Re-, Again
A semantic investigation of restitutive again and re- in English

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1 Overview

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1.1 The restitutive/repetitive ambiguity

Structures modified by *again* are ambiguous, a fact much discussed in the literature (Dowty, 1979; Fabricius-Hansen, 1983; Stechow, 1996; Jager and Blutner, 2000; Marantz, 2007). We propose three potential readings, two of which have been previously discussed.

1. John opened the door again.
2. (a) John opened the door, and the door had been open before. (Restitutive)
   (b) John opened the door, and he has done so before. (Repetitive)
   (c) John opened the door, and the door had been opened before. (Reiterative)

For this discussion we will limit ourselves to the restitutive reading in (2a). Our our claims are as follows:

- *again* has multiple readings because it has multiple scope possibilities
- *re-* does not have multiple scope possibilities, and it always has a restitutive reading
- The semantics of *again* are identical to the semantics of *re-*

1.2 The semantics

The semantics for *again*, and by assumption *re-* , are given in (3) below.

3. \[[\text{again}]\] = \[[\text{re-}]\] = \[\lambda P \lambda e [P(e) & \exists e' [P(e') & \gamma(e, e') & e' < e]]\]

Where \(\gamma\) is defined as the non-overlap gap condition given formally in (4). This was added to replace the notion of maximality in Stechow (1996), which is presented in (5). The formal details needn’t concern us much here.

4. \[[\gamma]\]_C = \forall x \forall y [x \in e][y \in e']. In context C, \exists e''[e'' < e' < e & \forall z [z \in e''][x \neq y \neq z]]
5. \[[\text{max}]\]_C (P)(e) = P(e) and there is no e' such that e is a proper part of e' and P(e') = 1

1.3 The big assumption

We claim that these semantics hold for both *again* and *re-* . This is a stipulation, as it is widely known that *again* and *re-* have different distributions (6) and semantic effects (7).

6. (a) John slept again.
   (b) *John re-slept.
7. (a) The doctor built my knee again.
   (b) The doctor re-built my knee.
Thus, we make this claim on theoretical grounds.

- Intuitively, again and re- seem to mean the same thing; there is no a priori reason to assume that they have different semantics.
- Given our operating assumption, differences in the distribution and interpretation of these two items suddenly becomes interesting.

Specifically, making this claim allows us to formalize our predictions as follows.

- If a structure $\alpha$ allows modification by both re- and again, then $\text{re-}(\alpha) = \text{again}(\alpha)$
- If a structure $\alpha$ allows modification by one but not the other item, then difference is morphological

1.4 The main focus

In this discussion we will be focusing on the apparent semantic asymmetries between re- and again. Specifically as they relate to the following set of pairs.

8. Causative/Inchoative
   - (a) John opened the door again.
   - (b) John re-opened the door.

9. Creation
   - (a) John built the house again.
   - (b) John re-built the house.

10. Resultatives
    - (a) John painted the door red.
    - (b) John re-painted the door red.

2 Scope and selection

We claim that again creates ambiguity because again is capable of taking different scopes with respect to the event. Given some basic event structure, such as that below we can explain how the readings in (2) arise.
2.1 Again takes scope all over the place

Essentially, given some event structure (of the sort proposed by Ramchand (2003) or Stechow (1996)), the various readings of again arise as a result of again adjoining to one of several possible positions. That it cannot adjoin anywhere can be explained via type matching or similar (here our semantics require an input of type $<e,t>$).\(^1\)

2.2 Re- does not take scope all over the place

We claim, with Marantz (2007) that re- is only restitutive. That re- can be restitutive is evident from sentences like those in (12).

11. (a) The doctor re-built my knee.
   (b) John re-opened the window.

   That re- is incompatible with structures without a lower result is also evident (note that again is fine with these structures, though restitutive again is not possible).

12. (a) John ran again.
   (b) *John re-ran.

The scope of indefinites with respect to re- also suggests that it occupies a very low position. Note that when again is interpreted as restitutive, it has the

\(^1\)The middle reiterative reading, is not currently discussed in the literature. There is, however, no principled way to rule it out. Stechow (1996) recognizes this possibility but ignores it for several reasons. As we are only interested in the lowest reading, however, it needn’t concern us here.
same scope properties. In 13 the indefinite must take wide scope with respect to the presupposition.

