

# Causative VP-omission, agency, and Null Complement Anaphora in English

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*Abstract.* In English, the causation verbs *make* and *let* allow their following VP to be omitted; e.g. *I made/let Chris play the drums before I made/let Sam (play the drums)*. We show that such ‘causative VP-omission’ involves Null Complement Anaphora rather than Predicate Ellipsis, and requires an agentive causee. We analyse this restriction—which extends to Null Complement Anaphora with aspectual verbs—as resulting from an interaction between a non-stative null pro-form and Voice (cf. Folli and Harley 2005).

**Keywords:** causatives, Null Complement Anaphora, ellipsis, agency, voice, aspectual verbs, English

## 1 Introduction

In English, the causation verbs *make* and *let* can take [DP + uninflected VP] complements (Mittwoch 1990; Ritter and Rosen 1993, 1997). As parenthesised in (1), both allow the VP to omitted:<sup>1</sup>

- (1) a. First I made Chris eat dinner, then I made Sam (eat dinner).
- b. First I let Chris play outside, then I let Sam (play outside).

We make two main empirical contributions regarding such ‘causative VP-omission’ (CVPO). First, CVPO involves Null Complement Anaphora rather than Predicate Ellipsis (section 2). Second, the thematic role of the causee is more restricted with CVPO than when the VP is present, in that it must be an agent (section 3). Our analysis derives these facts from an interaction between the null pro-form employed in NCA and the Voice head which introduces the causee (section 4), taking inspiration from Folli and Harley (2005). Finally, we show that this interaction regulates NCA quite generally by stepping beyond CVPO to examine the behaviour of aspectual verbs (section 5). We conclude in section 6.

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<sup>1</sup>Example (1) et seq. counterexemplify previous claims that such VP-omission is unacceptable in English (Craenenbroeck 2017: ex. 59h, Lobeck 1995:48).

## 2 VP-omission is Null Complement Anaphora

This section argues that CVPO is an instance of Null Complement Anaphora (NCA) rather than Predicate Ellipsis (PE, a.k.a. VP ellipsis).

Example (2) contrasts typical examples of PE (a) and NCA (b). We notate the ellipsis site with a ~~strikethrough~~ and the NCA site with a ‘ $\emptyset$ ’, in keeping with the analysis that ellipsis involves silenced syntactic structure (e.g. Merchant 2001), while NCA involves a null pro-form (e.g. Depiante 2000):

- (2) I asked Mary to give her toys away, but ...
- a. she refused to ~~give them away~~.
  - b. she refused  $\emptyset$ .  $\emptyset$  = to give them away

Further to (1), some examples of CVPO with the ‘ $\emptyset$ ’ notation are given in (3):

- (3) a. I chopped the wood, because Sally made me  $\emptyset$ .  $\emptyset$  = chop the wood  
b. We’ll present in person if the travel rules let us  $\emptyset$ .  $\emptyset$  = present in person

We thus identify CVPO as ‘deep’ rather than ‘surface’ anaphora (Hankamer and Sag 1976). As evidence, CVPO patterns with NCA, and not with PE, on two key diagnostics: whether it permits A’-movement (section 2.1) and whether it shows categorial restrictions (section 2.2).

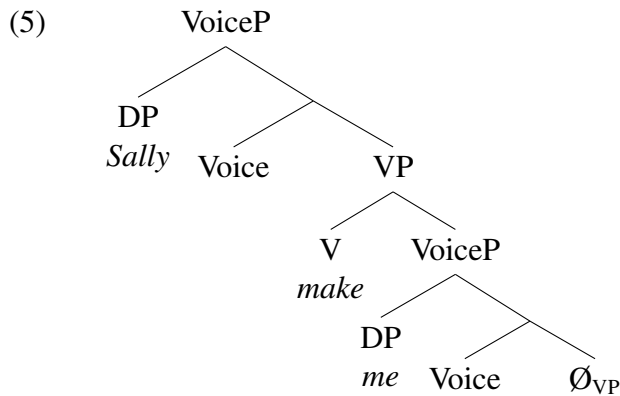
For concreteness, the tree in (5) shows the structure that we will defend for the maximal VoiceP constituent in (3a):<sup>2</sup>

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<sup>2</sup>A complete syntactic analysis of *makellet*-type causation verbs is likely to require raising-to-object. In (5), the causee is base-generated in Spec-VoiceP. This cannot be the case with the derived causees in (4), however, proving the need for a position between *makellet* and the lower verb to which DPs can A-move (Ritter and Rosen 1993):

- (4) a. We could make [the train arrive *t* late]. (unaccusative)  
b. We could make [our handout read *t* more smoothly]. (dispositional middle)  
c. We could make [there appear *t* to remain just one thing on the to-do list]. (raising verb)  
d. We could make [the monument be seen *t* more easily]. (passive)

Following Sheehan and Cyrino (2022: sect. 3.3) we suggest that the derived position is the raising-to-object position, Spec-VP. In section 3 we explain why the configurations in (4) are incompatible with CVPO.



