

Result states and repetitive adverbs

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Abstract: This paper considers some paradoxes that arise in connection with repetitive adverbials in English. We propose a simple syntactic structure of verbal predicates along the lines of Ramchand 2008 and show how the apparent paradoxes can be resolved with that structure and some straightforward assumptions. One observation is that repetitives behave differently with verbs taking affected subjects (like *read*) than with verbs taking non-affected subjects (like *paint*). Another observation is the fact that repetitives are not uniform in their behaviour with respect to resultatives. Once again, structural assumptions, specifically, distinct structural positions of the resultatives, account for this varied behaviour.

keywords: repetitives, verbs, resultatives, affectedness, telicity

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1 Repetitives

As has been noted (von Stechow 1996, Holsinger 2007, and many others), *again* is ambiguous in sentences like (1) between a repetitive reading (1-a) and a restitutive reading (1-b); where the first requires that John opened the door before, and the second requires that the door have been opened before.

- (1) John opened a door again.
- a. “John opened a door, and then he opened it again.”
 - b. “Someone opened a door, and then John opened it again.”

English *again*, *re-* and similar elements involve both assertive and presuppositional components. We adopt the definitions given in (2):

- (2) Where $\tau(e)$ is the runtime of the event e , \prec is temporal precedence; $LB(j)$ is the left boundary of an interval j :
- $$\begin{aligned} \llbracket \text{again} \rrbracket_{\langle \langle i,t \rangle, \langle i,t \rangle \rangle} (P_{\langle i,t \rangle})(e_i)^1 &= 1 \text{ iff } P(e) \ \& \ \exists e' [P(e') \ \& \ LB(\tau(e')) \prec LB(\tau(e))] \\ &= 0 \text{ iff } \neg P(e) \ \& \ \exists e' [P(e') \ \& \ LB(\tau(e')) \prec LB(\tau(e))] \\ &\text{undefined otherwise} \end{aligned}$$

English also possesses other elements which can broadly be classified as “repetitive”, including *anew*, *afresh*, *once more*, *once again*, and *re-*. Repetitive elements in English differ from one another in various ways, including both syntactic and semantic differences.

For example, while *again* can occur in a variety of syntactic positions, *anew* is much more restricted in the positions it may occupy, as in (3).

- (3) a. (Again) John (again) read the book (again).
 b. (*Anew) John (*anew) read the book (anew).

In terms of semantics, *anew* and *afresh* impose additional conditions, requiring that the event be as if returned to an initial state. *Re-* appears to require a result, unlike *again*. Further, where *again* is ambiguous between repetitive and restitutive readings (see above (1)), *re-* bears only the restitutive meaning (e.g. Keyser and Roeper 1992).

- (4) John opened a door again.
- a. John opened the door on the left, and then John opened the door on the right. [repetitive]
 - b. There was a door which had been open, and then it was shut, and then John opened it. [restitutive]

¹Where i is used as the semantic type of an event.

- (5) John reopened a door.
- a. #John opened the door on the left, and then John opened the door on the right (and the doors had never been opened before). [repetitive]
 - b. There was a door which had been open, and then it was shut, and then John opened it. [restitutive]

We argue — following von Stechow 1996, among others — that this interpretational difference is best treated as dependent on which part of the structure the repetitive modifies,² thus:

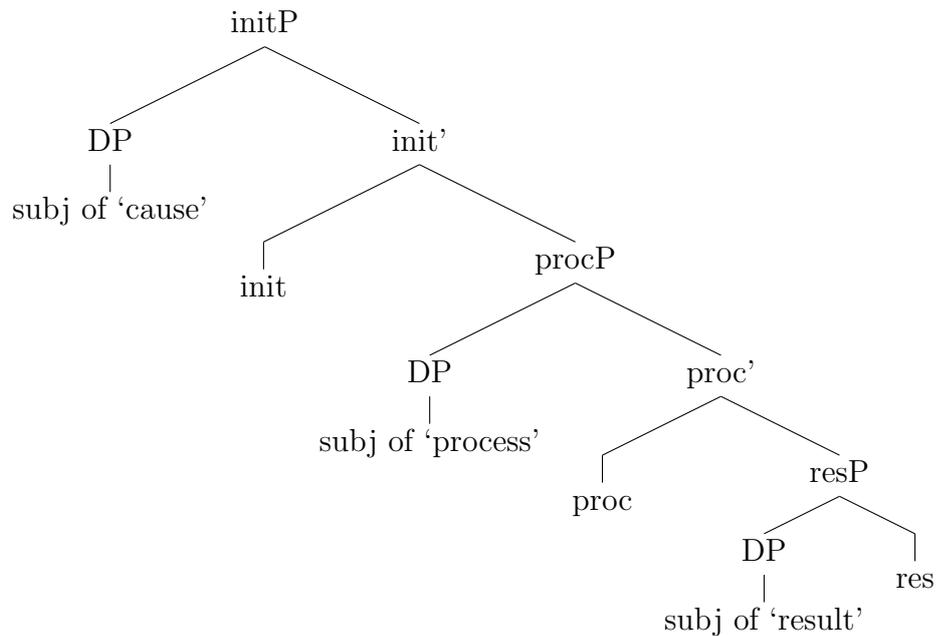
- (6) [**again** [John opened a door]] (repetitive)
- (7) [John [**again** [opened a door]]] (restitutive)

That is, (6) means that John opened a door, and this same event (i.e. John opening a door) occurred in the past. While (7) means that John opened a door, and this event returned the door to a state it had been in previously (i.e. the door had been open before at some point in the past, and John returned it to this state; although this may have been the first door he personally has ever opened).

We argue that these above data point to the ability of *again* to occur in high and low positions, while *re-* is restricted to the lower position. The formalisation we adopt involves the articulated VP-layer analysis proposed by Ramchand (2008). Ramchand posits that the VP-layer can be decomposed into an initiationP, processP, and resultP, as:

²Note criticisms of this approach, however, including Jäger & Blutner (2000, 2003).

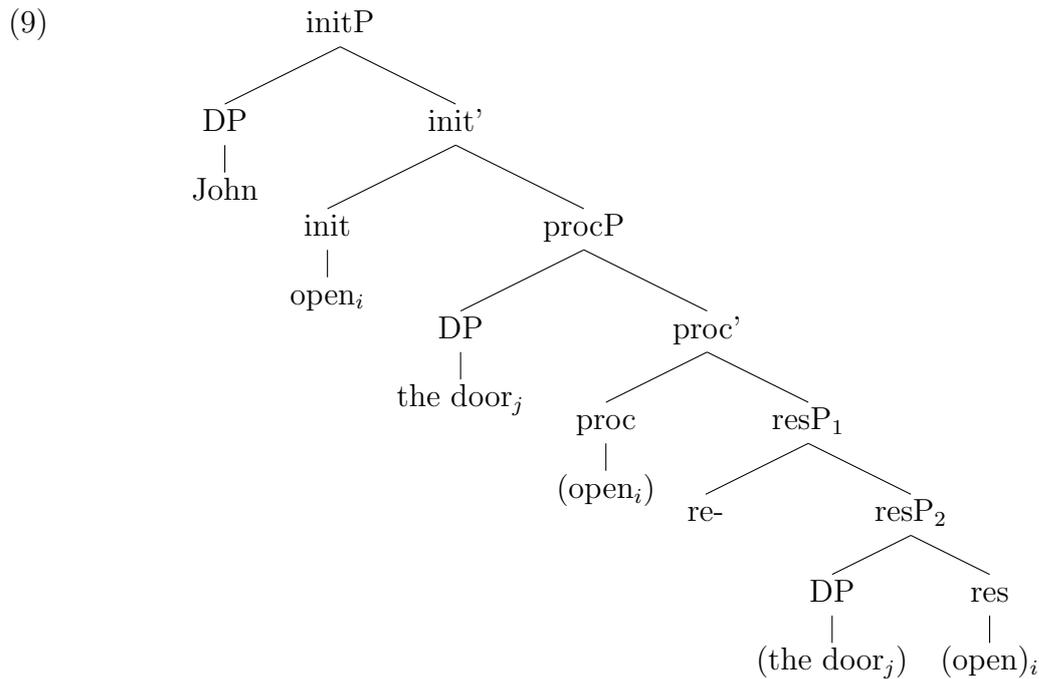
(8)



