

The Non-Existence of Sub-Lexical Scope*

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1. Introduction

There is a body of literature that suggests that simplex causative verbs must be syntactically complex since they appear to allow modification of parts of their lexical semantics. In what follows we argue (i) that simplex causative verbs never allow modifiers to take scope over part of their lexical semantics, and (ii) that where scope appears to be sub-lexical, this is a consequence of the construction of a presupposition in which not all the material in the scope of a modifier is used.

There are two theories of causative verbs that we will consider. In the theory we advocate, the semantics of causation is contained in a single terminal (see, for example, Pinker 1989, Jackendoff 1990, and Rappaport Hovav and Levin 1998). In the alternative theory, the semantics of causation is distributed across several syntactic heads (see, for example, Hale and Keyser 1993, Pykkänen 2008, and Ramchand 2008). Each of these theories comes in various flavours, depending on one's assumptions about the semantics of causation. It is most commonly assumed that causative events consist of a causing event, a process or become event, and a resultant state, which is the culmination of the become event. For concreteness sake, we adopt this standard assumption in what follows, although nothing hinges on this.¹ Thus, we will compare two proposals, one in which lexical verbs are simplex heads with a semantics as in (1a) and one in which they are the amalgamation of three heads, as in (1b).²

- (1) a. $\llbracket V_{\text{cause}} \rrbracket = \lambda y \lambda x \lambda e_m \exists e_1 \exists e_2 [e_m = \text{CAUSE}(e_1, e_2) \wedge \text{subject}(x, e_1) \wedge e_2 = \text{BECOME}(\text{RESULT}(y))]$
b. $[\text{CAUSEP DP CAUSE} [\text{BECOMEP DP BECOME} [\text{RESULTP (DP) RESULT}]]]$

On the standard assumption that adverbials modify the node to which they attach, the theories in (1a) and (1b) make very different predictions. The latter predicts that modification can in principle target three different constituents. An adjunct can be adjoined to CAUSEP, BECOME P

* We are delighted to contribute to this volume in honour of our erstwhile colleague Rita Manzini. We remember Rita's time at UCL as highly stimulating, with conversations in which we agreed with her on all preliminary steps in an argument, but typically ended up with different conclusions. We suspect that the same would happen if we were to discuss lexical decomposition and therefore offer the material in this paper as a new area in which to test this generalization.

We would like to thank an anonymous reviewer for useful comments that prompted a comprehensive revision of the first version of this paper. We would like to thank the editors for the invitation to contribute to this volume.

¹ We have elsewhere defended the view that causative verbs have very sparse semantics and lexically encode only a process and a culmination, enriched with an external argument (see Pietroski 2003, 2005 and Neeleman and Van de Koot 2012).

² To be sure, when we use the term 'simplex head' what we mean is a single base-generated X^0 -category. This is not to deny that certain simplex causatives are derived from adjectives. We would analyze the verb *open*, for example, as a V^0 -category that contains the A^0 -category *open* and a silent suffix. This V^0 -category is not derived by movement, but base-generated. Its argument structure is composed on the basis of the semantics of its parts, and in this composition the external argument variable of the adjective *open* becomes the internal argument variable of the verb. An analysis along these lines makes it possible to capture observed regularities in pairs like $\text{open}_A\text{-open}_V$ without the need for syntactic or semantic decomposition.

or RESULTP. By contrast, the theory in (1a) only allows modification of the causative verbs as a whole, which is equivalent to modification of CAUSEP under syntactic decomposition.

The problem we address in this paper is that neither of these theories seems correct. On the one hand, there is evidence from manner, locational and temporal adverbs suggesting that causative verbs should not be syntactically decomposed. On the other hand, there is evidence from presuppositional adverbs that does seem to require such decomposition. In particular, example (2) is ambiguous between a repeated action and a restitutive reading. (In the literature the former is sometimes referred to as the repetitive reading.) Of particular interest here is the restitutive reading, which seems to require that the adverbial modifies sub-lexical material.

- (2) John opened the window again.
- i. *Agent's action is repeated* (repeated action reading)
again (CAUSE (John, BECOME (OPEN (the window))))
 - ii. *Resultant state is restored* (restitutive reading)
CAUSE (John, BECOME (again (OPEN (the window))))

In section 2 we review the evidence from non-presuppositional adverbs. We show that such adverbs are unable to modify sub-lexical material, as predicted by the theory in (1a). Additional hypotheses that can capture these facts in a theory like (1b) also rule out a syntactic account of the restitutive reading of *again*.

In section 3 we reinterpret the data involving *again* in terms of a specific procedure by which a presupposition is constructed. On this reinterpretation, the theory in (1a) can capture the data. In fact, we will demonstrate that it provides more insight into the phenomenon of apparent sub-lexical scope than theories based on syntactic decomposition.

2. The scope of non-presuppositional modifiers

2.1. Manner modifiers

A well-known piece of evidence against the syntactic decomposition theory comes from manner modification (see Fodor 1970, Fodor and Lepore 1997, and Pytkänen 2008). In example (3a), John rather than Bill is associated with an action that takes place in a grumpy manner. This suggests that the syntactic structure of this example does not contain a constituent corresponding to an embedded become event “Bill become awake” that *grumpily* could take scope over. Yet, in (3b) and (3c), *grumpily* modifies the very event that cannot be targeted by manner modification in (3a) (see also Higginbotham 2000).

- (3) a. John awoke Bill grumpily.
b. Bill awoke grumpily.
c. John caused Bill to awake grumpily.

Similarly, in (4a) the GP rather than the patient is associated with an action that takes place in a dignified manner, while in (4b) and (4c) *in a dignified manner* modifies the become event that is apparently inaccessible in (4a).

- (4) a. The GP killed the patient in a dignified manner.
b. The patient died in a dignified manner.
c. The GP caused the patient to die in a dignified manner.

None of the examples in (3) and (4) allows a reading involving modification of the state in which their event culminates. This is, however, less informative, since states seem incompatible with manner modification:

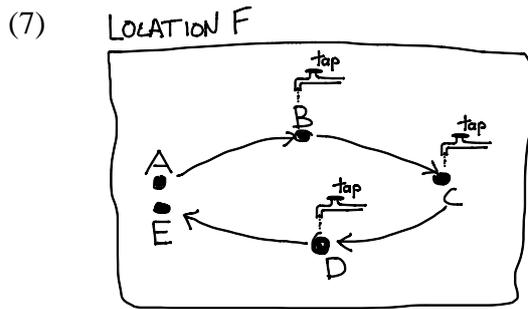
- (5) a. *John was awake grumpily.
- b. *The patient was dead in a dignified manner.

