bien, Astrid n'aime pas les moules, mais les huîtres, oui.  
 b. \*If I remember correctly, Astrid doesn't like mussels, but oysters, yes.

In such nonreactive assertion contexts, we would then expect that relative polarity features are irrelevant and that therefore *si*, an item that obligatorily encodes both the absolute feature Pos u[ ] and the relative feature SAME i[val], should be ruled out. However, this expectation is not met, as (50) illustrates.

- (50) a. Maman dit qu'il ne ment pas, mais moi, je crois que si.  
 Mom says that-he lies not but me I think that yes  
 'Mom claims he's not lying, but I think he is.'  
 b. Lui n'habite pas sur Paris, mais elle, si.  
 him lives not in Paris but her yes  
 'He doesn't live in Paris, but she does.'

The *si* that appears in (50) can, however, be shown to be different from that found in reactive assertions. Indeed, while reversing reactive assertions encoding positive polarity appear to be exclusively tied to *si* (see (51)), contexts other than reactive assertions that express contrastive polarity display free variation between *si* and *oui* (see (52)).

- (51) A: Vous n'aimez pas les huîtres?  
 you like not the oysters  
 'Don't you like oysters?'  
 B: Si/\*Oui (je les aime).  
 yes I them like  
 'Yes (I do).'
- (52) a. Ses copines n'ont pas changé, mais elle, si/oui.  
 her friends have not changed but she yes  
 'Her friends haven't changed, but she has.'  
 b. Elle pense que non, mais moi, je suis sûr que si/oui.  
 she thinks that no but me I am sure that yes  
 'She doesn't think so, but I'm sure of it.'

Thus, in view of the paradigm in (51)–(52), I will assume that the *si* that appears in (52) does not encode a [REVERSE] feature, but instead is (optionally) used by analogy to the *si* that appears in (51B) to express the contrastive (rather than contradictory) nature of the polarity of the conjunct that hosts it relative to that expressed by the first conjunct.

### 3.2 Ellipsis Again: The Case of Right Conjuncts with Contrastive Polarity

The question of how ellipsis works in the case of right conjuncts expressing contrastive polarity is far from trivial. To see why, consider an example like (53).

- (53) Il ne parle pas à son fils, mais à sa fille, oui.  
 he speaks not to his son but to his daughter yes  
 ‘He doesn’t speak to his son, but he does to his daughter.’

As pointed out by a reviewer, since *oui* in (53) is not a polarity-reversing particle, polarity reversal cannot be appealed to in order to account for the possibility of ellipsis after *oui* (we would expect *si*, which is also possible, but we concluded in the previous section that *si* does not encode [REVERSE] in these cases). Further, it cannot be the case that the antecedent of the ellipsis includes negation, since that would give the wrong meaning. This means that if we take the antecedent of the ellipsis in (53) to be the negated left conjunct, we will get the wrong results, unless, as suggested by the reviewer, we assume that somehow negation in the left conjunct moves covertly to a focus position outside TP at LF, so that the TP itself does not have a fixed polarity. This assumption is, however, dubious under a copy theory of movement since moving negation out of a clause entails reemerging the negation (or its negative interpretable feature) higher up in the structure rather than removing it from its first Merge position and merging it outside the TP that originally contained it. Thus, taking the TP of the first conjunct in (53) to be the antecedent for the ellipsis in the right conjunct does not appear to be a viable alternative.<sup>13</sup> However, there is another, more appealing alternative to be considered. Since ellipsis is, after all, a discourse phenomenon, nothing forces us to take the left conjunct in (53) to be the antecedent of the right conjunct ellipsis. Suppose then that, following Van Kuppevelt (1995) and Roberts (1998), we view each sentence in a coherent discourse as constituting the answer to a question (called *quaestio* in the literature on information structure) that is explicitly asked or implicitly given—either by the speaker, or just because the situation is such that it suggests a particular question to be answered. Suppose further that, following Umbach (2005), we take the semantics of conjunctions containing *but* (or *mais* in French) to have the following two crucial characteristics. First, the contrast induced by *but* depends on the focus of the second conjunct (a focus that is signaled by stress in English but can also be encoded via movement to a left-dislocated focus position in French, as in (53)). Consider in this respect the (right) conjuncts in (54a–b). In (54a), the VP is focused, whereas in (54b), the subject NP is.

- (54) a. . . . but Noah washed the CAR.  
 b. . . . but NOAH washed the car.

<sup>13</sup> This is true unless, perhaps, we assume that the original copy is converted into a variable, as the reviewer suggests. Under this view, movement of a focused negation would be assumed to leave behind a  $\Sigma$ -variable.

A similar problem arises with respect to English VP-ellipsis in sentences like (i).

(i) Bill caught no trout, but Mary did  $\emptyset$ .

Even under the assumption that QR (Quantifier Raising) applies to the negative quantifier *no trout*, copying this QP in a position external to VP, the first Merge copy of the negative quantifier will still be present in its VP-internal position at LF.

This suggests, as Umbach (2005) points out, that *but* is in some ways similar to a focus-sensitive particle like *only* in that it explores a set of alternatives. Second, as Umbach argues, while *but*-conjunctions induce a quaestio suggesting that the alternatives under discussion hold simultaneously (see, e.g., (55a)), the semantic function of *but* is as follows: *but* is associated with a focus in the second conjunct, and that focus provides the expected alternative (EA). To the EA corresponds a sister alternative (SA) in the first conjunct. Both the EA and the SA constitute the alternatives referred to in the quaestio. The meaning of *but* then imposes a *confirm + deny condition*: the proposition resulting from substituting the EA for the SA in the first conjunct is false. Thus, (55b–c), which comply with the confirm + deny condition, but not (55d–e), which do not, are acceptable *but*-conjunctions whose quaestio is (55a).

- (55) a. Did Noah clean up the garage and wash the car?  
 b. Noah cleaned up the garage, but he didn't wash the car.  
 c. Noah didn't clean up the garage, but he washed the car.  
 d. \*Noah cleaned up the garage, but he washed the car.  
 e. \*Noah didn't clean up the garage, but he didn't wash the car.

Given this background, consider the crucial role played by *mais* 'but' in licensing contrastive polarity in conjunctions. Notice in particular that the contrastive polarity particle that precedes the ellipsis site in (53) cannot be licensed if *et* 'and' is substituted for *mais* 'but', as (56) shows.

- (56) \*Il ne parle pas à son fils, et à sa fille, oui.  
 he speaks not to his son and to his daughter yes  
 'He's not on speaking terms with his son, but he is, with his daughter.'

This suggests that two things are necessary for contrastive polarity ellipsis to be licit in (53): access to a quaestio (57a) that provides a positive EA (57b) as the antecedent for the ellipsis and the presence of the conjunction *but* that ensures via the confirm + deny condition that the first and second conjuncts have opposite values with respect to polarity. Thus, the derivation for the second conjunct of (53) is as in (57c), where the overstruck material corresponds to the TP deleted under identity with the EA in (57b).

- (57) a. Parle-t-il à son fils et à sa fille?  
 speaks-he to his son and to his daughter  
 'Is he on speaking terms with his son and his daughter?'  
 b. EA = Il parle à sa fille.  
 he speaks to his daughter  
 c. . . . mais [à sa fille] oui [<sub>TP</sub> il parle [Pos] <à sa fille>]

### 3.3 French-Type versus English-Type Languages

One final, rather intriguing question that arises at this juncture is why many languages (such as French, German, Hungarian, Polish, Romanian, and Spanish) can effect clausal typing in embed-

ded contexts via *yes/no*-type polarity particles but English cannot. The contrast in question is illustrated in (58).

- (58) a. \*I think (that) yes. (cf. I think so.)  
 b. Je crois que oui. ‘Lit. I believe that yes.’ (French)  
 c. Ich denke ja. ‘Lit. I think yes.’ (German)  
 d. Azt hiszem, igen. ‘Lit. I know/think yes.’ (Hungarian)  
 e. Myślę, że tak. ‘Lit. I think that yes.’ (Polish)  
 f. Cred că da. ‘Lit. I believe that yes.’ (Romanian)  
 g. Creo que sí. ‘Lit. I believe that yes.’ (Spanish)

The question is therefore why English uses *so/not* rather than *yes/no* in those contexts (see (59))—or, to put it slightly differently, whether *so/not* are themselves a type of polarity particle.

- (59) I hope/guess/imagine/suppose/think/believe *so/not*.