The rest of the section provides more direct evidence that CVPO and NCA involve a null pro-form (section 2.3) and that the licensing of  $\emptyset$  is a lexical matter (section 2.4).

## 2.1 A'-movement

A'-movement is possible out of PE (Fiengo and May 1994, Haik 1987, Johnson 2001, Merchant 2013) but not NCA (Depiante 2000, 2018). As illustrated in (6), the internal structure of PE (a) allows the base position of A'-movement to be represented, where the atomic pro-form of NCA (b) does not:

- (6) I remember what Mary was willing to give away *t*, but I don't remember ...
- a. what she refused to ~~give away~~ *t*.
  - b. \*what she refused  $\emptyset$ .

CVPO patterns with NCA in disallowing A'-movement. In (11) and (12), A'-movement is impossible out of the omitted VP:<sup>3</sup>

<sup>3</sup>While *make*-causatives freely allow A-bar movement of the causee (7), [name redacted] observes that such movement is often degraded when combined with CVPO (8):

- (7) Who did Mary make *t* eat their vegetables?
- (8) a. Who did Mary make *t* eat their vegetables?  
\*And who did you make *t*  $\emptyset_{VP}$ ?
- b. I remember I made John/someone issue an apology.  
\*But I can't remember who you made *t*  $\emptyset_{VP}$ .

However, A-bar movement of the causee is in principle possible with CVPO so long as there is contrastive FOCUS on *make*, as licensed in (9) by opposition with *leave* (a) and *let* (b):

- (9) a. Which of the kids can you just leave *t* to eat their vegetables?  
And which ones do you have to MAKE *t*  $\emptyset$ ?
- b. Mary, you can simply let *t* eat her vegetables; it's John you have to MAKE *t*  $\emptyset$ .

We also note that NCA is generally compatible with A-bar movement of indirect objects which intervene between the verb and null pro-form (10):

- (11) I remember what Mary was willing to give away  $t$ ,  
 \*but I don't remember what Bill made her  $\emptyset$ .
- (12) Whose dessert did Mary make John eat  $t$ ?  
 \*And whose did she make Bill  $\emptyset$ ?

Covert A'-movement points to the same conclusion. The sentences in (13) serve as a baseline, since no covert movement is required to derive the surface scope reading of each sentence. In (14), however, an inverse scope reading can be derived via Quantifier Raising out of PE (a) but not NCA (b) (Depiante 2000, 2018). CVPO (c) again patterns with NCA:

- (13) *Baseline, surface scope context:*  
 A keen new doctor and a keen new nurse have just joined the ward. So...  
 some doctor volunteered to visit every patient, and some nurse...  
 a. ... did ~~volunteer to visit every patient~~, too. (PE)  
 b. ... volunteered  $\emptyset$ , too. (\*NCA)  
 c. ... made the radiographer  $\emptyset$ , too. (CVPO)
- (14) *Inverse scope context:*  
 Each patient needed to be seen by some doctor or other, and by some other medic.  
 So fortunately, some doctor volunteered to visit every patient, and some nurse...  
 a. ... did ~~volunteer to visit [every patient]~~<sub>QR</sub>, too. (PE)  
 b. \*... volunteered  $\emptyset$ , too. (\*NCA)  
 c. \*... made the radiographer  $\emptyset$ , too. (\*CVPO)

## 2.2 Categorical restrictions

Turning to the second diagnostic, note first that the target of PE is not restricted by category. As (15) shows, not only VP but also AdjP, DP and PP predicates can be elided:

- (15) Mary is [<sub>VP</sub> crying] / [<sub>AdjP</sub> teary] / [<sub>DP</sub> a star] / [<sub>PP</sub> in DC], and  
 John is [~~<sub>VP</sub> crying~~] / [~~<sub>AdjP</sub> teary~~] / [~~<sub>DP</sub> a star~~] / [~~<sub>PP</sub> in DC~~], too.