2.2. Locational modifiers

We next turn to data involving locational modifiers. Consider the scenario in (6). What happened can be felicitously reported using (6a), but not using (6b). This suggests that (6b) does not contain a constituent corresponding to the become event “John died in UCLH” or a constituent corresponding to the state “John (is) dead in UCLH”. Rather, the modifier scopes over a constituent that represents the entire causative semantics, but this does not fit the context. Yet, in (6c) and (6d), the locational modifier takes scope over the very event that it could not target in (6b). The examples in (6e,f) indicate that locational modification of the state “John (is) dead” is not altogether impossible. Their marginality is presumably due to *dead* being an individual-level predicate: if a person is dead in location X, then that person is dead anywhere. However, a reading of (6b) as “A roof tile caused John to undergo an event that culminated in his being dead in UCLH” must be completely unavailable, or the example would have a status comparable to (6f).

- (6) [Context: John steps out of his house in Whetstone, north London, and gets hit on the head by a falling roof tile. An ambulance transports him to UCLH, a hospital in central London, where he dies.]
 - a. A roof tile killed John in London.
 - b. #A roof tile killed John in UCLH.
 - c. John died in London.
 - d. John died in UCLH.
 - e. ?John was dead in London.
 - f. ?John was dead in UCLH.

The scenario in (7) allows the use of a causative verb (namely *fill*) expressing a stage-level resultant state. This allows us to test the extent to which locational modification can reach into the lexical semantics of a causative verb. Suppose John uses a machine that fills buckets. It works as follows. One places an empty bucket on a circular moving track that runs from point A to points B, C and D and then back to collection point E (which is right next to point A). At points B, C, and D, a volume of water equal to 1/3 of the volume of the bucket is added. The full bucket then continues to point E for collection. A picture of the machine appears in (7). Now consider which of the examples (7a-d) can be used to talk about what happened when John has filled a bucket using this machine.



- a. John filled the bucket in location F.
- b. #John filled the bucket in location D.
- c. The bucket filled in location D.
- d. The bucket was full in location D.

The appropriateness of (7a) is unsurprising. The infelicity of (7b) is surprising on the decompositional approach, given that (7c) and (7d) are completely felicitous. It suggests that simplex causatives do not have an attachment site for locational modifiers at the level of the caused event or the resultant state, something which comes for free in non-decompositional theories.

2.3. Temporal modifiers

A considerably murkier picture presents itself when we turn to temporal modification of causatives and their unaccusative counterparts. Although we will not demonstrate this here, we believe that temporal adverbials cannot modify the process component of a simplex causative (much like what was demonstrated above for manner and locational modifiers). However, remarkably, temporal adverbials do seem to be able to modify the resultant state of such a verb. Thus, example (8a) has a reading on which the window was open for ten minutes as a result of John's actions, in addition to a less relevant reading on which John merely intended the window to be open for ten minutes (we ignore the repeated action reading, which is irrelevant to the present discussion). The unaccusative counterpart of (8a), given in (8b), lacks this 'intentionality' reading (which is unsurprising if the expression of intentionality requires the syntactic presence of a causer argument), but it apparently still allows modification of the resultant state: that is, on completion of the opening process, the window may stay open for ten minutes.

- (8)
- a. John opened the window for ten minutes.
 - (i) John caused the window to be open and the window stayed open for ten minutes.
 - (ii) John opened the window with the intention for it to remain open for ten minutes.
 - b. The window opened for ten minutes
 - (i) The window opened and it stayed open for 10 minutes.
 - (ii) *The window opened with the intention for it to remain open for ten minutes.

We put the 'intentionality' reading to one side for now and focus on the reading on which the window must actually be open for ten minutes for the sentence to be true.

As just mentioned, this reading appears to require modification of the end state of the verb *open*. However, the assumption that such modification is possible has unwanted consequences once it is combined with the widely-accepted view that the starting point of a

become event is the negation of its culmination. Just like causative *open* describes a transition from “not open” to “open”, *open for ten minutes* should describe a transition from “not open for ten minutes” to “open for ten minutes”. But this reading is not available. What this modified verb describes is a transition from “not open” to “open for ten minutes”. This is made clear by the infelicity of the examples in (9) in the contexts given.

- (9) a. [Context: When we enter the room, we are informed that the window has been open for two minutes. Bill wants to close it, but John persuades him to leave it open. When a further eight minutes have passed, I say:]
 #Look, John opened the window for ten minutes.
- b. [Context: When we enter the room, we are informed that the window has been open for two minutes. When a further eight minutes have passed, I say:]
 #It took only eight minutes for the window to open for ten minutes.

This unwanted outcome is avoided if we maintain, as before, that the end state of a simplex causative verb is lexically encoded and therefore cannot be modified. Of course, this requires that we develop an alternative approach to temporal modification that can somehow operate on the lexically encoded end state in the absence of decomposition.

As a point of departure, consider the temporal interpretation of an unmodified verb of change. By definition, verbs of change (which include causative verbs and unaccusatives) describe a transition from $\neg p$ to p . Given that $\neg p$ and p are typically states, there is a great inherent flexibility in the temporal construal of verbs of change, as both $\neg p$ and p may persist over an interval of time. We propose that the interval covered by verbs of change is minimized by default, but can be stretched under specific circumstances. For example, if a puppy is born with a genetic defect that causes it to die after three months, it is fine to summarize what happened as *the puppy died in three months*. However, if a puppy is born healthy but contracts a disease after two months and dies a month later, it would be inappropriate to describe what happened in this way. Rather, one would have to say that the puppy died in a month (or after three months). Thus, the portion of $\neg p$ (being alive) that can be covered by a verb of change like *die* is minimized to what is contextually relevant. (Much more can be said about this; see Neeleman and Van de Koot 2012.)

The example just given homes in on the portion of $\neg p$ included in the event. We would expect that the same flexibility, constrained by minimization, characterizes the portion of p that can be included. In particular, we propose that temporal modifiers can stretch the portion of the resultant state covered by the verb of change by measuring backwards from the end of the event to the point preceding it in which p first holds. This will have the effect that the verb of change covers the portion of p measured by the modifier and no more. The proposal does not imply that the resultant state must terminate at the end of the event. Indeed, neither (8a) nor (8b) entail that the window closes after ten minutes.

A key fact about reading (i) of (8a) is that the duration for which the window is open is understood as being under the control of the causer arguments, as expected if the interval measured is construed as part of the interval covered by the causative verb. Thus, one would judge that John was being economical with the truth with the utterance in (10).

- (10) [Context: John is part of a group of burglars who are targeting the local jeweller. The plan is that John will open the metal shutter and keep it open for ten minutes, while his mates loot the shop. On the day, John cuts the lock that secures the shutter and lifts it while the gang goes about their business. After nine minutes John can't hold the shutter anymore and his mate Bill takes over, keeping the shutter open for another crucial minute. On the way back, John boasts:]
#I opened the shutter for ten minutes, didn't I?