Not all verbs will involve all three verbal projections:— which projections are present depends on the precise semantics of the verb in question. The verbal root can be merged first either with the head of *resP*, or else, when *resP* is not present, the verbal root merges with the head of *procP*.

Thus, on this analysis, the verbal layer in a sentence like “John reopened the door” would have the structure:³

³Assuming that *re-* behaves as a clitic (cf. Keyser & Roeper 1992) in terms of the PF side, *re-* will be picked up by *open* as the latter moves up the tree.



There are a number of apparent paradoxes involving repetitives, discussed in the remainder of this paper. These include the following: differences in scopal properties of objects in clauses containing *re-* vs those containing *again* (section 2); the fact that some, but not all, verbs require subjects to remain constant between repetitions (section 3); the fact that the presence of a result does not guarantee telicity (section 4); and the existence of results which are not themselves properly part of result states (section 5). We offer a structural account of these apparent paradoxes below.

2 Paradox 1: *re-* and *again* - Object Scope

The possible object scopes are different for *re-* and *again*; this is surprising if they bear the same basic denotation.⁴

Thus, in (10-a), John may have closed different doors, i.e. *again* can scope high over the existential in (10-a); while in (10-b), there is only one relevant door possible, i.e. *re-* must take scope under the QR position of the indefinite. The resP_2 of the tree in (9) above is of type $\langle i, t \rangle$ (cf. Ramchand 2008:45), and *re-* is of type $\langle \langle i, t \rangle, \langle i, t \rangle \rangle$ (as per (2)).

- (10) a. John closed a door again.

⁴Assuming that all other relevant properties of these two elements are identical.

- b. John reclosed a door.

Here we assume that the lowest QR position can be no lower than *initP* (lowest node of type *t* — see Barwise & Cooper 1981; Heim & Kratzer 1998; Bruening 2001). This is consistent with *re-* necessarily merging low, specifically below the level of the *initP*.

3 Paradox 2: Subject identity

Certain verbs require that the subject be identical between repetitions. This holds both for *again* and *re-*. Compare the infelicitous (11-a), (12-a) with the felicitous (11-b), (12-b):

- (11) a. Bill read the book and liked it, # so John read the book again on Bill's recommendation (even though John had never read it before).
b. Bill painted the door, but John didn't like the colour he chose, so John painted the door again (even though John had never painted a door before in his life).
- (12) a. Bill read the book and liked it, # so John reread the book on Bill's recommendation (even though John had never read it before).
b. Bill painted the door, but John didn't like the colour he chose, so John repainted the door (even though John had never painted a door before in his life).

This contrast too can be explained in terms of differences in whether the verbal root takes an affected agent/subject (on affected agents, see Saksena 1980, 1982; Hock 1985; Næss 2007; amongst others).

On the notion of affected and non-affected agent, see, for example, alternation in the following contrast from Hungarian involving differences in case-marking on (internal) affected agents in causative constructions, with affected agents taking accusative marking, as in (13-a) and non-affected agents taking instrumental marking, as in (13-b):

- (13) a. Köhögtettem a gyereket.
I-caused-to-cough the boy-ACC
'I made the boy cough.'
- b. Köhögtettem a gyerekkal.
I-caused-to-cough the boy-INST
'I had the boy cough' (by asking him to do so)

Hindi displays similar alternations, see (14), and discussion in Saksena (1980,

1982).