In discussing data like those in (59), Laka (1990:158–159) remarks that “[i]t is interesting to note that in certain contexts, which seem to fall under the generalization of propositional attitude predicates, we find elements of  $\Sigma$  as complements of the verb.” What she suggests is that the *so* that appears in (59) is the same as the emphatic *so* that appears in (60C), a reactive assertion denying the second speaker’s denial in (60B). Emphatic *so* is, of course, considered to be one of the possible values of  $\Sigma$  because it competes for the same slot as sentence negation *not*, a view that goes back to Klima 1964:257.

- (60) A: They believed the boy.  
 B: They didn’t believe the boy.  
 C: They did so believe the boy.

While a full discussion of the *so* that appears in sentences like (59) is beyond the scope of this article, I would like to point out that the hypothesis according to which this *so* and emphatic *so* are the same element appears to be on the wrong track. Consider in this respect the fact that emphatic *so* is far better as a root phenomenon than in embedded contexts, as the contrast between (60C) and (61) illustrates.

- (61) ?\*I hope/guess/imagine that they did so believe the boy.

This contrast is, of course, unexpected if we assume that the source of *so* in (61) is the head of a  $\Sigma$  projection contained in an embedded clause. Hence, whatever *so* in (59) is, it is unlikely to be an element of  $\Sigma$  as Laka (1990) suggests. Still, sentential *so* could be hypothesized to be a polarity particle that occupies a position in the C field of an embedded clause. I would like to argue, however, that in fact *so/not* are not of the same syntactic nature as, say, embedded French *oui/non*. There are several reasons for this. Let me begin by pointing out that the class of verbs that accept *so/not* as a sentential complement substitute is much smaller than the class that licenses embedded *oui/non*. For example, while *oui/non* can appear as the complement of virtually any



propositional verb (i.e., speech act verbs and verbs of propositional attitude), such is not the case for *so/not*, as the paradigm in (62) makes clear.

(62) *Speech act verbs*

- a. She said/\*declared/told you/\*answered so.
- b. Elle a dit/a déclaré/t'a dit/a répondu que oui.

*Verbs of propositional attitude*

- c. She believes/thinks/\*doubts/\*denies/\*is happy so.
- d. Elle croit/pense/doute/nie/est bien contente que oui.

Now, it has been known since Cushing 1972 that *so/not* are elements that stand for the sentential objects of so-called [– stance] verbs—that is, verbs that denote passive states of mind, with the subject merely expressing a disposition to the truth or falsity of the embedded proposition rather than committing himself or herself to the truth or falsity of that proposition. On the other hand, the sentential complements to verbs that are [+ stance], such as *theorize*, *deny*, *deduce*, and *announce*, take *it* as a pronominal substitute, as (63) shows.

(63) Pythagoras theorized/denied/deduced/announced it/\*so.

To illustrate Cushing's (1972) characterization of the distribution of *so/not* versus *it*, consider two predicates that express the notion of 'lack of belief,' namely, *to not believe* and *to doubt*. Despite their apparent semantic similarity, the former, but not the latter, can function as a [– stance] predicate; that is, for me *to not believe p* can mean something like 'My mental set is such that for *p* to be false would surprise me much less than for *p* to be true'. For me *to doubt p*, on the other hand, necessarily involves my taking a definite stance with respect to the falsity of *p*; that is, a sentence like (64a) is synonymous with (64b) (which illustrates the [+ stance] reading of *believe*) but not with (64c) (which illustrates the [– stance] reading of *believe*).

- (64) a. I doubt that Paul will be promoted.
- b. I believe that Paul won't be promoted.
- c. It is not the case that I believe that Paul will be promoted.

Thus, while *doubt* is [+ stance], *believe* has both a [– stance] and a [+ stance] interpretation, and this is reflected by the shape pronominalized sentential complements to these verbs can take, as (65) shows.

- (65) a. I doubt it/\*so.
- b. I believe it/so.

Now, given that *so/not* alternate with *it*, Cushing (1972) takes these elements to be pronouns. If this is on the right track, it follows that *so/not* do not occupy a position in the C field of an elided embedded clause. Rather, *so/not* are pronouns that stand for CPs (or ForcePs) and therefore lack internal syntactic structure. Interestingly, this view receives support from two syntactic phenomena. First, as the paradigm in (66)–(68) shows, while syntactic extraction out of a matrix English

clause introduced by *yes* and out of an embedded (as well as a matrix) French clause introduced by *oui* is possible, such extraction is impossible with embedded English *so/not*.

- (66) Q: Did you talk to Robert or Christine?  
A: To Christine, yes.
- (67) Q: Est-ce qu'il a parlé à Robert ou à Christine?  
A: Je crois qu'à Christine, oui.  
I think that-to Christine yes  
'I think that to Christine, yes.'
- (68) Q: Did he talk to Robert or Christine?  
A: \*I think (that) to Christine, so/not.

Second, while a French embedded elliptical clause introduced by *que oui* can be used as the left conjunct of a CP/ForceP coordination, English *so* resists being conjoined with CP/ForceP in like fashion. This is illustrated in (69) and (70).

- (69) Q: Tu crois qu'on devrait couper dans notre budget?  
'Do you believe we should cut our budget?'  
A: Je pense [que oui [Ø]] et [que ça fait longtemps qu'on aurait dû  
I think that yes and that it makes long.time that-we should have  
le faire].  
it to.do
- (70) A: ??I think [so] and [that we should have done it long ago].

So, the question of why English differs from, say, French in expressing embedded polarity in a reduced form can be rephrased as follows: why must English use the pronouns *so/not/it* rather than ellipsis following a polarity particle in embedded contexts (as French does)? While space considerations prevent me from fully addressing this issue, I will mention what I think is a promising line of investigation. In the recent literature on ellipsis, Dagnac (2010) and I (Authier 2011) have presented arguments that so-called modal ellipsis in French, Italian, and Spanish is PF deletion of an embedded TP. Such ellipsis is unavailable in languages like English, however, as the paradigm in (71) shows.

- (71) a. Ils veulent qu'elle aille à Paris mais moi, je veux pas [Ø].  
they want that-she go to Paris but me I want not  
b. \*They want her to go to Paris, but I don't want [Ø].

If this is correct, then we in fact expect English not to have ellipsis following polarity particles in embedded contexts for the same reason it does not license embedded TP-deletion after modal verbs like *want*. As illustrated in (72), this leaves English with two syntactic options for expressing embedded polarity in a reduced form, namely, pronominalization and VP-deletion.

- (72) A: Did John leave?  
B: I think so/I think he did [Ø]/\*I think (that) yes [Ø].

Finally, if the French polarity particles *oui/non* mark the left edge of a TP-elision site, we are left with the question of where in the C field these particles are located. It is to this issue that I turn next.

#### 4 The Position of French Polarity Particles in the C Field

Where in the C field are French polarity particles merged? As is obvious from examples like (62b,d), they must be lower than Force since the latter hosts the declarative complementizer *que*. Assuming the classical Rizziian hierarchy of functional C field heads given in (22), we are left with three potential candidates: Int, Foc, and Fin. The fact that examples like (73B–C) show that French polarity particles can be preceded by a topic will not help since all three projections can potentially appear under a TopP.

- (73) A: Est-ce qu'il a téléphoné à quelqu'un?  
 Q-PART he has called to someone  
 'Did he call anyone?'  
 B: Je pense qu'à son fils, oui.  
 I think that-to his son yes  
 C: Il n'a pas téléphoné à sa fille, mais à son fils, oui.  
 he has not called to his daughter but to his son yes

Examples (73B–C) are, however, interesting in a different way. First, note that the left-dislocated phrase *à son fils* 'to his son', being a PP, is a true representative of clitic left-dislocation (CLLD); that is, it is sensitive to islands, as shown in Cinque 1977.<sup>14</sup> Second, if *à son fils* is a true CLLD phrase, rather than a hanging topic, then it follows that it must be linked to a silent copy lower in the structure, which means that we now have another argument in favor of French polarity particles marking the left edge of a PF deletion ellipsis site. The next logical question is, of course, whether French polarity particles can be followed by a topic. Again using a PP to ensure that we are not dealing with a hanging topic, it can easily be shown that this is not possible. Thus, speakers judge the examples in (74) to be sharply ungrammatical.

- (74) a. \*Je pense que oui, à son fils. (?? only if *à son fils* is added as an afterthought)  
 I think that yes to his son  
 b. \*Il n'a pas téléphoné à sa fille, mais oui, à son fils.  
 he has not called to his daughter but yes to his son

<sup>14</sup> Island sensitivity, as illustrated in (i) versus (ii), in turn suggests that a movement analysis of CLLD is warranted.