By contrast, on reading (ii) of (8a), the intentional reading, the interval measured by the for-phrase cannot be construed as part of the causation event: if some action is carried out with a particular intention, there is no guarantee that what is intended actually comes about. This implies that on the intentionality reading the modifier does not measure backwards into the causation event, but forwards from the culmination of that event. The fact that these modifiers measure in different directions can be illustrated in various ways. Consider first the contrast in (11), based on readings (i) and (ii) of (8a).

- (11) a. reading (i):
John opened the window for ten minutes and then left for work.
⇒ John left for work ten minutes after opening the window.
b. reading (ii):
John opened the window for ten minutes and then left for work.
⇒ John left for work after opening the window.

On reading (i), where the window is in fact open for ten minutes, the ten minutes is included in the duration of the causation event, so that the implication of the example is that John left for work ten minutes after he opened the window. On the intentionality reading, however, this implication does not hold: John may well have left immediately after he opened the window (perhaps he asked someone else to close it after ten minutes).

The different ways in which measurement takes place on the two readings can also be made visible through interaction with a second modifier that measures the length of the causation event. If the length of the causation event is shorter than the duration measured by the for-modifier, only the intentionality reading survives:

- (12) In just a few seconds John opened the window for ten minutes.
*reading (i); ✓reading (ii)

Finally, there are consequences for the 'reach' of the causer argument. On the intentionality reading, this argument bears responsibility for its intentions, which can be anchored in the culmination of the causation event. But since the interval linked with the causer argument's intentions falls outside the causation event, it is not interpreted as being under its control. Thus, there is a clear difference between (13) and the earlier example in (10): only in the former is John considered to have misrepresented the situation.

- (13) [Context: John is part of a group of burglars who are targeting the local jeweller. The plan is that John will open the metal shutter and keep it open for ten minutes, while his mates loot the shop. On the day, John cuts the lock that secures the shutter, lifts it, and props it up with a piece of wood. The gang enter and go about their business. After five minutes the piece of wood collapses under the weight of the shutter and the gang only manage to escape after John lifts the shutter for a second time. On the way back, John says ruefully:]
As planned, I opened the shutter for ten minutes, but I misjudged the strength of the piece of wood I used to prop it up.

To summarize this section, although at first blush temporal modification seems to have access to the resultant state of a verb of change, on closer inspection this cannot be the case, as it makes incorrect predictions regarding the meaning of temporally modified verbs of change. *Open for ten minutes* does not describe a transition from “not open for ten minutes” to “open for ten minutes”, but rather a transition from “not open” to “open for ten minutes”. We have proposed an alternative account that does not suffer this defect and that is furthermore able to express the difference between the duration of a resultant and the intended duration of a resultant state.

3. The scope of presuppositional modifiers

3.1. A two-way ambiguity with *again*

Having argued that sub-lexical modification is not attested with manner adverbials and the like, we now turn to the most famous case of apparent modification of this type, namely with the adverb *again*. This adverb is semantically compatible with states and events, as shown by the examples in (14).

- (14) a. John is asleep again.
b. John works again.

Again triggers a presupposition, based on its scope, that there was a previous eventuality of the same type. Given the standard claim that anything in the scope of *again* must be mapped to the presupposition, the theories in (1) make different predictions about the presuppositions that result from attaching *again* to a structure headed by a causative verb. The theory based on lexical semantic decomposition in (1a) predicts that all the information in the verb must reoccur in the presupposition. By contrast, the theory based on syntactic decomposition in (1b) predicts a three-way ambiguity, corresponding to modification of the entire causation event, the caused event, or the resultant state. Both theories face empirical hurdles, since the observation in the literature is that *again* creates a two-way ambiguity in the relevant structure, but not a three-way ambiguity. It can modify the matrix event or the result, but Von Stechow (1996) and Pylkkänen (2008), among others, claim that the intermediate reading, in which the modifier scopes exactly over the caused event (to the exclusion of the causing event), does not seem to exist.

- (15) John opened the window again.
- i. *Agent's action is repeated* (repeated action reading)
again (CAUSE (John, BECOME (OPEN (the window))))
 - ii. **Caused event is repeated* (intermediate reading)
CAUSE (John, (again (BECOME (OPEN (the window))))))
 - iii. *Resultant state is restored* (restitutive reading)
CAUSE (John, BECOME (again (OPEN (the window))))

We take reading (15i) to be easily accessible and we will not illustrate it further. However, the reading in (15iii) may require some contextualization. For example, if we enter a room with an open window, and Bill closes that window, then we may describe John's action of reopening it as in (15). In this context, the only reading that makes sense is one of restitution. The readings in (15i) and (15ii) are not felicitous in this context, as John did not open the window previously and neither did the window open previously.

The claim that the intermediate reading does not exist is not universally accepted (see for example Bale 2007 and Lechner et al. 2015).³ However, its unavailability is manifest in the following scenario, suggested to us by an anonymous reviewer. Consider a situation in which a window has been nailed shut by Bill because it kept opening all by itself. Now imagine that John removes the nails, thereby allowing the window to spontaneously open again. While this action on John's part can be described by saying that John caused or allowed the window to open again, it cannot be described by uttering (15). (Some further examples illustrating the absence of the intermediate reading appear in (34) and (35) below.)

The two-way ambiguity just illustrated is also found with the unaccusative counterpart of causative verbs. Thus, *the window opened again* permits a reading in which the window opened before, as well as one in which it was open before. This is unremarkable in itself, but serves to make the point that the absence of the intermediate reading in (15ii) cannot be due to a ban on *again* modifying a become event.

There are two further peculiarities associated with the restitutive reading in (15iii). On the one hand, scope of *again* over the resultant state should give rise to a simple repeated state reading, rather than the more specific restitutive reading. A repeated state reading should not require restitution; that is, the undoing of the previous instantiation of the resultant state before its current instantiation is brought about. Yet in contexts that are incompatible with restitution, *again* cannot take low scope:

- (16) [Context: When we entered the kitchen this morning we found a broken glass on the floor.]
#This afternoon John broke a glass again.

What this seems to indicate is that a low construal of *again* requires the result to be contrastive.