- (14) a. main̄-ne rām-se kitāb paṛh-vāi
I-AGT Ram-INSTR book read.CAUS.PAST.FEM
“I got the book read by Ram.”
b. main̄-ne rām-ko kitāb paṛh-vāi
I-AGT Ram-DAT book read.CAUS.PAST.FEM
“I had Ram read the book.”

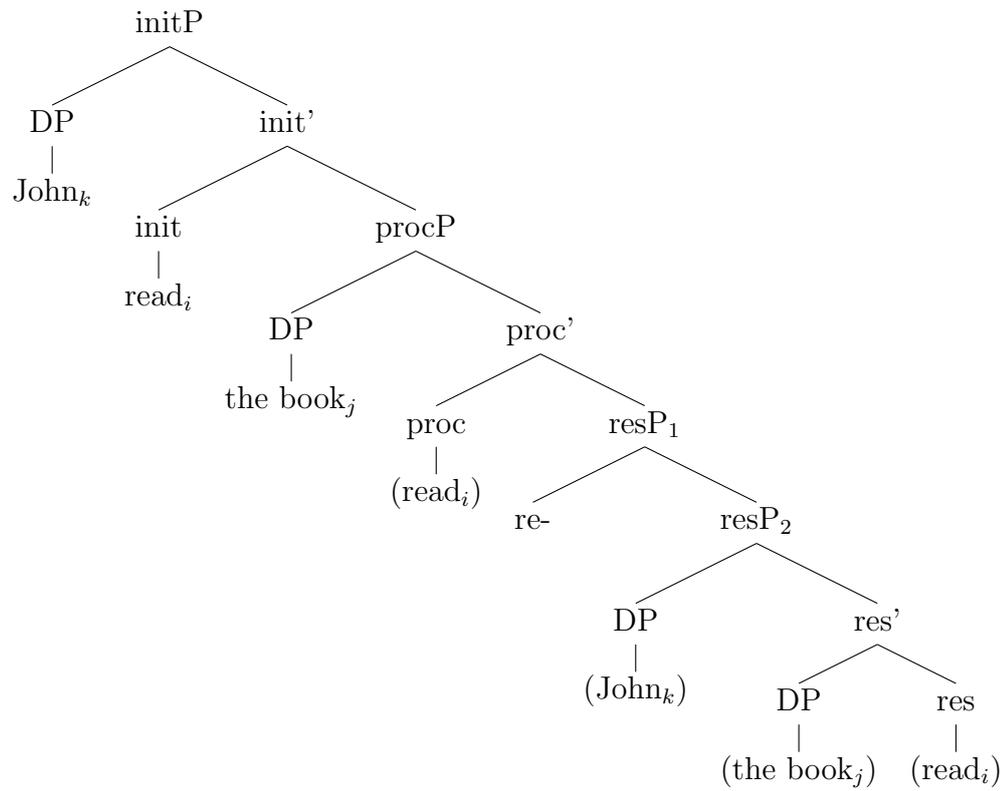
Affectedness of subjects/agents has morphological consequences elsewhere, as for example in Sanskrit, where some so-called “middle” vs “active” verbal contrasts involve whether or not the logical subject is directly affected or not, as shown below:

- (15) a. ajam yajāmi
goat.ACC sacrifice.pres.mid.1sg
“I sacrificed a goat (for someone else’s benefit).”
b. ajam yaje
goat.ACC sacrifice.pres.act.1sg
“I sacrificed a goat (for my own benefit).”

