Re re again*

What French *re* shows about VP structures, *have* and *be* raising, and the syntax/phonology interface¹

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I discuss some properties of the morpheme *re* (pronounced [rö] in isolation) in French^{3,4} (glossed as RE throughout) exemplified below, when it means again:⁵

(1) Jean a fermé la porte une première fois, puis a du la re fermer. John closed the door a first time, and had to to close it again.

I take as general background the following:

- Cinque's (1999) universal hierarchy of functional structures yielding a richly structured hierarchy of adverb positions.
- Morgan (1969), Mc Cawley's (1971) and von Stechow 's (1996) work on English again /German wieder motivating the inference from scope properties to syntactic structures: scopal properties of these elements correlate with different levels of syntactic attachment, thus justifying the existence of a refined internal structure to the classical VP.

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³ Throughout, French refers to Dominique Sportiche's colloquial (informal) French and the French of people sharing the relevant portions of his grammar.

⁴ Note that according to usual orthographic conventions: RE should be written as attached to its verbal host ($remang\acute{e}$). The analytic significance of this convention is unclear. I will write RE as separated.

⁵ There may be other RE prefixes with different meanings, although it is not entirely clear that they cannot be reduced to this one, once proper analyses of the host verbs are understood.

• Cardinaletti's (2003) work on *ri*, the Italian counterpart of French RE, immediately extendable to French RE and showing that RE is best thought of as a syntactically independent morpheme.⁶

I will begin by documenting that French RE is (or can be) an independent morpheme on the surface, unlike perhaps in Cardinaletti's Italian. To handle its distribution, I will conclude that it can be introduced at several different points within Cinque's Universal hierarchy, yielding, as expected under the McCawley/von Stechow approach, different readings.

Next I will discuss two properties of French RE.

First, I will discuss a peculiar restriction on the distribution of RE noted in French in Lionnet (2007), and mentioned also in Cardinaletti (op.cit.) for Italian: while RE can freely immediately precede (and thus modify) just about any verb, it cannot do so with certain instances of *avoir* and *être* (*have* and *be*). In the relevant contexts, it can instead immediately precede nouns or adjectives. I will conclude that these facts can be made sense of if, contrary to what is customarily assumed, exceptional *have* and *be* raising takes place in French tensed clauses (and probably elsewhere e.g. in Italian clauses) just like it does in English main clauses and (perhaps) to a lesser extent in French infinitival clauses.

Secondly, I discuss correlations found in French between the phonological realization of RE and the so-called repetitive/restitutive ambiguity motivating the McCawley/von Stechow approach to again/wieder. These phonological properties suggesting a direct correlation between semantic and phonological closeness mediated by syntactic closeness will be seen to be straightforwardly accounted for within their approach, but unexpected under non syntactic analyses of the repetitive/restitutive ambiguity.

1. Background:

1.1. Basic Distribution.

RE basically distributes like a preverbal adverb and in many ways behaves as Cardinaletti (op.cit.) describes ri in Italian (with some differences that I will point out when relevant). She concludes that ri is an adverb, and it is reasonable to adopt the same conclusion for French RE.

⁶ This article only discusses French RE (although some conclusions may be extended to Italian *ri*). English *re*- as documented in Keyser and Roeper (1992) seems substantially different.

RE means *again*. It can be taken to select as argument an eventuality (this term is meant to be neutral between event and state), asserting that this eventually is occurring again. Since eventualities are denoted by VPs or "extended" projections thereof, it is not surprising that RE has the distribution of a (preverbal) adverb.

Cardinaletti (op.cit.) demonstrates that Italian ri is best thought of as forming a small syntactic unit with its verbal host, which she concludes is the result of syntactic incorporation (head movement) and not of (cliticization or) morphological derivation or compounding. French is partially similar in that RE and a following verb can clearly form a constituent. However, this need not happen. French RE need not be incorporated. For example, while RE may occur preverbally:

(2) Jean a lentement re mangé John has slowly re-eaten

It need not be adjacent to the verb:

(3) Jean a re lentement mangé John has RE slowly eaten

When it does not precedes a verb (or a deverbal noun), as above, there is no evidence that it ever forms a constituent (solely) with the head it immediately precedes.

As might be expected, the position of RE in these last two examples directly codes its scope: while in the first sentence, eating is asserted to have taken place twice, slowly the second time, in the second, slow eating is asserted to have taken place twice. In other words, RE scopes only over the verb in the first example, but on both the adverb and the verb in the second.