On the other hand, while the repeated action reading does not trigger a marked stress pattern, the restitutive reading seems to require stress on the verb. Consider the following examples. The contexts in (17) and (18) have in common that they provide the example

³ To a large extent, this is a matter of what one considers to be the intermediate reading. The notion of intermediate reading relevant to our discussion is one in which *again* c-commands a causative verb and triggers a presupposition that includes the become event and its culmination but excludes the verb's causal layer (which contains the variable for the external argument). Lechner et al. (2015) consider cases where *again* scopes over anticausatives like *open* to be instances of the intermediate reading. These exist but do not involve sublexical scope and are therefore irrelevant to the issue discussed in this paper. Bale (2007) discusses what he calls "subjectless presuppositions" triggered by *again*. These exist, too, but we will argue that they do not exclude the semantics associated with the external argument but only the specific value of the argument variable.

sentences with both an earlier mention of the resultant state *open* and a contrasting state, namely *closed*. This implies that the information-structural status of the resultant state in the two examples must be the same, and can therefore not be responsible for the diverging stress patterns. Where the examples differ, though, is in their compatibility with a repeated action reading of *again*. In (17), which permits this reading, stress can fall on the adverbial, whereas in (18), which requires a restitutive reading, stress must fall on the verb.

- (17) [Context: When we came into the room this morning, John opened the window. When we came in after lunch the window was closed.]
- a. So, John opened it *AGAIN*.
 - b. So, John *OPENED* it again.
- (18) [Context: When we came into the room this morning, the window was open. When we came in after lunch the window was closed.]
- a. #So, John opened it *AGAIN*.
 - b. So, John *OPENED* it again.

The co-occurrence of these peculiarities suggests that contrastive focus on the result is necessary to license a low construal of *again*. After all, contrastive focus requires main stress and is associated at LF with a semantic representation that combines a proposition with the negation of an alternative proposition that differs exactly in the value of the focused constituent. This sort of representation is exactly right for situations of restitution.⁴

There is an alternative view of the effects of focus in sentences that contain *again*. Klein (2001) and Beck (2006) assume that stress on *again* triggers a repetitive reading. The intuition behind the proposal intended to explain this generalization is that stress on *again* in an example like *John opened the door AGAIN* implies destressing of the rest of the sentence, which in turn generates an anaphoric commitment that requires an occurrence of an identical event. In other words, John must have opened the door before and this information must be salient enough to trigger stress shift.

If we restrict the discussion to situations in which stress is placed either on the verb or on *again*, the generalization that the restitutive reading requires stress on the verb and the generalization that stress on *again* triggers the repetitive reading are empirically indistinguishable. What would distinguish them are situations in which neutral stress falls on the object. This stress pattern is available if the information that satisfies the presupposition triggered by *again* is satisfied by information present in the common ground but not in the linguistic context. We illustrate this in (19), where shared knowledge licenses the use of *again* on a repetitive reading, and the use of neutral stress on the object is available because the linguistic context does not provide an antecedent for stress shift to *again*.

⁴ For presentational reasons, we will assume throughout that it is contrastive focus placed on the result that licenses the restitutive reading. It is likely, however, that what is required is contrastive focus placed on the verb. (For example, a restitutive reading of *weer nationaliseren* ‘nationalize again’ in Dutch requires stress on the stress-attracting suffix *-iseer* rather than the adjective *national*.) Contrastive focus on the verb and contrastive focus on the result yield the same semantics, as long as the presupposition triggered by a contrastive reading of the verb is chosen so that the antecedent verb is causative and has a result opposite to the verb bearing contrastive focus. Of course, nothing goes wrong if the presupposition is not chosen in this way, but the resulting interpretation will not be one of restitution.

- (19) [Shared knowledge: For many years, John has opened the window whenever he came into the office. And for many years Mary has objected to this unsuccessfully. Recently a conflict mediator intervened and it was agreed that John would not open the window any longer.]
 [Situation: Bill comes into the office and finds Mary in tears.]
 [Linguistic context: Bill asks Lucy “What happened?”]
 Lucy: John opened the WINDOW again.

The scenario should be compared with one in which the shared knowledge only licenses the use of *again* on a restitutive reading. The Klein/Beck generalization predicts that this should not affect the stress pattern in Lucy’s answer, whereas the generalization proposed here implies that stress must shift to the verb. As shown in (20), the latter prediction is correct.

- (20) [Shared knowledge: The window has been fixed open for many years. And for many years Mary has objected to this unsuccessfully, because John wanted the window permanently open and always got his way. As a result of a recent intervention by a conflict mediator, the window has finally been closed.]
 [Situation: Bill comes into the office and finds Mary in tears.]
 [Linguistic context: Bill asks Lucy “What happened?”]
 a. #Lucy: John opened the WINDOW again.
 b. Lucy: John OPENED the window again.

It would seem then that the correct generalization is that the restitutive reading requires stress on the verb, in line with our claim that this reading is dependent on contrastive focus on the resultant state. If so, any theory of *again* will have to answer the following three questions: (i) Why is there no intermediate reading?; (ii) What permits the low reading?; and (iii) Why does the low reading require contrastive focus on the resultant state?

A theory in which a causative verb corresponds to a complex syntactic structure rather than a single head provides a straightforward answer to question (ii). After all, if there is a complex structure, then part of that structure should be open to modification. However, decompositional theories fare less well with questions (i) and (iii). If syntactic structure is generally open to modification, decomposition should permit the intermediate reading, but as we have seen this reading is not available. Furthermore, the notion of decomposition in itself provides no insight into the relation between contrastive focus and the restitutive reading. In the following section we develop a non-decompositional account that provides an answer to all three questions.

3.2. Accounting for the ambiguity

Our analysis of *again* cannot rely on sub-lexical scope because we assume that lexical causatives are simplex verbs. The central idea is that the appearance of sub-lexical scope in restitutive readings is due to a process of presupposition impoverishment that takes place after an initial presupposition is constructed on the basis of scope relations in the syntactic representation. For ease of exposition, we develop our proposal in two steps, beginning with an illustration of the effects of scope on presupposition formation in repetitive readings. Once this is in place, we consider the effect of narrow contrastive focus on the verb for the process of presupposition construction, arguing that it can license impoverishment of the presupposition initially triggered by *again*.

Let us first formulate the two rules that govern the construction of the presupposition triggered by *again*.^{5,6}

(21) *Rule 1*

Map all material c-commanded by *again* to the presupposition under type identity.

Rule 2

Map all internal arguments (of the eventuality) not c-commanded by *again* to the presupposition under token identity.

To get a flavour of the effects of these rules, consider the interpretation of *on Sunday* in the Dutch examples in (22). Rule 1 correctly predicts that this constituent must be mapped to the presupposition under type identity in (22b). In other words, (22b) presupposes that there was an earlier Sunday on which John opened a window. Given that rule 2 specifically mentions internal arguments, it follows that adverbials outside the scope of *again* will not be mapped to the presupposition at all. Thus, (22a) triggers the presupposition that John has opened a window before without specifying the day of the week on which this happened.

