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ALAPSZAKOS SZAKDOLGOZAT

Műveltetés és az igei csoport mérete

Causativity and the size of the Verb Phrase

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CERTIFICATE OF RESEARCH

By my signature below, I certify that my ELTE B.A. thesis, entitled Causativity and the size of the Verb Phrase, is entirely the result of my own work, and that no degree has previously been conferred upon me for this work. In my thesis I have cited all the sources (printed, electronic or oral) I have used faithfully and have always indicated their origin. The electronic version of my thesis (in PDF format) is a true representation (identical copy) of the printed version.

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Abstract

This paper delves into challenges within X-bar theory and θ-role analysis concerning causative and double object constructions, emphasizing projection size and alignment with the Universal Theta-role Assignment Hypothesis. Proposing Pylkkänen's (2008) framework as an alternative way to analyse the problematic structures, it categorizes English causatives, as well as double object constructions interpreted as causatives.

1. Contents

2. Introduction

In this paper I aim to shed light on some of the problems that may arise in X-bar theory and θ-role analysis when it comes to causative and double object constructions, in particular the size of their projection and their agreement with Universal Theta-role Assignment Hypothesis (Baker, 1988). As an alternative approach to analysing thes structures I am going to adopt a framework developed by Pylkkänen (2008). After a summary of the theory behind Pylkkänen's work and explanation how it can be used to categorize causatives, I am going to analyse a number of different causative or causative-like structures of English.

Then, I will turn my focus back to the double object construction. Following a brief glance at the different approaches that have been used to examine and account for the special behaviour of double object constructions, I am going to follow the footsteps of Lyons (1967) and Harley (2000), and I will analyse these constructions as causatives.

Finally, I will examine and categorize the double object construction whithin Pylkkänen's framework and illustrate my findings in a Table along with the rest of the tested causative structures. This will help draw some interesting conclusions, as well as reveal further territories that require research.

3. Theoretical background

Generative grammar and X-bar theory, initially proposed by Chomsky (1970) and further developed by Jackendoff (1977), have long defined linguists approach to syntactical phenomena. X-bar theory, independent from phonology and semantics, proposed an abstract binary syntactic structure universally shared across languages. However, the theory and its straightforward binary interpretation started to show their limitations, particularly with the double object construction (DOC), as Lipécz highlights.

The core issues with DOC in X-bar theory include the size of the VP with too many arguments, and the parallelism of the DOC with its to-construction alternative. On the one hand it is problematic with regards to the Universal Theta-role Assignment Hypothesis, (Baker, 1988) to explain why two there can be two distinct syntactical structures for two semantically identical sentences, and on the other hand, X-bar theory struggle to accomodate and assign case to all arguments in DOC. Although Newson et al. (2006) suggests a feasible theory, it does not address all the issues (Lipécz)

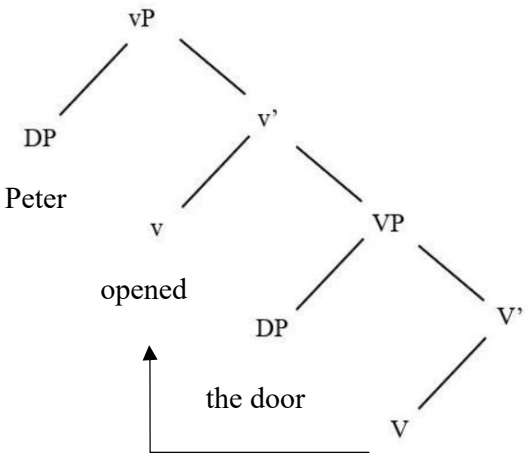
Following suggestions by Lyons (1967) and Harley (2000) that DOC can be interpreted as a causative, I am going to hypothesize that treating it as such may present viable alternative ways to analyse its structure. I will return to DOCs towards the end of my paper; now I will turn my attention on Causatives.

3.1. Bieventive analysis of causatives

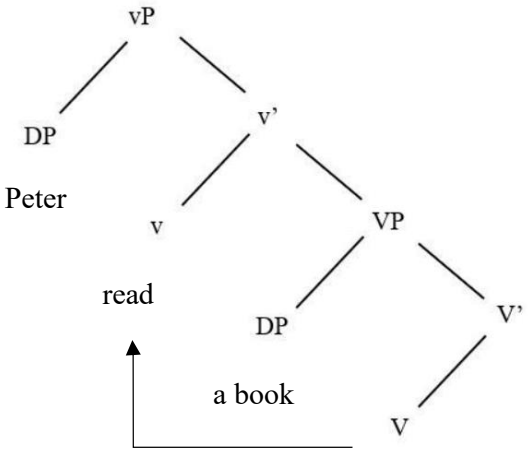
Pylkkänen (2008) argues that θ-role analysis is unfit for building a universal theory of the various causative structures across languages. In fact, she states that Cause is not a θ-role, rather a "relation between two events" (Parsons, 1990 as cited in Pylkkänen, 2008, p. 86).

Pylkkänen observes that causatives have two relations that set them apart from their non-causative counterparts: one between the caused and the causing event (Cause), and the thematic relation between the external argument or 'causer' and the causing event (Voice). According to θ-role analysis however, the causer θ-role is the only one thing that differentiates causatives. Thus the structure of a causative verb and of a noncausative transitive verb will be the same.