Note furthermore that RE can stand by itself as in the second elliptical utterance of the discourse below:

⁷ Cardinaletti (op.cit.) suggests it is not a morphological prefix because it neither trigger intervocalic [s] to [z] sonorization, nor vowel deletion. In French, compositional prefixes (anti, pre, de, RE, ...) typically do not trigger the first, and the vowel in re does undergo phonological changes in prevocalic contexts, which we discuss below.

(4) A: tu veux encore du vin?

Do you want wine again?

B: RE

again (i.e. yes)

I conclude then that RE can be a free standing morpheme, can be merged in different positions in the functional hierarchy, e.g. lower or higher than manner adverbials. This conclusion is unsurprising both from the point of view of Cinque's hierarchy and from the point of view of the Mc Cawley/von Stechow approach to the repetitive/restitutive ambiguities.

1.2. Is RE ever incorporated in French?

We concluded that RE need not be incorporated. Is it sometimes?

Sometimes, RE is part of a larger constituent subject to movement, which may suggest that it is cliticized or incorporated. This is exemplified below with V as high as T which always takes place with simple tensed verbs in French:

(5) Jean re fermera la porte John again close-will the door John will close the door again.

Although this could be due to the verb moving by itself, and RE being merged into the structure higher than T, the possible meanings of this sentence suggest that another derivation is possible, with RE merged lower than T and moved. Indeed, if RE was merged higher than T, we would expect it to necessarily outscope T. Under such a reading, it would be presupposed that John will close the door once, and asserted that he will close it again, both actions being in the future.⁸

⁸ Here, the repetitive/ restitutive distinction is ignored but it is of course relevant for a finer grained discussion. Thus, if RE was merged higher than T, it would ipso facto be merged higher

than the VP internal subject and the entire VP shell. As a consequence, the sentence should require a repetitive reading. The fact is that it does not: a restitutive reading is available, where the

door is, prior to being closed again by John, in a closed state (and was for example never closed

by John). This state furthermore need not be in the future of the utterance time.

However, this sentence allows a reading under which it is asserted that John will close the door again in the future, presupposing that he closed it previously, whether the latter is taking place in the future or has taken place in the past with respect to the utterance time.

Thus the following is perfectly natural:

(6) Jean a fermé la porte hier et la re fermera demain.

John closed the door yesterday and will close it again tomorrow

If the surface distribution of tensed verbs is indeed to be handled by a rule of V to T, this would suggest that re+V can form a head, suggesting cliticization or incorporation. If however, it is to be handled by remnant XP movement, re+ V can simply form an XP constituent.

But it is not clear that in French main verbs raise to T in simple tensed clauses.

What is known is only that main Vs raise higher in French than they do in English, and in particular past certain higher adverbs in one language but not in the other. In English, the distribution of tense morphology is handled either by a lowering rule or the tense morphology itself, or by a licensing rule (allowing a low tense suffix to be licensed buy a higher T), or by some more complex remnant movement mechanism having the effect of keeping the verb lower in English than in French.

The existence of either one of these mechanisms would allow a derivation of the French paradigm in which French verbs raise only *part way* to some intermediate projection, but not all the way to T.

As a result, we cannot easily decide on this basis whether RE has a merge position higher than T. Interpretive evidence could help if it could be made decisive: we would have to make sure that the asserted meaning must presuppose that repetition is of a future event with respect to utterance time, as opposed to being of some event in the past of the repeated event. But the former entails the latter (if the former is true, the latter is too) and disambiguation seems not to be available. Which means, if true, that we cannot tell this way.

If we proceed by analogy with other, similar adverbs such as *encore* (once more), *de nouveau* (anew), we should conclude that RE is not mergeable higher than T. We leave all these questions open.

1.3. Finer Distribution of RE: NPs, PPs, APs and VPs.

Just like Italian *ri*, and unlike English re, French RE seems unrestricted in that it can precede any kind of VP, regardless of the choice of the verb. And, as an adverb, it cannot normally occur immediately in front of nominals, prepositions, or adjectives, etc..

(7) a. * J'ai vu re un film

I have seen RE a film

b. * Elle est allé re à Paris

she has gone RE to Paris

c. * Le re magnifique jardin

The RE magnificent garden

d. * Re le garçon est parti

RE the boy has left

However, there is one class of contexts in which RE can precede such categories.