- (i) A mon fils, je lui téléphone tous les jours.  
 to my son I to.him call all the days  
 'My son, I call him every day.'  
 (ii) \*A mon fils, je connais la fille qui lui téléphone tous les jours.  
 to my son I know the girl that to.him calls all the days  
 'I know the girl that calls my son every day.'

The facts in (74) therefore appear to indicate that French polarity particles are hosted by the Fin head, a head that serves the function of marking a clause as finite or nonfinite and whose projection cannot dominate a TopP because it closes the C domain downward (see (22)). Another argument pointing in the same direction can be made when we consider that French polarity particles can type finite but not nonfinite clauses. For example, there are verbs like *se plaindre* ‘to complain’ that take both finite and nonfinite complements, as shown in (75), but only display elliptical sentential complements introduced by a polarity particle with the complementizer corresponding to finite complements—namely, *que*—as (76) illustrates.

- (75) a. Elle se plaint qu’elle a mal à la tête.  
 she complains that-she has hurt to the head  
 b. Elle se plaint d’avoir mal à la tête.  
 she complains of-to.have hurt to the head  
 ‘She complains that her head hurts.’
- (76) (Je ne sais pas si elle a vraiment mal à la tête, mais . . . )  
 I know not if she has really hurt to the head but  
 ‘(I don’t know if her head really hurts, but . . . )  
 a. elle se plaint que oui.  
 she complains that yes  
 . . . she complains that it does.’  
 b. \*elle se plaint de oui.  
 she complains of yes

The question that arises with respect to (76) is therefore why French polarity particles can only type finite clauses. Assuming with Rizzi (2001) that Romance prepositional complementizers are located in the head of FinP, and assuming further, as we have been, that polarity particles also head FinP, the ungrammaticality of (76b) can be explained as a case of two items competing for the same slot.<sup>15</sup>

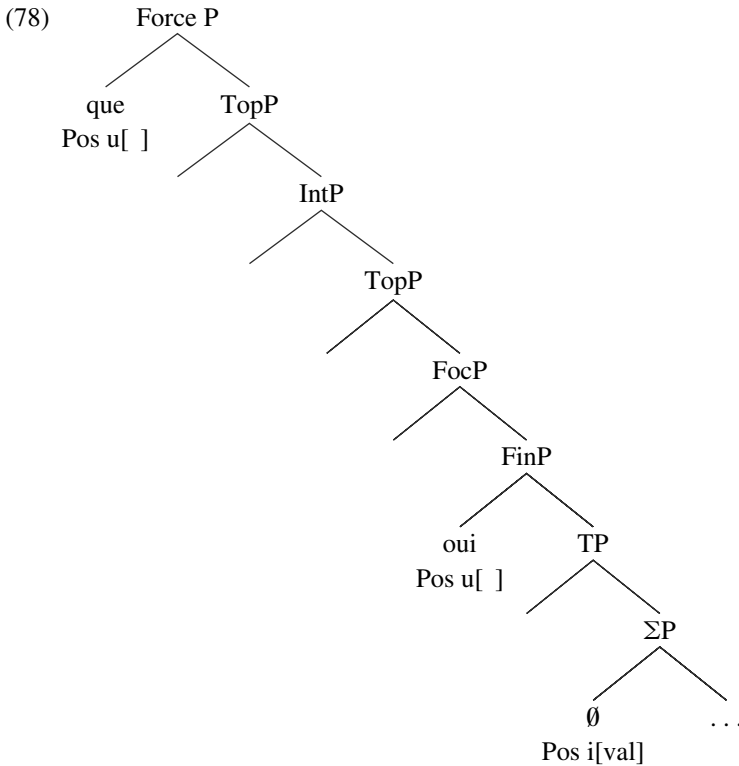
<sup>15</sup> French polarity particles are also incompatible with nonfinite complements in the absence of a prepositional complementizer, as shown in (i) versus (ii).

- (i) a. Je crois que j’y ai passé la nuit.  
 I believe that I-there have spent the night  
 ‘I think that’s where I spent the night.’  
 b. Je crois que oui.  
 I believe that yes  
 ‘I think so.’
- (ii) a. Je crois y avoir passé la nuit.  
 I believe there to.have spent the night  
 ‘I think that’s where I spent the night.’  
 b. \*Je crois oui.  
 I believe yes  
 ‘I think so.’

The present explanation of the ungrammaticality of (76b) can, however, be extended to (iib) if we assume that a phonologically unrealized prepositional complementizer in Fin dominates embedded nonfinite complements to *croire* ‘believe/think’.

To sum up and illustrate my conclusions to this point: I have argued that French polarity particles lexicalize unvalued Pos/Neg features that undergo Agree with a valued Pos/Neg feature in the head of  $\Sigma$ P. Since polarity particles are selected by a subset of matrix verbs in embedded contexts, it seems natural to assume as well that we are dealing with clausal typing; this in turn prompted me to assume that Force, being the phase-edge position, can also be endowed with an unvalued Pos/Neg feature. Thus, prior to Agree (and PF deletion/lack of spell-out of TP), the embedded clause of a sentence like (77B) will have the (schematic) representation shown in (78).

- (77) A: Je me demande s'il a une voiture.  
 I wonder if-he has a car  
 'I wonder if he has a car.'  
 B: Je crois que oui.  
 I think that yes  
 'I think he does.'



Assuming the feature-sharing version of Agree argued for by P&T (2007), Agree between two unvalued occurrences of a feature—say, Pos u[ ] in Force and Pos [ ] in Fin in (78)—is far from vacuous since its output will be a structure that contains only one occurrence of Pos with two instances. If a later operation of Agree applies between Pos u[ ] in Fin and the distinct valued occurrence of Pos in  $\Sigma$ , the result will be a valued feature Pos present at three locations:  $\Sigma$ , Fin,

and Force. Finally, given Moscati's (2006) version of Brody's Thesis of Radical Interpretability, the feature Pos will receive exactly one semantic interpretation in some syntactic location ( $\Sigma$  in (78)). Thus, the sharing version of Agree as applied to clausal typing explains how a French polarity particle located in Fin can inherit the (positive or negative) value of  $\Sigma$  and "pass it on" to Force, allowing a matrix verb to "see" whether the clause it has merged with satisfies its selectional properties.

## 5 Extending the Analysis: The Case of Interrogatives and Exclamatives

In this section, I will examine two additional (and admittedly more challenging) contexts in which French polarity particles can be found. Both of these will lead me to discuss recent proposals concerning the presence in the C field of a Polarity Focus Phrase (called (high)  $\Sigma$ P, PolP, or sometimes Verum Focus Phrase (VFocP)), in light of my proposals regarding the syntactic position of French polarity particles laid out in section 4. The second context, exclamative clauses, will lead me to further develop the syntactic treatment of exclamatives argued for by Zanuttini and Portner (2003) on the basis of Paduan and English data. Although the discussion in this section is somewhat speculative at times, I do believe that it constitutes a positive first step toward a deeper understanding of these two constructions.

### 5.1 *Oui ou Non in French Polar Questions*

Recent analyses of affirmative and negative polarity phenomena based on data from various languages have converged on the idea that under certain conditions, the C field involves a high polarity projection that is higher than TP. This projection, often referred to as  $\Sigma$ P, should not be confused with the  $\Sigma$ P argued for by Laka (1990); the latter (but not the former) is a renaming of NegP, now assumed to be a unified polarity projection with three possible settings: affirmative, negative, and emphatic. In contrast, the high  $\Sigma$ P (hereafter H $\Sigma$ P) is seen as either a functional projection available in contexts of polarity/verum focus (or contrastive sentential emphasis) or as a high polarity phrase that not only plays a role in polarity focus but also is used by syntax to determine clausal typing. The summary in (79) outlines some examples of the polarity-focus/sentential-focus-based view of the H $\Sigma$ P.<sup>16</sup>

- (79) a. Holmberg 2001: In Finnish replies to polar questions, vP moves to Spec,TopP; and when  $\Sigma$  (= polarity focus operator) is merged with TopP, the remnant PolP (= Laka's lower  $\Sigma$ P) is moved to Spec, $\Sigma$ P (= H $\Sigma$ P).
- b. Wood 2008: In English, *so*-inversion (e.g., *So do I*) is polarity focus. The affirmative particle *so* heads PolP (= Laka's lower  $\Sigma$ P); and when  $\Sigma$  merges with TP, it creates  $\Sigma$ P (= H $\Sigma$ P) by attracting PolP to its specifier (after VP has evacuated the latter).

<sup>16</sup> The outlines in (79), though not inaccurate, are nevertheless selective in portraying the analyses they represent. For more details, see the works cited.