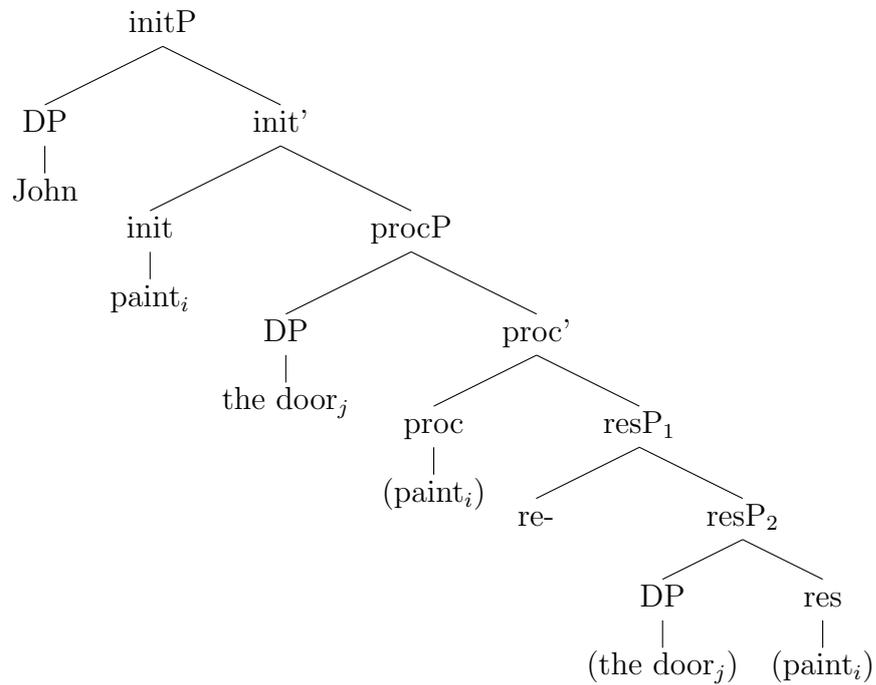
Verbs which take affected agents/subjects, like *read*, require these arguments to merge as part of resP. (We equivocate here between agents and subjects since certain verbs whose subjects end up being affected may be analysed as taking experiencer rather than agent subjects.) Since the lowest scope position for repetitives is adjoined to resP, this has the effect of requiring any affected subjects to be identical between repetitions since such subjects will end up as part of the presuppositional component of the repetitive, as per (2). A reviewer points out that in (11-a), (12-a) that John stands in a state of “being/having the-book-read” which seems odd on the face of it. However, though affected subjects/agents do not respond identically to the same sort of tests which can be applied to diagnose affected objects (like those discussed in Beaver 2013), they do in fact appear to be part of a result state. And, thus in the case of *read* and similar verbs, it is apparently the properties of the agent rather than the patient which are altered.

The structures proposed for *John reread the book* and *John repainted the door* are shown in (16) and (17), respectively.

(16)



(17)



In example (16), in contrast to (17), the external argument is first merged

into the structure relatively low, in the Spec of resP, thus falling within the scope domain of resP-adjoined *re-* and therefore necessarily appears in the repetitive’s presupposition. Verbal roots apparently may vary in the requirements they place upon the extended verbal shell, including requiring resP to merge with an external argument (appearing in Spec of resP).⁵

In addition to “ingestive” verbs like *eat* and *read*, verbs of speech generally require the subject to remain the same between events, as in (18-a); but where the speech event involves a Result, as in (18-b), appear felicitous with non-identical subjects. Thus, speech events which have an illocutionary/performative component, i.e. where there is some sort of definitive consequence: legal, magical etc.), seem to necessarily involve a Result. In these cases, the subject may differ between the two events, as in (18-b).

- (18) a. *Bill spoke and then John spoke again (even though he hadn’t spoken earlier).
b. Bill spoke the incantation, and then John spoke it again (though he never uttered it before).

4 Paradox 3: Non-telic results

The presence of a result does not guarantee telicity (a fact problematic for Ramchand 2008, as well as simple compositional accounts of telicity), as in:

- (19) John resorted rice (for five years).