NCA, however, generally is restricted by category (Haynie 2010). In (16), *try* permits NCA of TP complements, but not of DP complements. Likewise in (17), *agree* permits NCA of CP complements but not of PP complements:

- (16) a. John wasn't good enough [<sub>TP</sub> to win], but at least he tried  $\emptyset$ <sub>TP</sub>.
- 
- (10) a. I promised John the fight was fixed. Who did you promise  $t$   $\emptyset$ ?  
 b. Why does everyone know I'm leaving? I need to know who you told  $t$   $\emptyset$ .

More broadly, CVPO is felicitous only in specific information-structural circumstances; namely where the omitted material is recoverable, but the causation verb and/or the causee are not. With this paper, we aim to account for how CVPO is possible at all, leaving a detailed investigation of these further information-structural conditions for future research.

- (17) b. \*John wasn't a fan of [DP the soup], but at least he tried  $\emptyset_{DP}$ .  
 a. It was suggested [CP that we should leave], and I agreed  $\emptyset_{CP}$ .  
 b. \*There was much disquiet [PP with the decision], but I agreed  $\emptyset_{PP}$ .

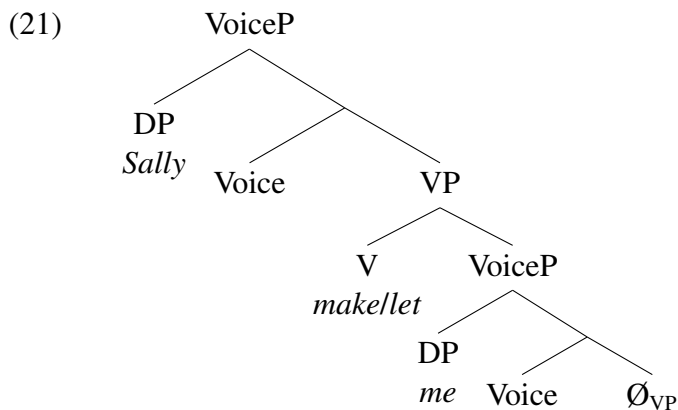
CVPO, like NCA, is restricted by category. *Make* combines with predicates of many categories, as shown in the first halves of (18); but as shown in the second halves, only VP complements can be omitted:

- (18) a. Mary made John [VP audition], and his agent made him  $\emptyset_{VP}$ , too.  
 b. *Up* made John [AdjP teary], \*then *Toy Story* made him  $\emptyset_{AdjP}$ , too.  
 c. Mary made John [DP a star], \*and his agent made him  $\emptyset_{DP}$ , too.  
 d. Mary made John [PP into a star], \*and his agent made him  $\emptyset_{PP}$ , too.

We re-visit categorial restrictions in section 4, where we will see that CVPO is further restricted to certain kinds of VP. But for now, based on the restriction to VP and the evidence from A'-movement, we conclude that CVPO is best analysed as a kind of NCA, not PE.<sup>4</sup>

### 2.3 NCA involves a pro-form

Adapting the pro-form analysis of NCA (Hankamer and Sag 1976, Depiante 2000, Haynie 2010) to CVPO yields (21), repeated from (5):



<sup>4</sup>It is of course possible for the causation verb to be elided when part of a larger constituent undergoing PE, licensed by T (see Lobeck 1995, Aelbrecht 2010). This can be diagnosed by A'-movement:

- (19) I remember what Mary made me eat *t*, and what JOHN did ~~make me eat~~ *t*, too.

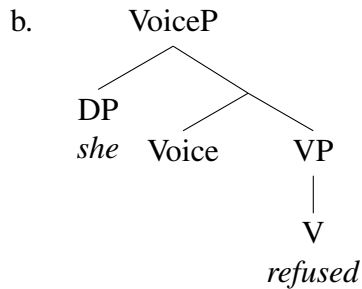
PE can also be induced below *make* (20), since constituent negation (a) and auxiliaries (b) independently license PE (Williams 1994, Potsdam 1997):

- (20) a. I remember what Mary made me eat *t*, and what she made me **NOT** eat *t*.  
 b. In my screenplay, I remember which monster I let Ed be eaten by *t*.  
 ?I just can't remember which monster I let Mary **be eaten by** *t*.

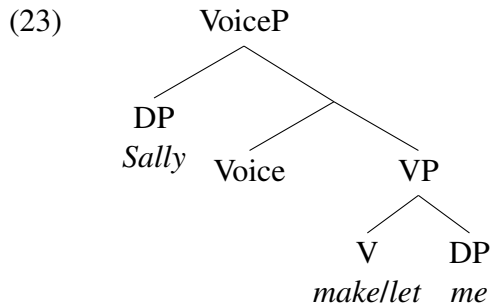
In this subsection, we argue against an alternative analysis of CVPO—one based in turn on an alternative analysis of NCA.