- (22) a. Jan heeft op zondag weer een raam geopend.
John has on Sunday again a window opened
'John has opened a window again on Sunday.'
- b. Jan heeft weer op zondag een raam geopend.
John has again on Sunday a window opened
'John has opened a window on Sunday again.'

Given the scopal positions of *again* with respect to external and internal arguments, there are three relevant structures when considering the interpretation of arguments under repetitive readings: (i) *again* may c-command only the verb, (ii) it may additionally c-command the internal argument, or (iii) it may additionally c-command both the external and internal arguments.

We first consider the behavior of indefinite internal arguments in the context of repetitive *again*. We initially use Dutch examples, as in this language c-command relations can be easily read off from the surface. Example (23a), where the indefinite *twee medewerkers* 'two employees' appears in the scope of *weer* 'again', is associated with the weak presupposition that previously two (different) employees were laid off. That is, the object is mapped to a type-identical object in the presupposition, as required by rule 1. By contrast, the example in (23b) triggers the stronger presupposition that previously the exact same two employees had been laid off. Thus, in this case, the object is mapped to a token-identical counterpart in the presupposition, as rule 2 dictates.⁷ This explains the inappropriateness of the example in the context given.⁸

⁵ See Fabricius-Hansen 2001 and Pedersen 2015 for alternative proposals that also do not rely on syntactic decomposition, but that assume that *again* is lexically ambiguous. The account developed here is non-decompositional but does not rely on an ambiguity of *again* in explaining the existence of repetitive and restitutive readings. For reasons of space we cannot offer a comparison.

⁶ The notions of type identity and token identity are descriptive conveniences. It is likely that these interpretations correspond to an alternation in scope in the presupposition triggered by *again*, where an existential may or may not be interpreted in the scope of the temporal operator (informally represented as *before* throughout).

⁷ It would be attractive if token identity reduced to specificity, which is in line with known interpretive effects of scrambling, but as we argue in section 3.3, this reductionist step is in fact unwarranted.

⁸ These examples and the ones below do not involve contexts in which windows are opened but ones in which employees are laid off. This is because the effects tested for rely on the identity of the object and this is often of little concern in contexts of the first type.

- (23) [Context: Things are going downhill with John’s company. On Monday, he had to lay off two employees. Unfortunately, that turned out not to be enough. And ...]
- a. op dinsdag heeft Jan weer twee medewerkers ontslagen.
on Tuesday has John again two employees fired
 ‘On Tuesday John fired two employees again.’
 - b. #op dinsdag heeft Jan twee medewerkers weer ontslagen.
on Tuesday has John two employees again fired
 ‘On Tuesday John fired the same two employees again.’

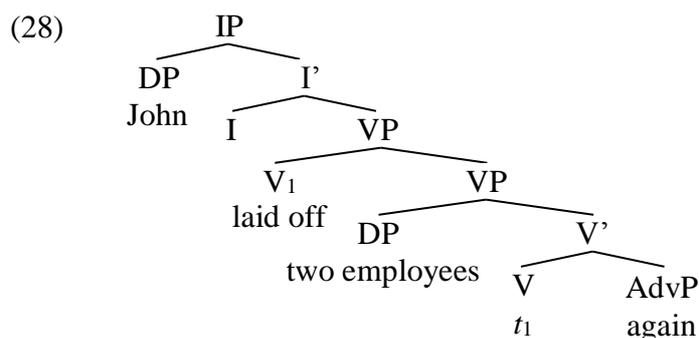
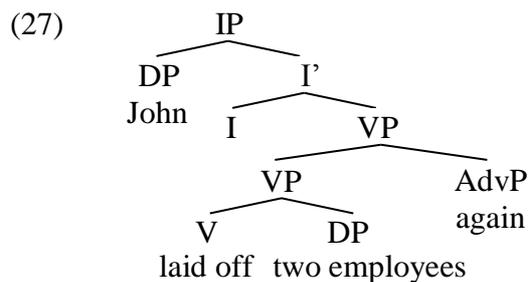
The context in (24) requires that the indefinite object in the examples are mapped under token identity (since the same two employees are laid off twice). This is possible in (24b) but not (24a), because objects in the scope of *again* are mapped under type identity rather than token identity.

- (24) [Context: Things are going downhill with John’s company. On Monday, he had to lay off ten employees. Unfortunately, he forgot to record who exactly he had fired. The next day, it became clear that another ten lay-offs were needed. Embarrassingly, John called up some people he had already fired. In other words, ...]
- a. #Op dinsdag heeft Jan weer twee medewerkers ontslagen.
on Tuesday has John again two employees fired
 ‘On Tuesday John fired two employees again.’
 - b. Op dinsdag heeft Jan twee medewerkers weer ontslagen.
on Tuesday has John two employees again fired
 ‘On Tuesday John fired the same two employees again.’

We believe that the effects of our rules are also present with English repetitive *again*. The main argument supporting this view has to do with the observation that preverbal and postverbal *again* differ in the readings they permit: postverbal *again* allows the object to be mapped to the presupposition under either type or token identity, but preverbal *again* excludes the latter. This explains the pattern of judgments in (25) and (26).

- (25) [Context: Things are going downhill with John’s company. On Monday, he had to lay off two employees. Unfortunately, that turned out not to be enough. And ...]
- a. on Tuesday John again laid off two employees.
 - b. on Tuesday John laid off two employees again.
- (26) [Context: Things are going downhill with John’s company. On Monday, he had to lay off ten employees. Unfortunately, he forgot to record who exactly he had fired. The next day, it became clear that another ten lay-offs were needed. Embarrassingly, John called up some people he had already fired. In other words, ...]
- a. #On Tuesday John again laid off two employees.
 - b. On Tuesday John laid off two employees again.

The contrast between postverbal and preverbal *again* can be understood as follows. In the postverbal domain English allows both ascending and descending structures (see Janke and Neeleman 2012, and references cited there). We may therefore assume that the scope of *again* may either include the object (in the regular left-branching VP in (27)) or exclude it (in the shell structure in (28)). This implies that, on the rules in (21), the object will be mapped to the presupposition triggered by *again* under type identity in (27) and under token identity in (28).



Preverbal adverbials uncontroversially c-command the object. Therefore, the examples in (25a) and (26a) only permit a reading in which the object is mapped under type identity. This fits the context in (25) but not that in (26).