In (19) there is a result (i.e. some amount of rice is sorted), but the action is non-telic.

Thus, the presence of a result does not guarantee telicity (cf. Beavers 2013). This claim contrasts with the theory of Ramchand 2008, where a result projection will ensure that the description will be telic. We assume that telicity requires additional structure (following Borer 2005): one way of implementing this is to posit a TelicP dominating initP (for Borer 2005, this head is Asp_Q , where Q stands for *quantity*). Additional elements in TelicP (specifiers or heads) license

⁵Note that this is true of this particular variety of *read*. There are other *read* lexical roots, such as the one associated with the domain of editing, which do not require Spec of resP to be filled and thus which do not include the external argument as part of the presuppositional component:

- (i) The editor had John read the submission. Unsatisfied with John’s review, she then had Bill reread it.

telicity by checking a ‘telic’ feature in that head. The elements which can license telicity in TelicP include most resultatives, particles and bounded homomorphic arguments.

It is important to note that not all results can check telicity in TelicP. That is, we cannot treat telicity as purely compositional. In sum, the interrelation between resP and TelicP, namely the fact that many verbs which have a resP are in fact telic, can be accounted for if we assume that there is some syntactic feature-checking relation between TelicP and resP.

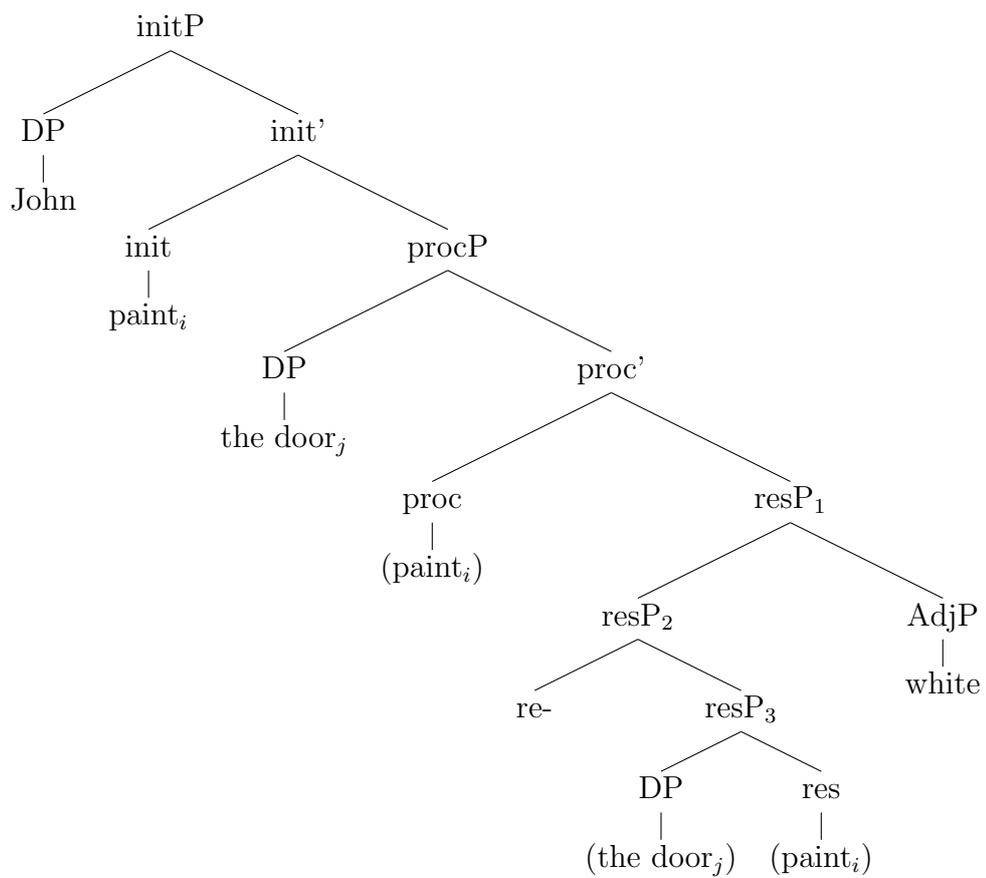
5 Paradox 4: Results which are not part of result states