(8) a. Pierre a/avait re soif

Pierre has/had RE thirst

Pierre is/was thirsty again

b. Marie est/ était re malade

Marie is/was RE sick

Marie is/was sick again

c. Jean est/était re en colère⁹

Jean is/was RE in anger

Jean is/was angry again

This surprising option correlates with an unexpected restriction. RE, as we saw, can immediately precede tensed verbs, but it may not easily precede tensed auxiliary verbs *avoir* et *être*.

(9) a. ?? Jean re a soif / ?? Marie re avait faim

Jean RE has thirst / Marie RE had hunger

b. ?? Marie re est malade/ ?? Marie re était fatiguée

marie RE is sick / Marie RE was tired

This restriction is not an absolute prohibition against having RE precede these verbs. RE can precede them for example when they are in participial form: 10

⁹ Individual level predicates are, unsurprisingly, odd with RE.

¹⁰ It seems to me that re in front or *have* or *be* is easier in front of a future inflected auxiliary.

i. Jean re aura faim / Marie re sera furieuse.

(10) a. Jean a re été vu

Jean has RE been seen

b. Marie aurait re eu raison

Marie would RE have reason (would have been right again)

This suggests that we are not dealing with some kind of lexical cooccurence restriction but rather with a positional restriction.

To understand what this could be, it seems noteworthy that this phenomenon singles out *tensed* auxiliary verbs *have* and *be*. ¹¹ A (partial) explanation could be provided by capitalizing on the analysis of another phenomenon singling out tensed *have* and *be*: *have* and *be* raising.

As Emonds (1976) demonstrated, French tensed verbs routinely raise to T^{12} . This accounts for the relative distribution that tensed verbs have with respect to, say, negative adverbs such as *pas*, which must precede a participial form, but must follow the tensed verb:

- (11) a. Jean n'a pas mangé
 - b. Jean ne mange pas

The tensed verbs (a or mange) are analyzed are merged below pas, but move past it to T.

In this case however, it seems to me that re must outscope the future modality. Thus (i) is more natural in the context #1 than in context #2.

Jean a faim tous les jours à 20h.

#1 : Il aura faim demain et re aura faim après demain. (John is hungry every day at 8pm, he will be hungry tomorrow at 8, and will again the day after tomorrow at 8).

#2: Il a eu faim hier et re aura faim après demain. (John is hungry every day at 8pm, he was hungry yesterday, and will again tomorrow).

In the second, it seems preferable to use: il aura re faim.

The difference between future on the one hand and present and past on the other could be due to the fact that the future inflection is really an affixal modal verb in the present tense (with the conditional an affixal modal verb in the past).

¹¹ It is also worth noting that RE in French does not easily occur in front of modals read epistemically, but is fine in front of modals read deontically. This however looks like a semantic restriction.

12 Or some position accessible to licensing by T, as discussed earlier.

(12) ne T pas a mangé \rightarrow ne a_k+T pas t_k mangé ne T pas mange \rightarrow ne mange $_k+T$ pas t_k

As Emonds further shows, English is partially different. The negative adverb *not* must precede simple verbs – with *do*-support triggered in such cases:

(13) T not eat \rightarrow do+T not eat

Except if the tensed verb is *have* or *be*, which can precede *not*, and are thus postulated to raise to T, just like French verbs do:

(14) T not has eaten \rightarrow has_k+T not t_k eaten T not is eating \rightarrow is_k+T not t_k eating

This picture is completed by Pollock's (1990) work which shows that this dichotomy between English and French is not as simple. Pollock (op.cit.) shows that the distinction between auxiliary verbs and main verbs found in English is reproduced in infinitives. Non finite main verbs do not raise past negation:

(15) Ne pas manger \rightarrow * ne manger pas

But infinitive auxiliary verbs can:

(16) Ne pas avoir mangé → ne avoir_k pas t_k mangé
 Ne pas être fatigué → ne être_k pas t_k fatigué

The facts with RE are similar to the tensed clause facts of English (or to a lesser extent to the infinitives facts of French): just like English tensed auxiliary verbs must precede *not*, French tensed auxiliary verbs must precede RE. The obvious descriptive conclusion is that French is identical to English in the following respect: tensed auxiliary verbs must raise higher than where main tensed verbs raise.

This French fact is obscured, unlike the comparable English facts, because French main verbs raise too. However, the same generalization holds: *have* and *be* raise higher in tensed clauses than main verbs do both in French and in English.