Alongside the null pro-form approach, NCA has been analysed as plain intransitivity (Shopen 1972, Grimshaw 1979, Napoli 1983), schematized in (22). On this view, anaphora is mediated semantico-pragmatically, without null pro-forms in the syntax:

- (22) a. I asked Mary to give her toys away, but she refused.



For CVPO, a parallel analysis would take the causative verb to be a ‘plain transitive’ with no further complement:



However, a plain transitive analysis of CVPO faces two difficult problems. First, *make* and *let*, when combined with CVPO, have different meanings from their simple transitive counterparts. Simple transitive *make* is not a bieventive causative: “*I made a band*” (in an out-of-the-blue context) means only that you created one, not that you made it do something. Meanwhile the simple transitive counterpart of *let* means ‘lease’ (at least in British English); e.g. “*They let grotty flats.*”

A second problem is that *make*+CVPO is structurally like *make*+VP and not like simple transitive *make*. This is evident with respect to passivisation in (24): *make*+VP resists passivisation (a) (Sheehan and Cyrino 2022), and continues to do so with CVPO (b):

- (24) a. \*I didn’t want to eat the haggis, but I was made eat the haggis (by my hosts).  
 b. \*I didn’t want to eat the haggis, but I was made  $\emptyset_{VP}$  (by my hosts).

By contrast, simple transitive *make* happily passivizes:

- (25) A cake was made for the occasion.

With a plain transitive analysis of CVPO facing these problems, we maintain the pro-form analysis in (21).

Still, a plain transitive analysis seems accurate in nearby circumstances. Like *make/let*, perception verbs take [DP + uninflected VP] complements (26):

(26) I saw/heard/watched/smelt/felt/witnessed [Mary eat the last sandwich].

However, they do not license CVPO. If they did, B's response in (27) and (28) would not have contradictory interpretations:

(27) A: Did the suspect leave the house?  
 B: #I didn't **see** him, even though I was watching him all day.  
 \*I didn't **see** him  $\emptyset_{VP}$ .  $\emptyset$  = leave the house

(28) A: Did Mary hear John go to the loo at 3am?  
 B: #She didn't **hear** him, although she was listening to him snore all night.  
 \*She didn't **hear** him  $\emptyset_{VP}$ .  $\emptyset$  = go to the loo at 3am

Instead, (27) and (28) can only involve plain transitive uses of *see* and *hear*.

A plain transitive analysis seems equally accurate for *help*. In (30), (b) cannot be interpreted as '*...helped Labour lose*', indicating the absence of any silent verbal material:<sup>5</sup>

(30) A poor Brexit strategy helped Labour lose the election.  
 a. An unpopular leader helped it lose, as well.  
 b. #An unpopular leader helped it, as well.  
 \*An unpopular leader helped it  $\emptyset$ .  $\emptyset$  = lose the election

Thus, while *make/let* license causative CVPO, there is no corresponding 'perceptive VP-omission' licensed by *see/hear*, nor any 'facilitative VP-omission' licensed by *help*. The next subsection argues that this is to be expected, as the licensing of CVPO and NCA is a lexical matter.

## 2.4 Lexical licensing

In the structure in (21), we propose that the null pro-form  $\emptyset_{VP}$  is licensed by *make/let*.<sup>6</sup> The differences at the end of the previous subsection between *make/let* on the one hand and

<sup>5</sup>This contrasts with *help* by itself, which does appear to license NCA in (29):

(29) A poor Brexit strategy helped Labour lose the election.  
 An unpopular leader helped  $\emptyset$ , as well.  $\emptyset$  = Labour lose the election

<sup>6</sup>We remain agnostic on the exact nature of this licensing relation, noting only that it cannot be classical local selection, since  $\emptyset_{VP}$  is not in the complement of *make/let*. 'Nearly-local' selection, by which a selecting head can 'see through' an argument-introducing head A to select the complement of A, has been argued to be a necessary part of selection—see Bruening (2021:1061).

*see/hear/help* on the other are a first step towards justifying the lexically-specific nature of this relationship: as a lexical matter, *make/let* can license  $\emptyset_{VP}$ , but *see/hear/help* cannot.