- c. Van Craenenbroeck 2010:166: In Dutch, contradictory sentential emphasis involves the activation of a specialized projection in the C domain to host the verum operator *toch*. This projection is called VFocP (= HΣP).

The HΣP argued for by Progovac (2005:chap. 7), on the other hand, is of a different nature since, in conjunction with the lower ΣP, it plays a role in determining clausal typing. On the basis of data from Serbian, Progovac postulates the existence of two polarity projections, Pol<sub>O</sub>P (= Laka's lower ΣP) and Pol<sub>S</sub>P (= HΣP); however, a clause may or may not contain a Pol<sub>S</sub>P, depending on the need. Further, each PolP is specified for two features, [+ / - positive] and [+ / - negative]. The lower PolP (Pol<sub>O</sub>P) has [+ positive, - negative] as its default/unmarked value. It can acquire [- positive, + negative] through morphological negation. It can also have a neutral [- positive, - negative] value, but only if there is a Pol<sub>S</sub>P with a nonneutral value—for example, in the case of English negative auxiliary questions, which display the values in (80a). As for polar questions, Progovac assumes that they involve two PolPs with the feature specifications in (80b).

- (80) a. Pol<sub>S</sub>P [- pos, + neg]      Pol<sub>O</sub>P [- pos, - neg]      (negative auxiliary questions)  
 b. Pol<sub>S</sub>P [- pos, - neg]      Pol<sub>O</sub>P [+ pos, - neg]      (polar questions)

It is beyond the scope of this article to discuss the advantages and disadvantages of Progovac's approach. What is important for present purposes, however, is that it links both Laka's lower ΣP and the HΣP to clausal typing, an assumption I have argued to be correct, on the basis of the function and distribution of French polarity particles.

With this in mind, consider the fact that coordinated polarity particles of opposite values (*oui ou non* 'yes or no') can optionally surface in two different locations in French polar direct (81) and indirect (82) questions.<sup>17</sup>

<sup>17</sup> For reasons that are unclear to me at this time, *oui ou non* cannot appear in either location in direct polar questions marked as such by rising intonation alone, as shown in (i). Note that (ii) is, however, possible; but *oui ou non* in (ii) is more like an afterthought in that it is separated from the sentence by an intonational break and could be analyzed as a separate clause, perhaps as the reduced version of a question like 'Is your answer going to be yes or is it going to be no?' That this intuition might be on the right track is suggested by the fact that English displays the same option as French in this case, as shown in (iii) and by the fact that this option yields much less felicitous results when construed as an indirect question as in (iv).

- (i) a. \*Oui ou non tu as sorti les poubelles?  
       yes or no you have taken.out the garbage  
 b. \*Tu as oui ou non sorti les poubelles?  
       you have yes or no taken.out the garbage  
 (ii) Tu as sorti les poubelles? Oui ou non?  
       you have taken.out the garbage yes or no  
 (iii) Did you take out the trash? Yes or no?  
 (iv) ??J'aimerais bien savoir s'il a sorti les poubelles. Oui ou non?  
       I-would.like well to.know if-he has taken.out the garbage yes or no

Note finally that it is unlikely that the impossibility of using *oui ou non* in polar questions can be linked to the lack of overt material in the C field. While this would accurately describe what happens in Standard French, this hypothesis would fail to account for the fact that in Canadian French, polar questions involving the use of the overt interrogative marker *-tu* (also *-ti* in some dialects) do cooccur with *oui ou non*, even though *-tu* seems to not involve the C field, at least not directly (see (v)).

- (81) a. Est-ce que **oui ou non** tu as sorti les poubelles?  
 Q-PART yes or no you have taken.out the garbage  
 ‘Did you (or did you not) take out the garbage?’
- b. Est-ce que tu as **oui ou non** sorti les poubelles?  
 Q-PART you have yes or no taken.out the garbage
- (82) a. J’aimerais bien savoir [si **oui ou non** il a sorti les poubelles].  
 I-would.like well to.know if yes or no he has taken.out the garbage  
 ‘I’d like to know whether or not he has taken out the garbage.’
- b. J’aimerais bien savoir [s’il a **oui ou non** sorti les poubelles].  
 I-would.like well to.know if-he has yes or no taken.out the garbage

Before I discuss the function and syntactic positions of *oui ou non* in these examples, one remark is in order. I have been assuming throughout this article that polarity particles like *oui* and *non* are heads. Does their ability to appear in a coordination then constitute evidence that they are phrases rather than heads? I believe that the answer to this question is negative. This is because although conjunction appears to be restricted to phrases, disjunction is known to be applicable to elements that are considered to be heads, such as pronominal clitics, as shown in (83).

- (83) Si j’attrape la personne qui a fait ça, je vais **le ou la** punir.  
 if I-catch the person who has done this I will him or her punish  
 ‘If I catch the person who did this, I will punish him or her.’

This being said, the data in (81)–(82) raise a number of questions, minimally those in (84).

- (84) a. Is *oui ou non* the optional phonological realization of the interrogative polar question morpheme, or is it something else?
- b. If it is something else, what kind of semantic contribution does it make to the polar question?
- c. Why is *oui ou non* optional in polar questions?
- d. Why can *oui ou non* appear in two different places?

In what follows, I will attempt to provide some answers to these questions in order to hopefully build a coherent picture of the function and syntactic distribution of *oui ou non*. The question in (84a) is by far the easiest one to tackle. While the expression *est-ce que* in (81) types the clause in which it appears as interrogative, it is not restricted to yes/no questions, as shown in (85a), and therefore does not exclude a positive answer to (84a). That is, one could conjecture that *est-*

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(v) Elle veut-tu oui ou non rencontrer André?  
 she wants-Q yes or no to.meet André  
 ‘Does she want to meet André or not?’

I will come back to Canadian French polar questions shortly.



*ce que* types a clause as interrogative while *oui ou non* further contributes to the typing of that clause by specifying that it is [+polar] (or [+alternative], depending on one's theory of the semantics of yes/no questions). At least two arguments can be brought to bear against the strong version of this hypothesis, however. First, the extensional-question-embedding examples in (82) contain both *si* and *oui ou non*. Now *si*, at least in some sense, types the embedded clause as a polar question since, unlike *est-ce que*, it is not compatible with *wh*-elements, as (85b) illustrates.

- (85) a. J'aimerais bien savoir quand est-ce qu'il joue au golf.  
I-would.like well to.know when Q-PART he plays golf  
'I'd like to know when he plays golf.'
- b. J'aimerais bien savoir (\*quand) si (\*quand) il joue au golf.  
I-would.like well to.know (when) if (when) he plays golf  
'I'd like to know if he plays golf.'

Thus, if a lexically realized Int head *si* types embedded polar questions that the matrix subject poses (mentally or explicitly) to himself or others, then *oui ou non* must have a function other than exclusively realizing a polar question morpheme. A second piece of evidence that this is indeed the case comes from Canadian French polar questions. As reported by Noonan (1992) and Vinet (2000), Canadian French has a question particle *-tu* (or *-ti* in Acadie) that is restricted to root non-*wh* questions, as the paradigm in (86) shows.<sup>18</sup>

- (86) a. Ils sont-tu déjà arrivés?  
they are-Q already arrived  
'Are they already here?'
- b. \*Je me demandais s'ils étaient-tu déjà arrivés.  
I was-wondering if-they were-Q already arrived
- c. \*Qui ils ont-tu rencontré?  
who they have-Q met  
'Who did they meet?'

The data in (86a–b) suggest that *-tu* is an element that undergoes Agree with a Force head that encodes illocutionary force (i.e., a *direct* question), not merely sentence force, since illocutionary force is only encoded by root Force heads. Further, the ungrammaticality of (86c) suggests that *-tu* is also involved in typing the clause as a yes/no (rather than a constituent) question. With this in mind, consider the example in (87).

- (87) Elle a-tu (oui ou non) téléphoné à André?  
she has-Q (yes or no) called to André  
'Did she call André (or not)?'

<sup>18</sup> Sentences like (86c) are ungrammatical for most Canadian French speakers, as reported in the works cited in the text and as confirmed by my two Canadian informants, Julie Auger and Yves Roberge. However, Vecchiato (2000: 142–145) points out that in some varieties of Canadian French spoken in Montréal Nord and Nicolet, *-tu* can also be used in matrix interrogatives containing a nonsubject fronted *wh*-word.