13. (a) John re-painted a door.
   (b) John knocked a bowling pin down again. (restitutive reading)

Despite this, there are apparent cases where it appears that re- can take wider scope.

14. John re-opened the door.

This is misleading, but explained given our semantics.

- The sentence (14) is always restitutive, we can verify the very low scope position of re- in this structure by noting that if the object is indefinite, it must take wide scope with respect to the presupposition.

- Given our semantics, all higher scope readings are possible as special cases for the lower scope readings. Thus, (14) only presupposes that the door had been in some open state before, it is perfectly plausible that it was in that previous state as a result of someone (perhaps even John) opening it.

2.3 Re- is very picky about the direct object

Note that the restrictions on re- are more serious than simply requiring telicity. re- requires more than telicity, it requires a verbal complement which measures out the event denoted by the verb. Hence:

15. No Paths
   (a) John re-ran the race.
   (b) *John re-ran to the store.

16. No Non-Incremental Themes
   (a) John re-ran the race.
   (b) ?John re-ran the horse past the barn.

17. No Small-Clause Complements
   (a) John re-considered the problem.
   (b) ?John re-considered the problem solved.

18. No Verb Particle Constructions (Though there is something interesting here)
   (a) John looked the number up.
   (b) ?John re-looked the number up.
   (c) *John re-looked up the number.
   (d) John chewed the students out.
   (e) *John re-chewed the students out.
   (f) *John re-chewed out the students.
3 The Paradigm

Let’s now return to our semantic asymmetries.

3.1 Of opening doors

19. Causative/inchoative

(a) John opened the door again.
(b) John re-opened the door.

Observations

• The verb encodes the result. (a broken glass, an open door)
• Both again and re- can take restitutive scope.

3.2 Of creating things

20. Creation

(a) John built the house again.
(b) John re-built the house.

Observations

• The object of the verb encodes the result. (a house, a cake, a knee)
• Again either cannot take, or strongly resists restitutive scope.
• Re- only has restitutive scope.

3.3 Painting burned doors

The readings here are a bit more subtle, so first we will verify that they are present.

21. Resultatives

(a) John re-painted the door red.
(b) John painted the door red again.

Let us assume a red-wood door and the lowest possible reading for again.
Observations

- It is unclear what the result of these verbs are. (A red-painted door vs. a painted door that is red)

- 21a
  - Presupposes that the door had been painted before (re- scopes over the verb)
  - Does not presuppose that the door had been red before (re- does not scope over red)

- 21b
  - Does not presuppose that the door had been painted before (again does not scope over the verb)
  - Presupposes that the door had been red before (again scopes over red)

A scope paradox...

22. (a) Paint > Again > Red
    (b) Red > Re > Paint

3.4 Summary

<table>
<thead>
<tr>
<th>Verb Type</th>
<th>again</th>
<th>re-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[verb result]</td>
<td>[verb]</td>
</tr>
<tr>
<td>Open/Break</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Verbs of Creation</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Resultatives</td>
<td>✓</td>
<td>×</td>
</tr>
</tbody>
</table>

So we need (at least) 4 different structures.

4 The solution

We can provide a structural solution to these problems given these tools.

- re- is incompatible with Small Clauses that are not selected by the verb.
- again adjoins only to type $<e,t>$.
- re- merges directly above the verbal complement, and later becomes prefixed to the verb by your favorite flavor of morphosyntax.
4.1 Open/Break Verbs

These verbs encode their result.

23. (a) John opened the door ⇒ an open door
(b) John broke the glass ⇒ a broken glass

4.2 Verbs of Creation

The object of these verbs encode the result.

24. (a) John built a house. ⇒ a house
(b) John baked a cake. ⇒ a cake
4.3 Resultatives

The result is encoded by the resultative predicate applied to the object or to the lower VP.

25. (a) John painted the door red. ⇒ a red door / a red-painted door

(b) John hammered an ingot flat. ⇒ a flat ingot / a flat-hammered ingot
5 Conclusion

We have attempted to take a semantic treatment of re- and restitutive again and explore the consequences that it has on verbal event structure. Insofar as our treatment is correct, it makes interesting predictions regarding the possible structural configurations of different classes of verbs. We have largely ignored the distributional differences between re- and again, which is sad, because they are very interesting.

References