Furthermore, this selectivity fits with what is known about NCA in general. NCA is found in the complement of lexical heads, apparently arbitrarily (Depiante 2018:670ff.).<sup>7</sup> For example in (31), *try* licenses NCA (a), but the semantically similar *attempt* does not (b):

- (31) a. I couldn't make it work, but I tried  $\emptyset$ .  
 b. \*I couldn't make it work, but I attempted  $\emptyset$ .

Indeed, we can see that the licensing of CVPO is lexically specific by considering *have* (32). While causative *make/let* license CVPO (a), causative *have* does not (b):

- (32) a. First I made/let Chris pet the tarantula, then I made/let Sam (pet the tarantula).  
 b. First I had Chris do my bidding, then I had Sam \*(do my bidding).

To summarise this section, A'-movement and the restriction to VP show causative CVPO to be a species of NCA, which involves a null pro-form and is lexically licensed. The next section turns to the thematic requirements of CVPO.

### 3 VP-omission requires an agentive causee

In all our good examples of CVPO so far, repeated in (33), the causee was an agent:

- (33) a. First I made Chris eat dinner, then I made Sam  $\emptyset_{VP}$ . (= 1a)  
 b. First I let Chris play outside, then I let Sam  $\emptyset_{VP}$ . (= 1b)  
 c. First I made/let Chris pet the tarantula, then I made/let Sam  $\emptyset_{VP}$ . (= 32a)  
 d. I chopped the wood, because Sally made me  $\emptyset_{VP}$ . (= 3a)  
 e. We'll present in person if the travel rules let us  $\emptyset_{VP}$ . (= 3b)  
 f. Mary made John audition, and his agent made him  $\emptyset_{VP}$ , too. (= 18a)

In this section, we show that non-agent causees are unacceptable with CVPO.<sup>8</sup> Our proposed structure in (21) can already account for why internal argument causees are incompatible with CVPO (section 3.1). However, the fact that CVPO remains incompatible with non-agent external argument causees (section 3.2) will require further analysis in section 4.

<sup>7</sup>Compare ellipsis, which is found exclusively in the complement of functional heads (Lobeck 1995): C for sluicing, T for predicate ellipsis, D for noun phrase ellipsis, etc. This lexical vs. functional divide could be definitional of NCA vs. ellipsis.

<sup>8</sup>Mittwoch (1990:113) makes a related but different claim. She states that with CVPO, the causer must be an agent. The examples in (34) do not seem overly degraded to us, however; further work is required:

- (34) a. ?Self-belief made Carol practice every day. A strong work ethic made Emily  $\emptyset_{VP}$ .  
 b. ?Perfectionism makes Tom resubmit his work. But only a bad grade will make David  $\emptyset_{VP}$ .



### 3.1 Internal arguments

We begin with those non-agents that are internal arguments. In (35)-(38), a predicate whose subject is an internal argument is embedded under *make*, rendering that internal argument as the causee. The (a) sentences, without CVPO, are mostly acceptable; the (b) sentences, with CVPO, are noticeably worse.<sup>9</sup> In each case, the internal-argument-hood of the causee is guaranteed by the choice of embedded predicate: in (35), the embedded predicate is unaccusative, as shown by its licensing a *from*-PP (Alexiadou et al. 2015); in (36) it is a dispositional middle; in (37) it is a ‘sporadic advancement’ construction (in the sense of Perlmutter and Postal 1984, Bruening 2013); and in (38) it is a passive:

- (35) a. We made [the glass crack from the pressure].  
b. But we couldn’t make the granite ??(crack from the pressure).
- (36) a. If we can make [our new line of shirts wash more easily], ...  
b. ... then we can certainly make our line of trousers ??(wash more easily).
- (37) a. By altering the design, we can make [the new hall seat an extra 200 people].  
b. After an upgrade, we can also make the old hall ??(seat an extra 200 people).
- (38) a. John wanted to make [the law be overturned].  
b. Mary just wanted to make the ruling ??(be overturned).

What (35)-(38) show with *make*, (39)-(42) show with *let*. Again, CVPO is bad in the (b) examples, where the causee is an internal argument:

- (39) a. I’m happy to let [the ice melt from the heat of the sun].  
b. But we shouldn’t let the butter ??(melt).
- (40) a. If the author lets [her French translation read as badly as this], ...  
b. ... then I wouldn’t be surprised if she lets her German translation ??(read as badly as this) too.
- (41) a. By altering the design, we can let [the new hall seat an extra 200 people].  
b. After an upgrade, we can let the old hall ??(seat an extra 200 people) too.
- (42) a. The attorney was happy to let [that one specific ruling be overturned].  
b. But she didn’t want to let the whole legal framework ??(be overturned).