Given that *-tu* is involved in typing the clause as a polar question, as we just saw, the optional presence of *oui ou non* in (87) suggests that this element makes a contribution that goes beyond that of encoding polarity in direct yes/no questions. If so, then our next task should be to attempt to spell out as specifically as possible the semantic contribution made by *oui ou non*. As a point of departure, I will assume once again, following Hamblin (1973), that the meaning of a question is represented by the set of possible answers (but see, e.g., Krifka 2001 for a more sophisticated treatment of question semantics). This means that an embedded French polar question introduced by *si* will have the denotation in (88).

$$(88) \llbracket si p \rrbracket = \{\llbracket p \rrbracket, \neg \llbracket p \rrbracket\}$$

Now, as first pointed out by Bolinger (1978) and further discussed by Eckardt (2006), English *if*, but not English *whether*, introduces a bias in that it presupposes an asymmetric interest between the positive case  $p$  and the negative case  $\neg p$ . Commonly, the positive case  $p$  is the “relevant” case for some decision, opinion, or the like. Consider in this respect the examples in (89), from Eckardt 2006:456.

- (89) a. The captain needs to know your name and whether you tend to get seasick.  
 b. The captain needs to know your name and if you get seasick.

While a question like (89a), at the beginning of a cruise, suggests that the captain is equally interested in both types of passengers, those who’ve got their sea legs and those who haven’t, a question like (89b) suggests that the captain is more interested in those passengers who’re prone to be seasick (perhaps so they can be provided with paper bags) and that those who don’t get seasick are perceived as the “otherwise” case, a case with no interesting consequences. Thus, as Eckardt points out, the bias of *if* should not be described in terms of expected answers; rather, it should be described in terms of one possible answer being more relevant or of more interest than the other. With this in mind, consider the French examples in (90).

- (90) a. Le skipper aimerait savoir si vous avez le mal de mer.  
 the captain would.like to.know if you have the seasickness  
 ‘The captain would like to know if you get seasick.’  
 b. Le skipper aimerait savoir si vous avez oui ou non le mal de mer.  
 the captain would.like to.know if you have yes or no the seasickness  
 ‘The captain would like to know whether or not you get seasick.’  
 c. Le skipper aimerait savoir si oui ou non vous avez le mal de mer.  
 the captain would.like to.know if yes or no you have the seasickness  
 ‘The captain would like to know whether or not you get seasick.’

In a question like (90a), Bolinger’s bias of *if* is present in exactly the same way it was in the English question in (89b). In (90b–c), however, the presence of *oui ou non* has the effect of canceling this bias. That is, the use of *oui ou non* indicates that the captain has a balanced interest in either one of the two possible answers. In other words, the contribution *oui ou non* makes to an embedded polar question is that it cancels the presupposition of *si p*, which consists of RELE-

VANT ( $p$ ) and, by default,  $\neg$ RELEVANT ( $\neg p$ ). But what of *oui ou non* in matrix polar questions, like those in (81)? There too it seems that it has a similar effect. Take, for example, (91a–b).

- (91) a. Est-ce que tu m'aimes?  
 Q-PART you me-love  
 'Do you love me?'  
 b. Est-ce que oui ou non tu m'aimes?  
 Q-PART yes or no you me-love  
 'Tell me whether or not you love me.'

At first blush, it is difficult to detect the presence of an “*if*-bias” in the question in (91a). This bias, however, becomes more discernible when (91a) is contrasted with (91b). Indeed, unlike (91a), (91b) has a disinterested ring to it. The speaker seems to “not care” what the answer might be and seems to have envisaged a course of action following either of the two possible answers. As a result, one gets the feeling that the speaker is demanding rather than requesting an answer so he can go on with his life. Finally, if the semantic effect of *oui ou non* is to highlight the symmetric interests between the positive and the negative cases denoted by polar questions, we would expect *oui ou non* to not be compatible with negative polar questions since the latter are associated with a positive presupposition. That this expectation is fulfilled is shown in (92).

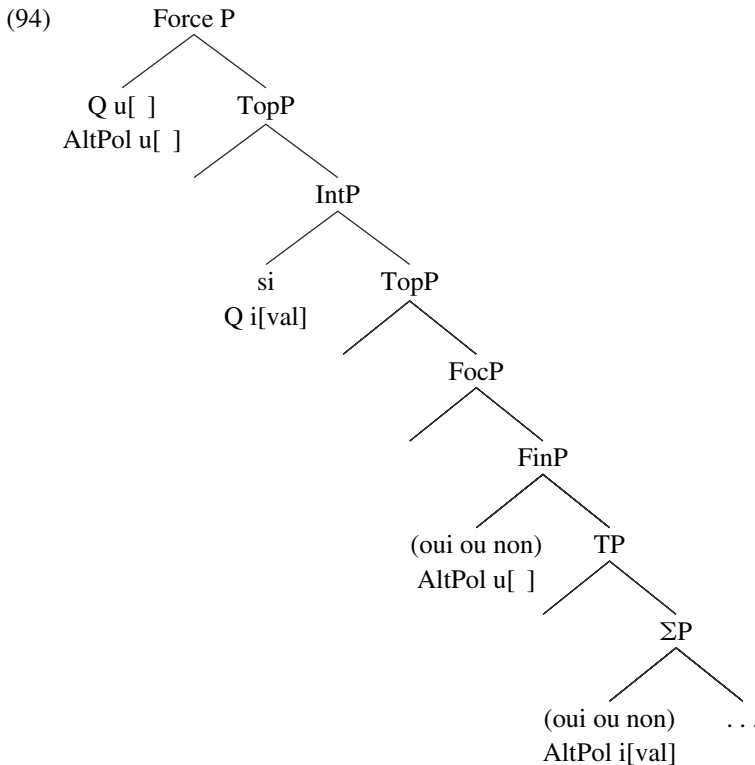
- (92) Est-ce que (\*oui ou non) Caroline n'a pas acheté ses chevaux?  
 Q-PART (yes or no) Caroline has not bought his horses  
 'Didn't Caroline buy his horses?'

Thus, we are led to the conclusion that in both matrix and embedded polar questions, *oui ou non* contributes meaning in the form of presuppositional material. Whether this meaning contribution falls in the realm of clausal typing is not a trivial question. It does not seem unreasonable, however, to conjecture that it does. It is standardly assumed, for example, that factive verbs such as *regret* select sentential complements the truth of which is presupposed. But another way of looking at this would be to say that factive verbs select clauses that are typed as being ontologically true. With this in mind, I would like to turn to the syntactic behavior of *oui ou non*. Consider again the sentences in (82), repeated here.

- (93) a. J'aimerais bien savoir [si **oui ou non** il a sorti les poubelles].  
 I-would.like well to.know if yes or no he has taken.out the garbage  
 'I'd like to know whether or not he has taken out the garbage.'  
 b. J'aimerais bien savoir [s'il a **oui ou non** sorti les poubelles].  
 I-would.like well to.know if-he has yes or no taken.out the garbage

In (93a), *oui ou non* appears between *si* in IntP and the embedded subject in Spec,TP. Its position is therefore that of the H $\Sigma$ P head, which I argued in section 4 to be FinP, at least for French. The lower position of *oui ou non* exhibited by (93b), on the other hand, is lower than the auxiliary verb, which I assume occupies the head of TP, and higher than the VP [*sorti les poubelles*]. This

is the position in which we find the morphological negation *pas* ‘not’ in French, and I will therefore assume that it is (Laka’s)  $\Sigma$ . Thus, in addition to the values Pos and Neg, the head  $\Sigma$  can be the locus of alternative polarity (AltPol), and I will therefore assume that *oui ou non* lexicalizes the feature AltPol. From this, the following hypothesis can be constructed: In a French embedded interrogative *if*-clause, clausal typing is achieved via two instances of Agree. The Force head is endowed with both  $Q u[ ]$  and AltPol  $u[ ]$ . The unvalued uninterpretable feature  $Q u[ ]$  in Force initiates an Agree operation, taking the valued interpretable typing feature  $Q i[val]$  lexicalized by *si* in Int as its goal, typing the clause as interrogative. The unvalued uninterpretable AltPol  $u[ ]$  in Force also acts as a probe, taking AltPol  $u[ ]$  in Fin as its goal, an operation that I have argued is not vacuous under P&T’s (2007) sharing version of Agree. Finally, a later operation of Agree applies between AltPol  $u[ ]$  in Fin and the distinct valued occurrence of AltPol in  $\Sigma$ , resulting in a valued AltPol present at three locations:  $\Sigma$ , Fin, and Force. Again, under Moscati’s (2006) version of Brody’s Thesis of Radical Interpretability, the feature AltPol will receive exactly one semantic interpretation in some syntactic location. Thus, given my assumptions, a French *si*-clause (prior to Agree) will have the representation in (94).