This conclusion is unexpected: while the evidence for it in English is obvious, in French, it is rather remote suggesting that *Have* and *Be* raising could be a much more general phenomenon than acknowledged up to now, and in need of a genuine explanation.¹³

2. Ambiguity: an argument for its structural representation

As alluded to before, RE induces the same kind of ambiguity that *again* does in English or *wieder* does in German. Thus, the sentence *Jean a re fermé la porte* can either assert that Jean brought the door back to a state of being closed – the <u>restitutive</u> meaning - or assert that once more, John caused the door to be closed – the <u>repetitive</u> meaning.

Mc Cawley (op.cit.) and von Stechow (op.cit) fundamentally suggest that *again/wieder* can be merged at different height of syntactic structures. Substantially simplifying here, the change of state verb *fermer* is analyzed as a "VP shell" comprising three constituents coding respectively from higher to lower (at least) the agent's action, the change/process predicate and the resulting state predicate. Simplifying, we can note this as below in (b) paraphrased as in (c):

- (17) a. [X Agent Act [Y Process [Z Theme State]]
 - b. Agent cause [become [Theme State]]
 - c. Agent Cause Theme to become state

The repetitive/restitutive distinction is a scopal matter, depending on where *again/wieder* is merged: above X yields the repetition of the whole action attributed to the agent; Lower than X and above Y yields the restitutive reading asserting the recurrence of the process yielding the resulting state but no more.

That this distinction should be syntactically, as Mc Cawley (op.cit.) and von Stechow (op.cit) argue is not uncontroversial (see e.g. Dowty, 1979, or Jäger and Blutner, 1999). Alternatively, the ambiguity could be attributed to a semantic rule with no syntactic correlate. Under such a view the adverb *again* always occurs in the same position, peripherally to a single VP headed by a single V. The verb has a complex lexical internal structure coding both the action and the process (and

¹³ As appear from Cardinaletti(op. cit), Standard Italian also disallows ri on finite *have* and *be* but not on other forms of these verbs. This is consistent with Belletti's 1990 conclusion that Italian finite *have* and *be* raise higher than other finite verbs, as we have argued for French. It would remaing to explain why Italian *ri* does not (in standard Italian) appear on non verbs, as RE does in French in the relevant contexts.

the result) meaning, but projecting simply a V in the syntax. Adverbs like *again* can semantically freely modify either the whole action or the change process part of the verb meaning.

Adverbs like *again* can in fact occur in dramatically different positions. For example, if they occur clause initially as in e.g. *again John closed the door*, only the repetitive reading is available. This is expected under the scopal/syntactic theory (the meaning unambiguously arising from the syntactic structure) but not otherwise. The latter makes the prediction that the syntactic position of the adverb should not matter and thus faces difficulties with such simple observations.

But even in the VP domain, such disambiguating is found.

Consider again examples such as (2) and (3):

- (18) a. Jean a lentement re fermé la porteJean has slowly RE closed the door
 - b. Jean a re lentement fermé la porte
 John has RE slowly closed the door

While the former displays the repetitive/restitutive ambiguity, the latter only has the repetitive reading. This is expected: the adverb *lentement* modifies the process and not the resulting state.

When RE is external to the constituent [lentement fermé], it must scope over the constituent denoting the process and is thus read repetitively.

Given that *lentement* modifies the process, the ambiguity of the (18a) is just as expected if RE appears in the indicated slots:

the sentence should be as ambiguous as its counterpart without the manner adverb, as RE can occur either immediately in front of X or immediately in front of Y.¹⁴

 $^{^{14}}$ The meaning (repetitive) corresponding to the structure [Lentement [RE [$_{\rm X}$ Agent Process ___ [$_{\rm Y}$ Theme State]]] seems not easily accessible, although it is not easy to tell. This may indicate that RE must be more external than *lentement* in the same VP.

It is striking that a manner adverb modifying the resulting state behaves differently. Verbs like *ouvrir* (open) can be modified by adverbs like *entre* (lit. between) to mean *partway open* or *open* in between (entre ouvrir, spelled entrouvrir or entr'ouvrir). Entre can only modify the resulting state. Entrouvrir une porte does not describe an opening action interrupted half way. It describes an action yielding a part way opened door. This is evidenced by the meaning composition and the fact that *entre* cannot occur with all durative action verbs (which could in principle be interrupted partway). This means *entre* appears inside the Y constituent, peripherally to Z. Significantly, RE cannot intervene between the verb and *entre*, suggesting that RE is higher than *entre*, at the periphery of Y or X.