The structure in (21) can explain why internal argument causees are incompatible with CVPO. Internal arguments are generated within VP; but the null VP pro-form ‘ $\emptyset_{VP}$ ’ of CVPO is atomic—it has no internal structure. Thus the syntactic structure where internal arguments would be generated does not exist under CVPO.<sup>10</sup>

<sup>9</sup>Some of the (a) examples in (35)-(42) are somewhat stilted; in particular, the passives in (38) and (42). Still, the contrasts with CVPO in (b) are appreciable.

<sup>10</sup>Raised agents are incompatible with CVPO for the same reason— $\emptyset_{VP}$  does not provide structure to raise out of. CVPO is accordingly bad in (43):

However, the inability of  $\emptyset_{VP}$  to support internal argument causees does not capture the whole story.<sup>11</sup> As shown in the next subsection, despite Spec-VoiceP being available to house external arguments, non-agent external arguments are also incompatible with CVPO.

### 3.2 External arguments

There are at least two classes of non-agent external argument that, when embedded as causees under *make/let*, render CVPO unacceptable. Because these arguments are external (i.e., merged in Spec-VoiceP), the structural explanation that worked for internal arguments does not carry over.

One such class is stative verbs. In the now-standard analysis of Kratzer (1996), stative subjects are external arguments that take on a ‘state holder’ role. As shown in (44), stative verbs reject CVPO:

- (44) a. Sure, the ride has been signed off by the inspector. But we still need to convince the public. With all the struts on display, it doesn’t *look* safe—we need to make it ??(look safe).  
b. Dave lacks confidence—he still doesn’t think he’s smart enough. We need to make him ??(think he is).

Of particular interest here, another class is external argument causees with a ‘cause’ role. These are also bad with CVPO, as shown in (45)-(47). We understand a cause role in similar terms to Folli and Harley (2005)—it is thematically similar to an agent, except it need not be intentional, and thus may be inanimate.<sup>12</sup> The contrasts between CVPO (a) and paraphrases involving PE (b) are striking:

- (45) a. He let his sickness depress him. He’s going to let his temper ??(depress him) as well.  
b. He let his sickness depress him. He’s going to allow his temper to depress ~~him~~ as well.

- 
- (43) At that stage, we really wanted to make [our preferred candidate seem *t* to be winning].  
But unfortunately, we could only make one of the backups ??(seem to be winning).

<sup>11</sup>In fact, under certain assumptions, the structural explanation would not capture this part of the story for internal argument causees. Bruening (2019) argues that the VP pro-form *do so* replaces a VP that is embedded under Voice, but is nonetheless compatible with unaccusatives—unaccusative subjects of *do so* get merged, exceptionally, in Spec-VoiceP. Thus, if Bruening’s proposal for *do so* should be extended to  $\emptyset_{VP}$ , then there is no structural reason why internal arguments should be incompatible with CVPO. Instead, the proposal to follow in section 4 would have to account for (35)-(42) too. We remain agnostic on this point.

<sup>12</sup>Folli and Harley (2008) note that what differentiates agents and causes isn’t strictly intentionality (which requires animacy), but rather the ‘teleological ability’ of the argument to participate in the eventuality denoted by the lexical verb, as a consequence of its inherent properties. Depending on the verb in question, this often corresponds to the ability to have intentions (i.e., animacy), but not always. For our purposes, the notion of intentionality suffices.

- (46) a. The cyclone turned towards land only after a high pressure front made it ??(turn towards land).  
 b. The cyclone turned towards land only after a high pressure front caused it to ~~turn towards land~~.
- (47) a. We thought the flashing lights would trip the alarm, but we couldn't make them ??(do it/trip the alarm).  
 b. We thought the flashing lights would trip the alarm, but we couldn't rig them to ~~trip the alarm~~.

The next section accounts for these facts by arguing that the NCA pro-form constrains the interpretation of Voice.

## 4 Analysis: NCA constrains Voice

In this section, we argue that the null VP pro-form implicated in CVPO ( $\emptyset_{VP}$ ) is responsible for the agency requirement described in the previous section. Thematic requirements can be imposed lexically by predicates, but also structurally by certain syntactic configurations (Folli and Harley 2005). In our case, the fact that the null VP pro-form cannot be interpreted as a state forces Voice to assign an agentive interpretation to the argument in Spec-VoiceP.