To account for the interpretive contribution of overt *oui ou non* discussed at the beginning of this section, however, something extra needs to be said. What I would like to propose in this respect is rather simple: The multiple Agree operation just sketched always takes place regardless of whether *oui ou non* is (phonologically) present in the sentence. If the feature AltPol ends up

not being phonologically spelled out in any of the syntactic positions linked by Agree, Bolinger's (1978) *if*-bias is implied as a presupposition that arises because negation is the marked case and therefore, with respect to alternative polarity, the absence of overt morphological negation creates a positive bias. If, on the other hand, *oui ou non* lexicalizes AltPol, the presence of overt negation emphasizes the balanced interest in either one of the two possible answers. In the end, then, interrogative clauses, be they direct or indirect, fall into two types. Both of these are endowed with a Q feature in Force; however, while one type also contains an AltPol feature in Force, yielding a polar question type, the other associates the Q feature with a [wh] feature, yielding a constituent question type. Interrogative Force can then be assumed to be typed according to (95).<sup>19</sup>

(95) *Interrogative typing*

- a. Force contains Q and
- b. Force also contains AltPol or Wh (but not both).

5.2 *Polarity Particles in the Extended C Field of Exclamatives*

In this section, I examine one last context in which French polarity particles are found. What makes this context special is the fact that it involves the use of a polarity particle sandwiched between two complementizers, as in the examples in (96).

- (96) a. Bien sûr que non que le végétarien n'est pas un ennemi de la planète!  
of course that no that the vegetarian is not an enemy of the planet  
'A vegetarian is definitely not an enemy of the planet!'
- b. Bien évidemment que si que cette idée m'est venue à l'esprit!  
obviously that yes that this idea to.me-is come to the-mind  
'Of course I thought of that!'
- c. Et comment que oui que ça m'intéresse!  
and how that yes that this me-interests  
'You'd better believe I'm interested!'
- d. (Si j'aime la langouste?) Oh que oui que je l'aime!  
if I-like the lobster oh that yes that I it-like  
'(If I like lobster?) Do I ever!'

<sup>19</sup> Although English *whether* is assumed to be a *wh*-element on the basis of its morphology and its island-inducing properties, it clearly realizes Q+AltPol semantically (cf. *whether or not*). It does not necessarily follow from this, however, that it cooccurs with a [wh] feature. It is interesting to note, in this respect, that unlike other *wh*-elements, *whether* in Belfast English is in complementary distribution with complementizer *that* and subject-auxiliary inversion (see Henry 1995:89). The following Belfast English paradigm illustrates this:

- (i) a. I wonder what street that he lives in.  
b. I wonder what street does he live in.  
c. \*I wonder what street that does he live in.
- (ii) a. I wonder whether he got there on time.  
b. I wonder did he get there on time.  
c. \*I wonder whether did he get there on time.

Examples such as these exhibit three important properties. First, they involve the characteristic intonational contour of exclamatives. Second, they involve words that introduce affect such as *bien sûr* ‘of course’, *et comment* ‘you’d better believe . . . (Lit. and how . . .)’, and *oh*. These words in fact appear to be nearly obligatory, as evidenced by the degraded status of the sentences in (97).<sup>20</sup> This too is a property of a subset of exclamatives known as yes/no exclamatives.

- (97) a. ??Que si que cette idée m’est est venue à l’esprit!  
           that yes that this idea to-me is come to the-mind  
       b. ??Que oui que ça m’intéresse!  
           that yes that this me-interests

Third, the examples in (96) are all semantically of the same type: they belong to the class dubbed “propositional exclamatives” by Gutiérrez-Rexach and Andueza (2011). Besides their illocutionary force, which can be described as the speaker’s expression of an emotive attitude toward the content of her utterance, the exclamatives in (96) display readings that are clearly propositional. For example, in (96b), the speaker asserts that it is obvious that she had already thought of the relevant thing/issue brought up by the addressee and also expresses a contextually determined emotive attitude toward this assertion. Sentence (96b) would typically be used in a situation in which the addressee has expressed some doubts about the speaker’s previous consideration of a relevant fact/issue and, by uttering (96b), the speaker expresses her resentment toward the fact that the addressee seems to think that she is careless. In a similar vein, what the reply in (96d) expresses is that the fact that the speaker likes lobster is considered evidentially strong. Note finally that, as Gutiérrez-Rexach and Andueza (2011) point out, in propositional exclamatives the content is presupposed only by the speaker; hence, propositional exclamatives can function as answers to questions, as (96d) illustrates.

Having established that the construction exemplified in (96) is semantically a propositional exclamative, I now turn to the more arduous task of determining its syntactic characteristics. I think it fair to say that the past literature on exclamative constructions has focused almost exclusively on *wh*-exclamatives. As a point of departure, I will therefore briefly discuss some of the conclusions that have been reached in that domain. Perhaps the most specific proposal concerning the structure of *wh*-exclamatives is that put forth by Zanuttini and Portner (2003). They argue that *wh*-exclamatives are characterized by two syntactic properties: they contain a *wh*-phrase and an abstract factive morpheme. What distinguishes *wh*-interrogatives from *wh*-exclamatives is, according to these authors, the fact that the latter syntactically encode factivity in a layer of CP

<sup>20</sup> A similar phenomenon exists in English yes/no exclamatives. In these constructions as well, some sort of interjection such as *boy*, *man*, or *damn* seems to be required.

- (i) a. \*(Boy,) can she sing!  
       b. \*(Man,) has she grown!

structure not present in interrogatives. To support this claim, they present evidence from Paduan, some of which is also available in French. For example, the *wh*-element in French exclamatives cooccurs with the complementizer *que*, an option that is not available for *wh*-questions (at least not those containing a complex *wh*-word), as illustrated in (98).

- (98) a. *Quelle belle histoire (que) tu viens de nous raconter là!*  
 what pretty story (that) you come from us to.tell there  
 ‘What a pretty story you just told us!’  
 b. *Quelle histoire (\*que) tu viens de leur raconter?*  
 what story (\*that) you come from them to.tell  
 ‘What story did you just tell them?’

Another difference between French (and Paduan) *wh*-questions and exclamatives concerns the obligatoriness of *wh*-movement: overt movement is obligatory in *wh*-exclamatives but optional in *wh*-questions, as the contrast between (99) and (100) shows.

- (99) a. *Quelle jolie maison (que) vous lui avez vendue!*  
 what pretty house (that) you to.him have sold  
 ‘What a pretty house you sold him!’  
 b. *\*Vous lui avez vendu quelle jolie maison!*  
 you to.him have sold what pretty house
- (100) a. *Quelle maison vous lui avez vendue?*  
 which house you to.him have sold  
 ‘Which house did you sell him?’  
 b. *Vous lui avez vendu quelle maison?*  
 you to.him have sold which house  
 ‘Which house did you sell him?’

Zanutini and Portner (2003:25) take these differences to follow from the fact that *wh*-exclamatives involve movement to a position that is structurally higher than the one involved in questions. They hypothesize that *wh*-exclamatives have two layers of CP structure. The *wh*-phrase occupies the higher Spec,CP, leaving room for an abstract factivity operator in the lower Spec,CP, the head of which is occupied by the complementizer, as illustrated in (101).

- (101) [<sub>CP<sub>2</sub></sub> *wh*-word [<sub>C</sub>  $\emptyset$ ] [<sub>CP<sub>1</sub></sub> FACT [<sub>C</sub> *que*] [ . . . ]]]

Note that in (101), the *wh*-element moves past the factive operator without triggering an intervention effect. This, Zanutini and Portner (2003:28) argue, is because neither the factive operator in CP<sub>1</sub> nor the lower C has a [wh] feature. The general picture that emerges is therefore that the syntax of *wh*-exclamatives is determined by the need to encode the two semantic components that characterize this clause type: the *wh*-CP<sub>2</sub> provides a set of alternative propositions via the *wh*-operator-variable structure it creates, and the factive operator in CP<sub>1</sub> encodes the factivity present in exclamatives.

We are now in a position to return to propositional exclamation, which Zanuttini and Portner (2003:25) briefly speculate have a similar structure. Thus, according to them, in a sentence like (102a) the obligatory expression *et comment* ‘Lit. and how’ occupies the specifier of the higher CP, as in (102b).