Similar data and scenarios can be constructed to tease apart the type-identical and token-identical mapping of definite objects. For reasons of space, we restrict the discussion here to Dutch. Setting up appropriate scenarios is somewhat complicated, as one must control for interference of the uniqueness requirement associated with definites, and the fact that scrambled definites tend to be discourse-anaphoric. However, a nice minimal pair can be constructed using superlative modification: *the tallest boy* in the examples below could either be interpreted as a specific individual or as the tallest boy in whatever group John is meeting. The word order in (29a) requires the first reading, as ‘the tallest boy’ must be mapped to the presupposition under token identity. The word order in (29b) triggers the second reading, because it requires that ‘the tallest boy’ be mapped to the presupposition under type identity. Thus, John may have met one group in the morning and another group in the afternoon, and congratulated the tallest boy in each of these groups.

- (29) [Context: This morning John congratulated the tallest boy.]
- a. En vanmiddag heeft Jan de langste jongen weer gefeliciteerd.
and this-afternoon has John the tallest boy again congratulated
 - b. En vanmiddag heeft Jan weer de langste jongen gefeliciteerd.
and this-afternoon has John again the tallest boy congratulated

We now turn to interactions between *again* and the external argument. The rules in (21) state that internal and external arguments behave alike when they appear in the scope of *again* but differently when outside the scope of this modifier. That external arguments in the scope of *again* indeed map to the presupposition under type identity can be seen from examples like those in (30). Example (30a) triggers the strong presupposition that there was a previous act of opening the window performed by a boy. This is because rule 1 requires that material in the scope of *again* be mapped to the presupposition under type identity. By contrast, example (30b) merely presupposes that there was a previous act of the window being opened. This is because

rule 2 is restricted to internal arguments, so that the indefinite subject of (30b) is not mapped to the presupposition under either type or token identity.

- (30) a. I believe that AGAIN a boy opened the window.
 b. I believe that a boy AGAIN opened the window.

The same pattern is exhibited by the corresponding Dutch facts in (31), where only (31a) requires the previous opening of the window to have been carried out by a boy.

- (31) a. Ik geloof dat er WEER een jongen het raam opende.
I believe that there again a boy the window opened
 ‘I believe that again a boy opened the window.’
 b. Ik geloof dat er een jongen WEER het raam opende.
I believe that there a boy again the window opened
 ‘I believe that a boy again opened the window’

These effects are also found with definite external arguments. At first sight, the data in (32) seem to pattern with what we observed for definite internal arguments in (29). ‘The tallest boy’, when c-commanded by *again*, is mapped to the presupposition under type identity, so that the two acts of glass breaking are performed by different boys (see (32b)). By contrast, the order in (32a) favours an interpretation in which the subject is mapped to the presupposition under token identity, so that the same boy is the agent of the two acts of glass breaking.

- (32) [Context: This morning the tallest boy broke a glass.]
 a. En vanmiddag heeft de langste jongen weer een glas gebroken.
and this-afternoon has the tallest boy again a glass broken
 b. En vanmiddag heeft weer de langste jongen een glas gebroken.
and this-afternoon has again the tallest boy a glass broken

This is only apparent, however, as demonstrated by the example in (33): if the subject c-commands *again* there is no requirement that the first glass was broken by a boy. Thus, the Dutch data with definite external arguments match the pattern established for indefinites.

- (33) [Context: This morning the tallest girl broke a glass.]
 a. En vanmiddag heeft de langste jongen weer een glas gebroken.
and this-afternoon has the tallest boy again a glass broken
 b. *En vanmiddag heeft weer de langste jongen een glas gebroken.
and this-afternoon has again the tallest boy a glass broken

At this point, one might wonder whether a subject not c-commanded by *again* must be mapped to the presupposition at all. This is an important point: if the subject were not represented in the presupposition at all, this could be taken to be evidence for a reading where *again* selectively takes scope over the become event but not over the causation event (see also footnote 3).⁹ However, as was already demonstrated in the discussion surrounding (15ii), intermediate readings are systematically unavailable. We support our conclusions in this regard with one further example that runs parallel to the ones given earlier in this section, but that

⁹ A related observation is made by Bale (2007) under the heading of “subjectless presuppositions”. The discussion below shows, however, that the presuppositions in question are not really subjectless, but merely involve underspecification of the subject: the subject variable is mapped to the presupposition, but the actual subject is not.

lacks a representation of the causer argument in the context. This leads to considerable deterioration, indicating that when the event is mapped to the presupposition, it is mapped with its full argument structure. Hence, the causer argument must be present in the presupposition at the very least as an existentially bound variable.

(34) This morning, a glass broke (all by itself).

#Later Bill AGAIN broke one.

We illustrate the same effect with the Dutch example in (35).

(35) Vanmorgen brak er (helemaal vanzelf) een glas
this.morning broke there (all by itself) a glass

#Later brak Jan er WEER één.

later broke John there again one

‘This morning a glass broke (all by itself). Later John again broke one.’

We now turn to restitutive readings. Our task is twofold. On the one hand, we must explain why the low reading is permitted at all. After all, on the theory in (1a), which rejects syntactic decomposition, it is predicted that *again* cannot take scope exclusively over the resultant state. On the other hand, we must explain why the low reading invariably requires contrastive focus on the result (see the discussion in section 3.1). The thrust of our proposal is as follows. Contrastive focus on the result generates a presupposition which, under certain circumstances, is in conflict with the presupposition licensed by *again*. When this is the case, a repair is needed that simplifies one of the two presuppositions, and it can be demonstrated that the only simplification that makes sense is one by which the presupposition triggered by *again* is reduced to a stative proposition.

Let us spell out the details of this proposal by going through a sample derivation. Consider the sentence in (36). As already explained, *again* triggers the presupposition in (i). Contrastive focus on the result does two things. First, focus generates a focus value, which consist of propositions that differ from the ordinary value of the sentence in exactly the focused element. Wagner (2005, 2012) has argued that the alternatives for the focused element must be mutually exclusive. In the case at hand, we are therefore dealing with the set of alternative results {open, closed}. Second, contrast negates a proposition in the focus value of the sentence and it may do so only, Wagner suggest, if this proposition is contextually salient. There are different ways in which salience can be achieved. The one we are interested in here is salience through previous occurrence of a similar event. In the case at hand, this results in the presupposition in (ii).

(36) This morning, John OPENED the window again.

Presuppositions:

(i) Again: Someone opened the window before.

(ii) Contrast: Someone closed the window (before).

The presuppositions in (i) and (ii) are not contradictory if they pertain to different antecedent events. However, if (36) is construed with respect to a single antecedent event, a contradiction does ensue, as an event of opening a window cannot simultaneously be an event of closing that window. What determines whether the presuppositions are construed with respect to different antecedent events or just a single one? We assume that this decision is part of the procedure in which the presuppositional content of a sentence is determined, rather than something that is merely a matter of contextual felicity. Assuming that any contradiction between

presuppositions is indeed detectable at the level of grammar, we may conjecture that repairs are possible before any presupposition failure is detected. There are two possible repairs: simplification of presupposition (i) or simplification of presupposition (ii). The first repair consists of a reduction of presupposition (i) to the stative proposition (i') below. These propositions are non-contradictory when associated with a single event, given that closing a window implies that at the start of the event that window was open.