Certain resultative constructions with *re-* do not require that the specific result held before (cf. Kayne 1985; Keyser & Roeper 1992; Williams 2011). For example:

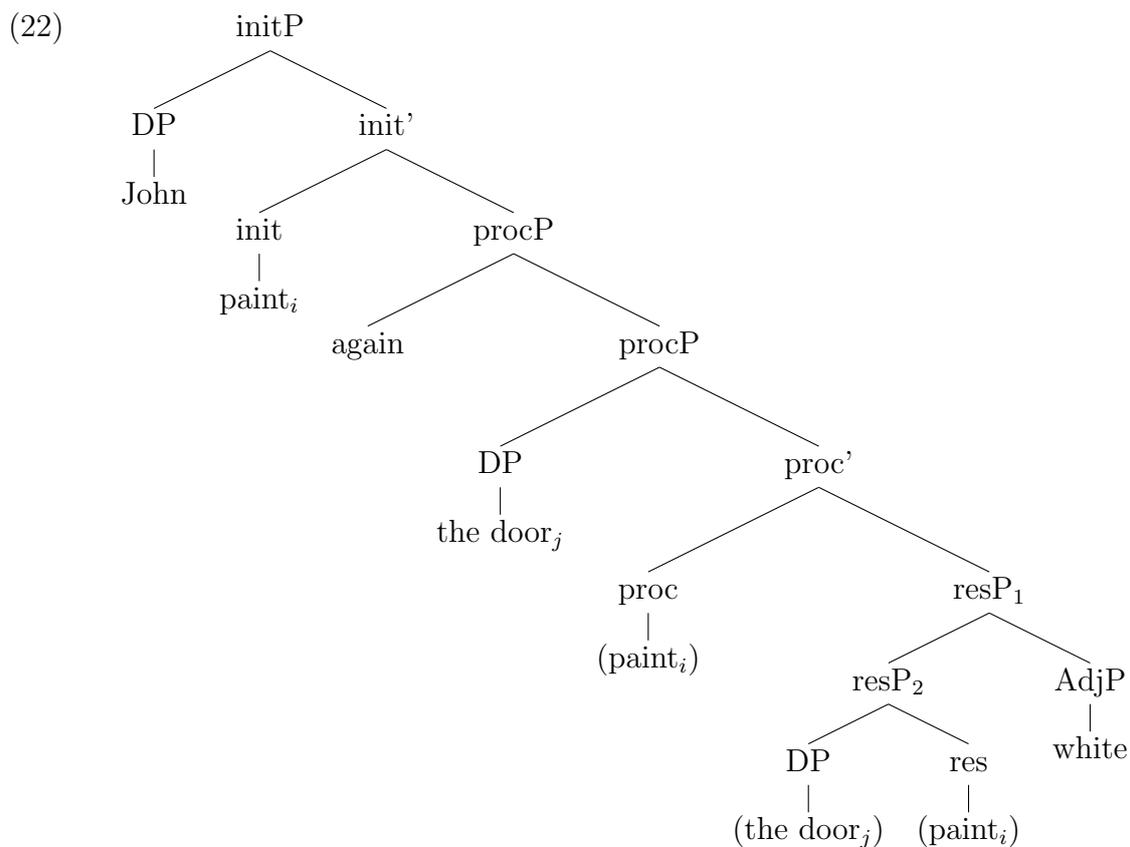
- (20) a. John repainted the door white.
b. John painted the door white again.