- (102) a. Et comment que je vais y aller!  
 and how that I will there to.go  
 ‘You’d better believe I’ll go there!’  
 b. [<sub>CP<sub>2</sub></sub> et comment [<sub>C</sub>  $\emptyset$ ] [<sub>CP<sub>1</sub></sub> FACT [<sub>C</sub> que] [je vais y aller]]]

But what of exclamation like (96), which, in addition to the type of material found in (102a), contain a polarity particle and an extra complementizer? Could these be the exclamation counterparts to the recomplementation structures (illustrated in (103), from Villa-García 2010:10) that sometimes occur in Spanish?

- (103) Dice que en ti, (que) no confía.  
 says that in you that not rely  
 ‘She/He says that she/he doesn’t rely on you.’

Sentences like (103) have been argued by Rodríguez-Ramalle (2003) and Villa-García (2010) to involve a structure in which the dislocated phrase *en ti* is located in the specifier projection of a TopP headed by the lower complementizer *que*. Although there are no French counterparts to Spanish sentences like (103), it does not seem too far-fetched to think that perhaps Spanish-style recomplementation is available in French but restricted to propositional exclamation. Thus, the polarity particle that appears in exclamation like (96) could be thought of as occupying the specifier of a Top projection headed by the lower complementizer. So (96c), for instance, would have the representation in (104).

- (104) [<sub>ForceP<sub>2</sub></sub> et comment [ $\emptyset$ ] [<sub>ForceP<sub>1</sub></sub> FACT [que] [<sub>TopP</sub> oui [<sub>Top</sub> que] [ça m’intéresse]]]]

Several arguments militate against this view, however. First, the lower complementizer in Spanish (103) is optional while the one that appears in the French examples in (96) is obligatory. Second, Spanish recomplementation structures can involve multiple instances of secondary complementizers—as many, in fact, as there are topics (see (105), from Villa-García 2010:15). However, this is not possible in French exclamation with polarity particles, as (106) shows.

- (105) Dijo que, el dinero, (que), a Juan, (que) se lo mandaban por correo.  
 said that the money that to Juan that CL CL send by mail  
 ‘She/He said they will send Juan the money by mail.’  
 (106) a. \*Et comment que oui, qu’à Jean, qu’on va lui envoyer  
 and how that yes that-to Jean that-we will to.him to.send  
 de l’argent!  
 some the.money  
 ‘You’d better believe we’ll send Jean some money!’



- b. \*Et comment qu'à Jean, que oui, qu'on va lui envoyer  
and how that-to Jean that yes that-we will to.him to.send  
de l'argent!  
some the.money

Interestingly, however, (106a) can be made grammatical by removing the lowest complementizer, as in (107).

- (107) Et comment que oui qu'à Jean, on va lui envoyer de l'argent!  
and how that yes that-to Jean we will to.him to.send some the-money

Thus, what (106) and (107) seem to show is that topics can only occur below the complementizer that follows the polarity particle. From this, I conclude first that the lower complementizer in sentences like (107) heads a 'regular' ForceP, one whose head can select a TopP (when needed). Thus, (107) has the partial structure in (108).

- (108) et comment que oui [<sub>ForceP<sub>1</sub></sub> qu' [<sub>TopP</sub> à Jean [<sub>FinP</sub> on va lui envoyer de l'argent]]]

Since in this structure, the polarity particle is structurally higher than ForceP<sub>1</sub>, it seems to be a good candidate to head the kind of HΣP merged above CP and called Verum Focus Phrase (VFocP) by Van Craenenbroeck (2010:162), as this is the kind of phrase whose head denotes contradictory sentential emphasis in Wambeek Dutch. If we now make the additional assumption that the part of the structure dominating the polarity particle in VFocP is as hypothesized by Zanuttini and Portner (2003:25), we end up with (109) as the structure for (107).

- (109) [<sub>ForceP<sub>3</sub></sub> et comment [<sub>Force</sub> ∅] [<sub>ForceP<sub>2</sub></sub> FACT [<sub>C</sub> que] [<sub>VFocP</sub> [<sub>VFoc</sub> oui] [<sub>ForceP<sub>1</sub></sub> qu'  
[<sub>TopP</sub> à Jean [<sub>FinP</sub> on va lui envoyer de l'argent]]]]]]]

Thus, in the case of propositional exclamationatives, polarity particles express the fact that the speaker takes the proposition denoted by ForceP<sub>1</sub> to be evidentially strong, in potential opposition to what the hearer might assume. As a result, they head a VFocP, a position higher than the ForceP they, as verum operators, take scope over, but lower than the projection hosting the factive operator present in both *wh*- and propositional exclamationatives.

One last question remains: why positive polarity particles encoding verum focus can often be omitted without altering the meaning of the propositional exclamationative beyond taking the speaker's expression of an emotive attitude toward the content of the utterance one notch down. For example, this is true of (96b–d), which, deprived of the positive polarity particle they contain, can nevertheless survive with various degrees of felicity, as shown in (110).

- (110) a. ?Bien évidemment que cette idée m'est venue à l'esprit!  
obviously that this idea to.me-is come to the-mind  
'Of course I thought of that!'  
b. Et comment que ça m'intéresse!  
and how that this me-interests  
'You'd better believe I'm interested!'

- c. ??Oh que je l'aime!  
 oh that I it-like  
 'Boy, do I ever (like it)!'

Interestingly, however, omitting a negative polarity particle in similar contexts is much less felicitous, if at all possible, as (111) illustrates.

- (111) a. Bien sûr ??(que non) qu'arriver en retard n'a pas d'importance!  
 of course (that no) that-to.arrive late has not any-importance  
 'Of course it doesn't matter if you arrive late!'  
 b. Oh \*(que non) que je ne vous le vendrai pas!  
 oh (that no) that I to.you it will.sell not  
 'No way I'm going to sell it to you!'

This, of course, follows from the fact that negative polarity, being more marked, has higher overt realization needs, and it in turn suggests that the positive polarity particle in (110) is not absent but merely phonologically unrealized. Thus, a polarity particle in the verum focus position of an exclamative is the phonological spell-out of a polarity feature that types the exclamative as being a propositional (as opposed to a *wh*-) exclamative. I take this feature to be a Pos/Neg u[ ] feature that serves as the goal of an Agree relation with a matching probe Pos/Neg u[ ] in the head of the highest ForceP (e.g., ForceP<sub>3</sub> in the structure in (109)). The Pos/Neg u[ ] feature in the head of VFocP in turn probes Pos/Neg u[ ] in the head of FinP dominated by ForceP<sub>1</sub>, which in turn agrees with Pos/Neg i[val] in the head of ΣP, forming the chain in (112).

- (112) [<sub>ForceP<sub>3</sub></sub> XP [<sub>Force</sub> Pos/Neg u[ ] ] [<sub>ForceP<sub>2</sub></sub> FACT [<sub>C</sub> que] [<sub>VFocP</sub>[<sub>VFoc</sub> Pos/Neg u[ ] ] ] [<sub>ForceP<sub>1</sub></sub> que [<sub>FinP</sub> Pos/Neg u[ ] ] [<sub>TP</sub> . . . [<sub>ΣP</sub> Pos/Neg i[val] . . . ]]]]]]]

The analysis for propositional exclamatives illustrated in (112) not only follows from the theory of polarity particles developed in this article but also receives some independent empirical support from sentences like (113B) and (114B) (adapted from examples found on the Internet), in which both the Pos/Neg u[ ] in VFoc and that in Fin are phonologically realized.

- (113) A: Ça vaut la peine d'essayer?  
 it is.worth the trouble of-to.try  
 'Is it worth trying?'  
 B: Non, bien sûr que **non** que **non**!  
 no of course that no that no  
 'No, of course not!'  
 (114) A: J'ai bien fait alors?  
 I-have well done then  
 'Did I do the right thing, then?'  
 B: Oh que oui que tu as bien fait! Oh que **oui** que **oui**!  
 oh that yes that you have well done oh that yes that yes  
 'Did you EVER do the right thing!'

## 6 Conclusion

To sum up, the general conclusions that emerge from the present discussion are the following. First, polarity particles are the phonological realization of unvalued uninterpretable polarity features that directly or indirectly probe their valued interpretable counterparts merged in Laka's (1990) original  $\Sigma P$ . These valued interpretable counterparts can be silent, as in the case of positive polarity, or phonologically spelled out, as in the case of French negative polarity *pas* 'not'. Second, the feature-sharing relation of Agree that I have adopted connects all of the polarity features present on heads (be they  $\Sigma$ , Fin, or, in some cases, VFoc) to a polarity feature in Force, the relevant phase-edge position for clausal typing. This explains, among other things, why embedded clauses containing a polarity feature can only satisfy the selectional properties of a particular class of (matrix) verbs.