Many predicates impose an agency requirement on their external argument. In some cases, responsibility lies with the lexical verb itself. For example in (48), *murder* requires an agent (a), where *kill* does not (b). *The illness* in these examples is not an agent but a cause, and thus is incapable of saturating the external argument role introduced by *murder*:

- (48) a. The journalist/\*The illness murdered the politician.  
 b. The journalist/The illness killed the politician.

In other cases, agency requirements arise not directly from the lexical verb, but through the configuration of the lexical verb and the syntactic structure in which it is inserted (Folli and Harley 2005). For example in (49), when the complement of *eat* is a theme ( $\theta$ ), its subject must be an agent—viz. (a) vs. (b). But when the complement of *eat* is a small clause (SC) composed of an argument and a stative predicate (DP + *away*), its subject can be an agent or a cause (c, d):

- (49) a. The guests ate [ $\theta$  the wedding cake]. *agent*  
 b. \*The sea ate [ $\theta$  the beach]. *cause*  
 c. The guests ate [<sub>SC</sub> the wedding cake away]. *agent*  
 d. The sea ate [<sub>SC</sub> the beach away]. *cause*

Similarly in (50), *chew* with a theme complement requires an agent subject (a vs. b); but *chew* with a small clause complement (DP + *to a pulp*) allows an agent or cause subject (c, d):

- (50)
- |    |  |              |
|----|--|--------------|
| a. | The student chewed [ <sub>θ</sub> the toffee].                     | <i>agent</i> |
| b. | *The washing machine chewed [ <sub>θ</sub> the clothes].           | <i>cause</i> |
| c. | The student chewed [ <sub>SC</sub> the toffee to a pulp].          | <i>agent</i> |
| d. | The washing machine chewed [ <sub>SC</sub> the clothes to a pulp]. | <i>cause</i> |

Folli and Harley (2005) propose that causes and agents are separate roles that can be assigned to the external argument in Spec-VoiceP.<sup>13</sup> Causes initiate a change into a state, and this result state must be specified by the complement to Voice. With reference to (50), the small clause [*the clothes to a pulp*] in (d) specifies the final state that results from the washing machine’s chewing. By contrast in (b), the complement to *chew* is not a state, and so the subject of *chew* cannot be interpreted as the cause of the (nonexistent) state. Instead the subject of *chew* can only be interpreted as an agent—something that is intentionally involved in causing the event (*pace* note 12).

Carrying this perspective over to CVPO, we propose that the agency requirement on the causee is a consequence of interactions of this sort. Our central stipulation is that the NCA pro-form  $\emptyset_{VP}$  cannot be interpreted as a state, as one of its inherent properties. This, by itself, straightforwardly accounts for the unacceptability of CVPO with stative verbs. For CVPO to work in (44), repeated here as (51), the null pro-form would have to be interpreted as a state, contrary to its nature:

- (51)
- |    |  |
|----|--|
| a. | Sure, the ride has been signed off by the inspector. But we still need to convince the public. With all the struts on display, it doesn’t <i>look</i> safe—we need to make it ??(look safe). |
| b. | Dave lacks confidence—he still doesn’t think he’s smart enough. We need to make him ??(think he is).   |

But in addition, we also have an explanation for why the specifier of Voice cannot have a cause role. Examples (45)-(47) are here collected together as (52):

- (52)
- |    |  |
|----|--|
| a. | He let his sickness depress him. He’s going to let his temper ??(depress him) as well.                   |
| b. | The cyclone turned towards land only after a high pressure front made it ??(turn towards land).          |
| c. | We thought the flashing lights would trip the alarm, but we couldn’t make them ??(do so/trip the alarm). |

Because the null CVPO pro-form cannot be interpreted as a state, the causee in these examples cannot be interpreted as a cause. The causee must instead be interpreted as an agent, leading to unacceptability when the causee is inanimate (or forcing an interpretation where

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<sup>13</sup>Folli and Harley (2005) make a slightly different set of assumptions regarding the introduction of roots and external arguments, though without consequence for the analysis at hand. They assume that the functional head which introduces the external argument is *v*, not Voice, and specify different flavours of *v*: the one that requires an agent specifier is *v*<sub>DO</sub>, while the one which requires a state as a complement is *v*<sub>CAUSE</sub>. They also assume that the lexical verb does not head its own projection, but that the verb root merges directly with *v*.

the inanimate causee is anthropomorphised).