- (37) This morning, John OPENED the window again.
 Presuppositions:
 (i') Again: The window was open before.
 (ii) Contrast: Someone closed the window (before).

The second potential repair would simplify the presupposition triggered by contrast. This would yield (38ii') alongside (38i). The problem with this repair is that the simplified presupposition associated with contrast is trivially true if John indeed opened the window. In other words, the mere use of the verb *open* already triggers the presupposition in (38iii).

- (38) This morning, John OPENED the window again.
 Presuppositions:
 (i) Again: Someone opened the window before.
 (ii') Contrast: The window was closed (before).
 (iii) Open_v: The window was closed (before).

If we assume that contrast may not be used unless it has an interpretive effect, then the repair in (38) is blocked. Notice that this problem does not arise in (37), since the presupposition in (37ii) is stronger than that in (38iii).

At this point it is useful to compare our proposal with the one developed by Klein (2001) and Beck (2006). Unlike us, these authors assume syntactic decomposition of causative verbs, so that the high and low construals are the result of a syntactic ambiguity. But like us, they assume that focus is instrumental in determining whether *again* receives a high or low construal. In short, they argue that focus on *again* triggers the repetitive reading because it leads to anaphoric destressing of the remaining material in VP, which in turn requires an identical antecedent event. We have already show in section 3.1 that the correct generalization is not that stress on *again* triggers a repetitive reading, but rather than the restitutive reading requires stress on the verb. Apart from that, a problem with the theory developed by Klein and Beck is that it only acknowledges two potential readings of *again* and fails to take account of the fact that a third potential reading (which we have called the repeated state reading above) does not exist under any intonation (see the discussion surrounding (16)). Our proposal excludes this reading because contrastive focus on the result is necessary for a low construal of *again* and contrast is incompatible with the simple repetition of the resultant state. However, we do not see how the repeated state reading could be ruled out in the Klein/Beck approach.

We provide further motivation for our proposal by developing an argument first laid out by Jäger and Blutner (2000), who observe that restitutive readings are sometimes possible even if *again* c-commands the subject position. If this is true, and provided our theory can capture the relevant facts, an account of the scope ambiguity with *again* in terms of decomposition of causatives must be rejected, as on such an account a high attachment of *again* can never yield a low construal.

We begin, slightly off-center, by considering the effects of the rules in (21) for *again* on its restitutive reading. What we expect is that internal arguments c-commanded by *again* are mapped to the presupposition under type identity, while internal arguments outside *again*'s

c-command domain are mapped to the presupposition under token identity. For external arguments, the prediction is that *again* cannot c-command them, as this would require that they be mapped to the presupposition, which would in turn stand in the way of the presupposition simplification required for a restitutive reading. These predictions are correct, as confirmed by the Dutch examples in (39), where c-command relations can be read off directly from linear order.

- (39) a. Gisteren heeft weer iemand twee ramen GEOPEND.
yesterday has again someone two windows OPENED
 *Restitutive reading
- b. Gisteren heeft iemand weer twee ramen GEOPEND.
yesterday has someone again two windows OPENED
 ✓Restitution (of type-identical windows in open state)
- c. Gisteren heeft iemand twee ramen weer GEOPEND.
yesterday has someone two windows again OPENED
 ✓Restitution (of token-identical windows in open state)
 ‘Yesterday someone opened two windows again.’

A further prediction of the rules in (21) is that it should not be possible to include an adjunct in the c-command domain of *again* on a restitutive reading. The reason for this is that any material in the c-command domain of *again* must be mapped to the presupposition. However, adjuncts do not permit sub-lexical scope (see section 2.3), but must instead be construed as modifying the event denoted by the verb. On a restitutive reading, however, this event is removed from the presupposition leaving the adjunct without an interpretation. This prediction, too, is correct, as illustrated here for temporal modifier (for related discussion, see Bale 2007):

- (40) a. Toen heeft iemand weer op zondag twee ramen GEOPEND.
then has someone again on Sunday two windows opened
 *Restitutive reading
- b. Toen heeft iemand op zondag weer twee ramen GEOPEND.
then has someone on Sunday again two windows opened
 ✓Restitution (of type-identical windows in open state)
 ‘Then someone opened two windows again on Sunday.’

As we explained a little earlier, the external argument of a causative verb is typically not part of its resultant state and therefore it will typically be irrelevant to any restitutive reading. As pointed out by Jäger and Blutner (2000), there is an exception to this general rule, namely structures in which the external argument binds a reflexive internal argument. In such cases, the external argument *is* part of the result and must therefore appear in some form or other in the relevant presupposition. Jäger and Blutner present the examples in (41), which involve the inherently reflexive variant of the verb *settle*. Both examples permit a restitutive reading of *again*. That is, they are felicitous even though no Delaware settled in New Jersey before, and no Delaware lived there twice.

- (41) [Context: The Delaware tribe was created in the area of New Jersey at the beginning of time. They never left the area until 200 years ago when they were forced into a reservation in Oklahoma. Recently, a member of the tribe moved to the home of his ancestors. Thus, ...]
- a. a Delaware has settled in New Jersey again.
- b. again a Delaware has settled in New Jersey.

Notice that in these examples the indefinite subject is mapped to the presupposition under type-identity, the typical effects of rule 1 of (21). Thus, this rule must be extended to external arguments of inherent reflexives. The same phenomenon can be observed in the Dutch variant of (41) below, which has an overt reflexive:

- (42) ... dat er zich weer een Delaware in New Jersey gevestigd heeft.
that there self again a Delaware in New Jersey settled has

If in examples of this type *een Delaware* ‘a Delaware’ finds itself outside the scope of *weer* ‘again’, it cannot be excluded from the presupposition and must be mapped under token identity, just like an internal argument. Thus, (43) implies that the very same Delaware lived in New Jersey before.