This decompositional approach makes fine predictions – which we are not going to pursue here regarding the relative distribution of adverbial elements depending on how their meaning combines with that of the verbs they modify. For now, we conclude, agreeing with Lionnet (2007), that the scopal/syntactic approach to the distribution of RE, implicit in Cinque's universal hierarchy approach, is correct.

3. Interpretation and Phonology

In authoritative dictionaries, RE is described as a prefix. It is also described as undergoing phonological changes according to what it is prefixed to.

Thus, the Trésor de la Langue Française (http://atilf.atilf.fr/) writes:

RE-, RÉ-, R-, préf.

Préf. qui, associé à un verbe ou un dér. de verbe, sert à former des verbes, des n. d'action ou des n. d'agents. Il a la forme *re*[Rə] devant les bases à init. conson., *ré*- [Re] ou *r*- [R] devant les bases à init. Vocalique.

The noteworthy fact is the phonological change the vowel undergoes, from /ə/ to /e/ or even zero in front of vowels.

In the register described here, this phonological change in front of vowels is not obligatory. Thus along side

(21) réouvrir, réassigner, réévaluer, réinitialiser (written in standard orthography),

it is also possible to have:

(22) re ouvrir, re assigner, re évaluer, re initialiser (with /re/ \rightarrow [ra]).

This phonological alternation is not free as the choice of pronunciation correlates with the meaning in the following way: when there is alternation (that is for verbs preceded by RE which begin with a vocalic sound), the pronunciation [re] is specialized for the restitutive meaning, while the pronunciation [rə] is specialized for the repetitive meaning.

Thus the command: *Re évalue ce dossier* (reevaluate this file), implies that the adressee has already evaluated this file once. While *Réévalue ce dossier* (reevaluate this file) does not.

One can "**ré** initialiser un program" (restart a program) even if it was started by someone else first. But to "**re** initialiser un program), one has to have started it.

The question arises then of how to describe this alternation, and describe it in a way that makes it non arbitrary.

Prima facie, this could be seen as an argument in favor of the lexical ambiguity approach whereby [re] would mean restitutive *again*, while [rə] would repetitive *again*. This however is implausible because the alternation is phonologically conditioned. When RE occurs in front of a consonant, the pronunciation [re] is excluded even though there is no phonotactic constraint against such strings or otherwise motivated phonological rule neutralizing [e] and [ə] in front of a consonant and the result (e.g. re fermer) is ambiguous, as we have discussed.

Instead it seems the traditional phonological description is partially correct. Still it leaves unexplained the correlation vowel change/restitutive reading.

An account can be provided capitalizing

- (i) on the structural differences postulated for the two readings
- (ii) conclusions regarding where the phonological material corresponding to the verb is structurally located.
- (iii) an assumption about the domain of phonological rules

Given the assumption about (i) defended in the text, we have the following structural analyses of the two readings of RE.

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(23) a. Repetitive RE [_X \dots [_Y \dots]]
b. Restitutive [_X \dots [RE [_Y \dots]]]
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Note next that the phonological form of the verb restitutive RE normally precedes is typically identical to the phonological form of the verb repetitive RE normally precedes. This suggests that this phonological form corresponds to the material in the constituent Y. This conclusion is consonant with what is observed with verbs that are ambiguous between full causatives and inchoatives, that between denoting the constituent X and denoting the constituent Y (e.g. *fermer*, close, *ouvrir*, open, *fondre*, melt, *casser*, break, etc...): the same form are used suggesting that the head of X is systematically a silent morpheme notated E here.

Applied to (23), this yields the following representations, say for the verb *ouvrir* (open):

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(24) a. Repetitive RE [_X E [_Y ouvrir]]
b. Restitutive [_X E [_X E [_Y ouvrir]]]
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The difference is clear: RE is separated from the verb by (at least) one fewer boundary or one zero morpheme in the latter than in the former. The phonological rule ⇒ → e requires the right kind of adjacency and does not apply if RE and the verb are structurally too distant. ¹⁵ Furthermore, it makes sense of the fact that the basic form, namely [rə], surfaces in the repetitive case, rather than the other way around: the change is phonologically conditioned by the presence of a vocalic sound: we expect that the non basic form will occur when RE is closer to it than when it is more distant: this is how phonological rules normally functions.

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There is another observation I do not discuss here concerning vowel initial derived nominals. We would expect RE to surface either as re- [R θ], ré- [Re] or r- [R]. The first option seems always excluded (* reouverture, *reanimation, *reinitialisation),r- [R] and the third too (réouvrir or rouvrir, réouverture but *rouverture, réanimer or ranimer, réanimation but *ranimation).

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