Beyond the fact that it cannot be a state, there do not seem to be any further restrictions on the interpretation of the null pro-form. As shown in (53),  $\emptyset_{VP}$  is compatible all manner of aspectual manipulations. As a process it may be punctual (a) or non-punctual (b), it may be telicly bounded (b) or atelic (c), and it need not involve a change of state (d):

- (53) a. I didn't want to enter the property without permission. He made me  $\emptyset_{VP}$ !  
b. I didn't want to drink the beer without permission. He made me  $\emptyset_{VP}$ !  
c. I didn't want to drink beer without permission. He made me  $\emptyset_{VP}$ !  
d. She'll only be able to sneeze spontaneously. You can't make her  $\emptyset_{VP}$ .

Thus the only requirement on  $\emptyset_{VP}$  is that it cannot be a state. From this, the agency restriction on the causee is derived via independently familiar thematic interactions between complements and external arguments.

## 5 NCA with aspectual verbs

The previous section tied the agent restriction on CVPO to a restriction on the interpretation of the null  $\emptyset_{VP}$  pro-form—it can't be a state. This in turn restricts the possible roles that Voice can assign to the external argument—it can't assign a cause role. In this section, we use aspectual verbs to argue that the agent restriction is a fact about NCA in general, rather than just a quirk of CVPO.

We start with the observation that a great many NCA-licensing predicates require agent subjects; for example, *volunteer* and *try* (54):

- (54) a. Chris couldn't move the boulder, so Sam volunteered/tried  $\emptyset$ .  
b. \*Chris couldn't move the boulder, so/but the wind volunteered/tried  $\emptyset$ .

This agent restriction is perhaps an 'unremarkable' property of these particular lexical items, along the same lines as *murder* vs. *kill* in (48), above.

The requirement for agent subjects is more striking with aspectual verbs, like *start*. These verbs can license NCA (55) and, separately, allow non-agent subjects (56):

- (55) Abby finished writing her essay before Beth had even started  $\emptyset$ .  
(56) a. There started appearing essays that discussed previously-taboo topics.  
b. Now the shit has really started hitting the fan.

Crucially, however, aspectual verbs cannot both license NCA and have a non-agent subject at the same time. In the following sets of examples, the range of manipulations familiar from section 3 guarantees that the subject is non-agentive. NCA after aspectual verbs with these non-agent subjects is degraded to an extent that contrasts starkly with PE (parenthesised). In (57), the subject is non-agentive by virtue of being an underlyingly internal argument:

- (57) a. The glass will stop cracking from the heat about when the pyrex starts ??(to).  
 b. My book was selling well in China long before yours started ??(to).  
 c. This run-down hotel was sleeping 100 guests per night long before the grand hotel ever began ??(to).  
 d. The fugitive ceased being spotted around town about when the sheriff's goons started ??(to be).

In (58), the subject is a state holder:

- (58) a. Sure, the ride has been signed off by the inspector, but we need it *looking* safe. If we set about covering up all those struts, it might start ??(to).  
 b. Dave lacks confidence—he has trouble thinking he's smart enough. But with a good result on this test, he might start ??(to).

Finally in (59), the subject is a cause:

- (59) a. His sickness isn't depressing him yet. But if we're not careful, his drugs will start ??(to).  
 b. Yesterday, the flashing lights weren't tripping the alarm. But today, they started ??(to).

The agent restriction in evidence with NCA after aspectual verbs supports and follows from our analysis in the previous section. The null pro-form of NCA cannot be interpreted as a state, hence forces Voice to introduce an agent. Thus the thematic interaction between  $\emptyset$  and agency is general across CVPO and NCA.

## 6 Conclusion

We have argued that the silence found after the causee in 'causative VP-omission' constructions in English is not Predicate Ellipsis, but rather a phonologically-null pro-form akin to that found in Null Complement Anaphora. ' $\emptyset_{VP}$ ' is merged as the complement of the Voice head selected by *makellet*, which introduces the causee in its specifier. This syntactic structure explains why causees in CVPO need to be external arguments—there are no positions inside the atomic pro-form where an internal argument could be generated.

We also observed a further restriction on the interpretation of CVPO: the causee must be an agent, and not a state-holder or causee. We attribute this restriction to a quirk of the null CVPO pro-form, which cannot be interpreted as a state. We follow Folli and Harley's (2005) analysis for why a cause role can be assigned only when a state is specified. We leave it to future work to determine whether the ' $\emptyset_{VP} \neq \text{state}$ ' stipulation can be derived in a more principled manner.

Finally, we noted that the interaction between NCA and agency is found beyond CVPO constructions. We looked only at aspectual verbs, but if our analysis is on the right track,

we expect this interaction to bear out more widely.

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