In (20-a), the door is not presupposed to have been white; while in (20-b) it is presupposed to have been white at some earlier time. This can be explained if we assume that *white* in (20-a) is outside of the scope of *re-*, and so is therefore not presupposed:

(21)



Note further that *again* must merge higher than *white*:



Even though both *re-* and *white* are adjuncts, it appears that *re-* obligatorily merges below the adjectival modifier. We speculate that this ordering is due to either the clitic nature of *re-* — which forces it to be the first modifier (i.e. it must be phonologically adjacent to the element it leans on) — or to some other extrinsic ordering of modifiers, such as is found among adjectives.

We propose, therefore, that ‘secondary’ results (like the colour of paint in the examples above), which are not specified by the verb, are merged above the root; *re-* modifies the root, but *again* never does so. Secondary results are ‘low’ adjuncts, merged below *again*. Note that the verb *paint* is resultative even in absence of the modifier *white*, as indicated by the acceptability of *re-* in:⁶

(23) John repainted the door

Not all “secondary” results or resultative modifiers are permitted with *re-*, e.g.:

(24) a. ?! He rewiped the table clean.

⁶A reviewer suggests that in (23) there is an unpronounced (paint colour) element. This seems to us not to be a warranted proposal, since (23) does not require an implicit colour (of any particular kind).

- b. ?! He rebaked the cake brown.

Other combinations of predicates and modifiers exhibit the optional inclusion of the secondary result in the presupposition of the repetitive, e.g.:

- (25) He recooled the tea (to 40 degrees).

Oddly, and problematically, *again* does not permit exclusion of secondary results from the presuppositional component, e.g.:⁷

- (26) a. !John cooled the tea to 50 degrees and then he cooled the tea to 40 degrees again (despite the only prior cooling of the tea being to 50 degrees).
b. !John walked the trail to work and then John walked the trail home again (despite having never walked the trail home before).
c. !John wiped the table half-clean and then John wiped the table clean again (despite never having wiped the table clean before).

Note that such modifiers generally need to be attached close to the verbal root:

- (27) a. John repainted the door white last night.
b. *?John repainted the door last night white.

6 Conclusion

This paper thus constitutes a sketch of how a syntactic treatment of repetitives within the Ramchandian system of articulated verbal structure can handle a number of apparent paradoxes, assuming the fairly uncontroversial definition of *again/re*-type repetitives given in (2).

The analysis here adopts Ramchand's (2008) articulated verbal layer in which a verb may project up to three sublayers (initP, procP, resP). The verbal root itself merges with the lowest verbal projection; thus either resP, or, in its absence, procP.

However, resP and procP can merge with other elements before merging with higher verbal projections, including arguments and *re-*. Positing this structure allows for an explanation of apparent paradoxes, including differences between *again* and *re-* w.r.t. the scope of quantificational objects.

⁷*Re-* is claimed to be non-permitted with so-called "strong" resultatives (e.g. Kaufmann & Wunderlich 1998):

- (i) a. He repainted the door white.
b. *He rehammered the metal flat.

As well, lexical variation in whether subject identity is required between repetitions is also accounted for in this analysis, which recognises the existence of affected agents/subjects, and requires these to be merged low in the VP-layer, either in Spec of resP or Spec of procP.

Results must be distinguished from telicity; this presumably requires additional syntactic structure, i.e. a TelicP dominating initP, to account for non-telic results. Certain resultative constructions with *re-* involving “secondary results” (e.g. “John painted the door white”; *painted* is the primary result; *white* is secondary) do not presuppose the secondary result; thus such elements must be merged outside of the scope of *re-* but not outside the scope of *again* (accounted for in terms of differences in the morphosyntax of these two elements).

Apparently paradoxical behaviour of repetitives thus can be at least partially accounted for by the adoption of an articulated Ramchandian VP-layer and the recognition of the potential of agents/subjects (as well as patients/objects) to be affected, combined with an appropriate syntactic treatment of this fact as reflecting generation within the lower resP or procP projections.

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