- (43) ... dat er zich een Delaware weer in New Jersey gevestigd heeft.
that there self a Delaware again in New Jersey settled has

On a decompositional view, this constellation of data is not amenable to analysis. The observations in (39) and (40) demonstrate that high attachment of *again* is incompatible with a low construal. But the observations regarding (41) and (42) entail that a low construal of *again* must be allowed even when this adverbial is attached high. This paradoxical situation does not arise on the proposal advanced here, as a restitutive reading is compatible with a high attachment of *again*, provided the material in the c-command domain of this adverbial can find an interpretation in the stative presupposition it triggers.¹⁰

3.3. The scope of *re-*

In this section we explore the presuppositions triggered by the English prefix *re-*. These pattern in major respects with those we identified for *again*. *Re-* has both a repetitive and a restitutive reading, and at least in some verbs these display the same pattern of stress shift we observed with *again*. We give two sets of examples to illustrate how the repetitive and restitutive readings correlate with stress on the verbal base and the prefix, respectively:

- (44) [Context: In this country the railways started as a collection of privately-owned enterprises. In the 1960s, prime minister Johansson nationalised them. Then, in the 1980s, prime minister Peterson privatised them. But fortunately ...]
 a. his successor decided to RENationalise them.
 b. #his successor decided to reNATIONALISE them.
- (45) [Context: In this country the railways started as a publicly-owned enterprise. In the 1980s prime minister Peterson privatised them, but fortunately ...]
 a. #his successor decided to RENationalise them.
 b. his successor decided to reNATIONALISE them.

¹⁰ Jäger and Blutner (2000) also propose a non-decompositional account of the ambiguity observed with *again*. *Again* can associate with the event variable of the verb, but they propose that in addition it can associate with the event variable of the resultant state (made available through the application of a result function). We have two main concerns about this analysis. First, we are unsure that it rules out sub-lexical modification by non-presuppositional modifiers. Second, we do not see how it explains why *again* – on a low construal – cannot give rise to a (non-restitutive) repeated state reading. For related discussion see Bale 2007.

- (46) [Context: The circus captured a strong and vicious bear, which they used for their show. After a few years it escaped, but I heard that ...]
- a. they managed to REcapture it last week.
 - b. #they managed to reCAPTURE it last week.
- (47) [Context: A bear was born in captivity. When it had grown into a strong and vicious specimen, it escaped, but I heard that ...]
- a. #they managed to REcapture it last week.
 - b. they managed to reCAPTURE it last week.

In view of these data, an extension of the analysis for *again* to *re-* seems straightforward. However, *re-* allows us to develop three further arguments for aspects of our analysis.

To begin with, the distribution of *re-* militates against a decompositional analysis of lexical causatives. As pointed out by Wunderlich (2001) and Williams (2007), *re-* attaches to the verb and not to some higher node in the verbal extended projection. The main argument for this is that, as already noted by Keyser and Roeper (1992), *re-* cannot take scope over syntactically encoded results, although it can take scope over morphologically or lexically encoded results. This is shown by the contrast in (48). In (48a) *re-* fails to take scope over *red*, whereas *again* must do so in (48b), given the presuppositions triggered by these examples.

- (48) a. John repainted the door red.
Presupposition:
 someone painted the door before
- b. John painted the door red again.
Presupposition:
 either: someone painted the door red before
 or: the door was red before

By contrast, *re-* must take scope over lexically or morphologically encoded results, and like *again* it permits a repetitive and a restitutive reading:

- (49) a. John reopened the door.
Presupposition:
 either: someone opened the door before
 or: the door was open before
- b. The government renationalized the railways.
Presupposition:
 either: someone nationalized the railways before
 or: the railways were national property before

Wunderlich and Williams both conclude that an account of these facts must refer to the notion of ‘word’: the prefix *re-* can only attach to a category if that category is a word. This is incompatible with a decompositional analysis of causative verbs, as on such an analysis there is no fundamental distinction between morphologically complex units (words) and syntactically complex units.

The second conclusion we can draw from verbs prefixed with *re-* is that they provide further evidence for the rule in (21). This rule states that objects not in the c-command domain of *again* must be mapped to the presupposition under token identity. As we noted, it is tempting to understand this rule as an effect of scrambling (or a comparable rule in English). On this view, the interpretation of an object outside the c-command domain of *again* is merely an

instance of the general fact that scrambled objects tend to be discourse-given or specific. It turns out that this alternative view is incompatible with the interpretation of the object of verbs prefixed with *re-*. The crucial point is that *re-* is attached very low in the structure, so that the object must be generated outside its c-command domain. The rule in (21) therefore predicts that it will invariably be mapped to the presupposition under token identity. By contrast, an analysis of the type/token distinction in terms of scrambling predicts that the object of a verb prefixed by *re-* can either remain in its base position, and therefore be construed as new or non-specific, or scramble, and hence be interpreted as discourse anaphoric or specific. This implies that the mapping to the presupposition can take place under either type or token identity. The fact of the matter is that only mapping under token identity is permitted, as demonstrated by the contrast between (50) and (51).

- (50) [Context: We came into a room with ten closed windows. John opened a window. A little while later he still felt hot and so ...]
 a. he again opened a window.
 b. #he reopened a window.
- (51) [Context: When we came into the room, John opened all ten windows. A little while later Mary closed them, as she felt cold. John still felt hot, however, and so ...]
 a. he again opened a window.
 b. he reopened a window.

We may conclude, then, that the interpretation of objects of verbs prefixed with *re-* provides straightforward evidence for the rule in (21) (as opposed to a scrambling-based account).

The third way in which properties of verbs prefixed with *re-* support our proposal has to do with the selectional properties of this prefix, which attaches only to verbs:

- (52) a. The windows are open again.
 b. *The windows are reopen.

This implies that a verb like *renationalize* must have a structure in which *-ize* combines with *national* before *re-* combines with *nationalize*:

- (53) [v re- [v national_A -izev]]

Notice that *-ize* is the morpheme that introduces the become event that culminates in the result contributed by *national*. However, we have already seen that *renationalize* permits a restitutive reading (see (45)). Therefore, the conclusion seems inescapable that the presupposition triggered by *re-* need not contain all the semantic material contained in *nationalize* (its c-command domain). As this must be true, too, on the decompositional analysis, this analysis must permit simplification of the presupposition triggered by *re-* in much the same way as ours. It cannot be maintained, then, that the decompositional approach has a conceptual advantage in this domain.

4. Conclusion

The interpretation of manner, locational and temporal modifiers provides strong support for an analysis of causative verbs that does not permit sub-lexical modification. The only apparently

convincing case of sub-lexical modification is based on the ambiguity found with presuppositional modifiers like *again*.

The detailed treatment of *again* (and *re-*) developed here favours non-decompositional theories over competitors that assign the semantic components of lexical causatives to independent syntactic positions. Such competitors fall short in a number of ways. They cannot account for the systematic absence of the “intermediate” scope reading and they cannot account for the systematic absence of repeated state reading (as opposed to restitutive reading). Moreover, the assumptions required to reconcile the interpretation of *again* with a non-decompositional analysis of lexical causatives (the rule in (21) and the option of presupposition simplification) are independently motivated in the sense that they cannot be avoided under decompositional accounts if these are extended to include the prefix *re-*.

Thus, on balance the evidence suggests that there is no such thing as sub-lexical scope.

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