## References

- Anand, Pranav, and Valentine Hacquard. 2009. Epistemics with attitude. In *Proceedings of SALT 18*, ed. by Tova Friedman and Satoshi Ito, 19–36. Available at <http://elanguage.net/journals/salt/issue/view/281>.
- Authier, J.-Marc. 2011. A movement analysis of French modal ellipsis. *Probus* 23:175–216.
- Authier, J.-Marc, and Lisa Reed. 2010. Clausal complementation and the status of French *à/de ce que*. *Lingua* 120:2193–2210.
- Bilola, Edmond. 2009. The cartography of the left periphery in Tuki. Ms., University of Yaounde I, Cameroon.
- Bolinger, Dwight. 1978. Yes/No questions are not alternative questions. In *Questions*, ed. by Henry Hiz, 87–105. Dordrecht: Reidel.
- Borillo, André. 1976. Les adverbes et la modalisation de l'assertion. *Langue française* 30:74–89.
- Brasoveanu, Adrian, Donka Farkas, and Floris Roelofsen. 2011. Polarity particles and the anatomy of negative quantifiers. Ms., University of California, Santa Cruz, and Institute for Logic, Language, and Computation, University of Amsterdam.
- Brody, Michael. 1997. Perfect chains. In *Elements of grammar*, ed. by Liliane Haegeman, 139–167. Dordrecht: Kluwer.
- Cheng, Lisa Lai-Shen. 1991. On the typology of *wh*-questions. Doctoral dissertation, MIT, Cambridge, MA.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1977. The movement nature of left dislocation. *Linguistic Inquiry* 8:397–412.
- Craenenbroeck, Jeroen van. 2010. *The syntax of ellipsis: Evidence from Dutch dialects*. Oxford: Oxford University Press.
- Cushing, Steven. 1972. The semantics of sentence pronominalization. *Foundations of Language* 9:186–208.
- Dagnac, Anne. 2010. Modal ellipsis in French, Spanish and Italian: Evidence for a TP-deletion analysis. In *Romance Linguistics 2008: Interactions in Romance*, ed. by Karlos Arregi, Zsuzsanna Fagyal, Silvina Montrul, and Annie Tremblay, 157–170. Amsterdam: John Benjamins.
- Dietrich, Franz, and Christian List. 2008. The aggregation of propositional attitudes: Towards a general theory. *Memorenda* 047. Maastricht: METEOR.
- Eckardt, Regine. 2006. The syntax and pragmatics of embedded *yes/no* questions. In *On information structure, meaning and form*, ed. by Kerstin Schwabe and Susanne Winkler, 447–466. Amsterdam: John Benjamins.
- Farkas, Donka. 2009. Polarity particles in Hungarian. In *Approaches to Hungarian*. Vol. 11, *Papers from the 2007 New York Conference*, ed. by Marcel den Dikken and Robert Vago, 95–118. Amsterdam: John Benjamins.

- Farkas, Donka. 2010. The grammar of polarity particles in Romanian. In *Edges, heads, and projections: Interface properties*, ed. by Anna Maria Di Sciullo and Virginia Hill, 87–124. Amsterdam: John Benjamins.
- Farkas, Donka, and Floris Roelofsen. 2011. Polarity particles in an inquisitive discourse model. Ms., University of California, Santa Cruz, and Institute for Logic, Language, and Computation, University of Amsterdam.
- Gutiérrez-Rexach, Javier, and Patricia Andueza. 2011. Degree restrictions in Spanish exclamatives. In *Selected proceedings of the 13th Hispanic Linguistics Symposium*, ed. by Luis Ortiz-López, 286–295. Somerville, MA: Cascadilla Press.
- Hamblin, C. L. 1973. Questions in Montague English. *Foundations of Language* 10:41–53.
- Henry, Alison. 1995. *Belfast English and Standard English: Dialect variation and parameter setting*. Oxford: Oxford University Press.
- Holmberg, Anders. 2001. The syntax of *yes* and *no* in Finnish. *Studia Linguistica* 55:141–175.
- Horn, Laurence. 2001. *A natural history of negation*. Stanford, CA: CSLI Publications.
- Iatridou, Sabine, and Anthony Kroch. 1992. The licensing of CP-recursion and its relevance to the verb-second phenomenon. *Working Papers in Scandinavian Linguistics* 50:1–25.
- Klima, Edward. 1964. Negation in English. In *The structure of language: Readings in the philosophy of language*, ed. by Jerry Fodor and Jerrold Katz, 246–323. Englewood Cliffs, NJ: Prentice-Hall.
- Kramer, Ruth, and Kyle Rawlins. 2008. Polarity particles: An ellipsis account. Ms., University of California, Santa Cruz, and Johns Hopkins University, Baltimore, MD. To appear in *NELS 39*. Amherst: University of Massachusetts, Graduate Linguistic Student Association.
- Krifka, Manfred. 2001. For a structured account of questions and answers. In *Audiatur vox sapientiae: A festschrift for Arnim von Stechow*, ed. by Caroline Féry and Wolfgang Sternefeld, 287–319. Berlin: Akademie Verlag.
- Kuppevelt, Jan van. 1995. Discourse structure topicality and questioning. *Journal of Linguistics* 31:109–147.
- Laka, Itziar. 1990. Negation in syntax: On the nature of functional categories and projections. Doctoral dissertation, MIT, Cambridge, MA.
- McCloskey, James. 2006. Questions and questioning in a local English. In *Cross-linguistic research in syntax and semantics: Negation, tense and clausal architecture*, ed. by Raffaella Zanuttini, Héctor Campos, Elena Herburger, and Paul H. Portner, 87–126. Washington, DC: Georgetown University Press.
- Morin, Annick. 2006. On the syntax of clause type particles: Evidence from Gascon, Innu and Québec French. Master's thesis, Concordia University, Montreal.
- Morin, Yves-Charles. 1985. On the two French subjectless verbs *voici* and *voilà*. *Language* 61:777–820.
- Moscati, Vincenzo. 2006. The scope of negation. Doctoral dissertation, University of Siena.
- Noonan, Máire. 1992. Case and syntactic geometry. Doctoral dissertation, McGill University, Montreal.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: Syntactic derivation and interpretation*, ed. by Simin Karimi, Vida Samiiian, and Wendy K. Wilkins, 262–294. Amsterdam: John Benjamins.
- Plann, Susan. 1982. Indirect questions in Spanish. *Linguistic Inquiry* 13:297–312.
- Progovac, Ljiljana. 2005. *A syntax of Serbian: Clausal architecture*. Bloomington, IN: Slavica.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. by Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2001. On the position 'Int(errogative)' in the left periphery of the clause. In *Current issues in Italian syntax*, ed. by Guglielmo Cinque and Giampaolo Salvi, 287–296. Amsterdam: Elsevier.
- Roberts, Craige. 1998. Focus, the flow of information, and Universal Grammar. In *Syntax and semantics*. Vol. 29, *The limits of syntax*, ed. by Peter Culicover and Louise McNally, 109–160. San Diego, CA: Academic Press.

- Rodríguez-Ramalle, Teresa. 2003. *La gramática de los adverbios en -mente o cómo expresar maneras, opiniones y actitudes a través de la lengua*. Madrid: Ediciones de la Universidad Autónoma de Madrid.
- Rowlett, Paul. 2007. *The syntax of French*. Cambridge: Cambridge University Press.
- Sadock, Jerrold, and Arnold Zwicky. 1985. Speech act distinctions in syntax. In *Language typology and syntactic description: Clause structure, volume 1*, ed. by Tim Shopen, 155–196. Cambridge: Cambridge University Press.
- Umbach, Carla. 2005. Contrast and information structure: A focus-based analysis of *but*. *Linguistics* 43: 207–232.
- Vecchiato, Sara. 2000. The *ti/tu* interrogative morpheme in Québec French. *Generative Grammar in Geneva* 1:141–163.
- Villa-García, Julio. 2010. Recompensation and locality of movement in Spanish. Ms., University of Connecticut, Storrs.
- Vinet, Marie-Thérèse. 2000. Feature representation and *-tu (pas)* in Québec French. *Studia Linguistica* 54: 381–411.
- Wood, Jim. 2008. *So*-inversion as polarity focus. In *Proceedings of the 38th Western Conference on Linguistics*, ed. by Michael Grosvald and Dionne Soares, 304–317. Fresno: California State University.
- Zanuttini, Raffaella, and Paul Portner. 2003. Exclamative clauses: At the syntax-semantics interface. *Language* 79:39–81.

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