Indeed, the θ-role analysis, when applied to X-bar theory, yields the following, structurally identical syntactic trees for an SVO-type monotransitive verb and a zero causative English verb, otherwise known as an ergatives (Newson et al., 2006)

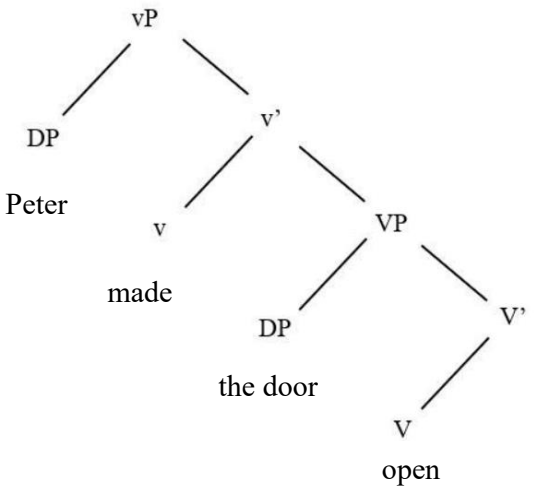


Peter opened the door



Peter read a book

Similarly, the *make somebody do something* type of causative also appears in the same syntactic tree, as the UTAH (Baker, 1988) suggests:



Peter made the door open.

This uniformity of the three structures is not accurate according to Pylkkänen's theory. As demonstrated later in the paper, the bieventive analysis can account for a more in depth analysis of causatives, and reveal different structural features for different types of causatives.

It is important to note that even though the verb 'read' can also be used to build similar sentences as ergatives can, such as "The book reads easily", it is not an ergative in the English language. The difference can be easily shown by applying the progressive aspect to the verb. "The door is opening" is grammatical, while "The book is reading easily" is not. Verbs like 'read' are classified as middle-verbs (Newson et al., 2006); however, the precise nature of this type of verbs will be left a question for future work, as the present paper does not aim to argue for a causative interpretation of middle-verbs, and thus the structural representation of their alternation is irrelevant. It is only to be noted that despite their similar surface appearance, they should not be treated the same way as ergatives.

3.2. Pylkkänen's framework

Pylkkänen (2008) attributes the crosslinguistic variation of causatives to two parameters, selection and Voice-bundling, which form the basis of her framework.

The first parameter, selection, refers to the size of the complement selected by the causative head. Pylkkänen differentiates three kinds: those that select for a complement smaller than a verb, a category-less root; those that select for Verb Phrases (VPs) without an external argument; and those that select for complements containing any kind of head that introduces an external argument, namely phases (McGinnis, 2001a,b, 2002 as cited in Pylkkänen, 2008, p. 105). Thus, we have a distinction between root-selecting, verb-selecting, and phase-selecting causatives, respectively.

The second parameter, Voice-bundling refers to how Cause is structurally represented in syntax. Voice, the element introducing external arguments (Kratzer, 1996), and Cause are universally independent functional heads in the inventory. Therefore, unsurprisingly they can appear as their own respective syntactic heads in causative structures. However, Pylkkänen argues that in the lexicon of certain languages Cause may be combined or bundled with Voice,. The resulting complex head serves both as the causative head and as the introducer of an external argument; still, Cause remains semantically distinct from Voice. The consequence of such a bundled head is that unaccusative causatives cannot be formed, as that would require the removal of the external θ-role, which is impossible to do without also removing the causative head when the two heads are bundled.

In case of root-selecting Voice-bundling causative heads, Pylkkänen oberves a further restriction, namely that causatives based on unergatives and transitives are impossible to form. Root causativizing an unergative or a transitive entails that the causative head takes the root of an unergative or a transitive verb directly. This means that the ‘causee’, the participant that is caused to carry out the action, (an argument not present in causativized ergatives) can only be introduced above Cause. At the same time, it must be introduced below Voice, the head that introduces the ‘causer’ external argument. As Pylkkänen points out, this configuration in unfeasible in case of Voice-bundling causatives, where Voice and Cause cannot be separated.

In conclusion, Pylkkänen classifies causative structures into six different types based on the selection and Voice-bundling parameters of the causative, as outlined by the chart below.

	Root-selecting	Verb-selecting	Phase-selecting
Voice-bundling			
Non-Voice-bundling			

4. Analysis of causative structures in Pylkkänen's framework

Out of the several different types of causative structures in the English language, in her study, Pylkkänen (2008) only analyses the zero-causative (ergatives) and classified them as root-selecting and Voice-bundling causatives. In the next sections I am going to explore how the different causatives or causative-like structure can be interpreted with the help of Pylkkänen's framework, as it might be helpful to reveal more about both the nature of the causatives and Pylkkänen's theory.

The causative structures I am going to analyse are the *make somebody do something* causative, the *have something done* causative, the causativizer suffixes, and finally,s I will attempt to analyse double object constructions as causatives within this framework. This selection of the structures to be tested is non-exhaustive and somewhat arbitrary.

4.1. Analysis steps

In this section I will go through the steps I will follow to analyse the causatives structures in Pylkkänen's framework. The two main parameters defined above, selection and Voice-bundling will be tested separately, one after the other.

For the first parameter, selection, to determine if a causative is root-selecting, verb-selecting or phrase-selecting, I am going to examine two features of the causative: the possible scope of adverbial modification, and restrictions on verbal morphology.

With regards to adverbial modification there are three options: VP-modification of the caused event is not possible (root-selecting); only agent-oriented modification of the caused event is possible (verb-selecting); or there is no restriction on adverbial modifiers (phase-selecting).

Restrictions of verbal morphology also have three categories: no verbal morphology is possible between the root and the causative morpheme (root-selecting); verbal morphology is possible, but high applicative morphology is not between the root and Cause (verb-selecting); or there are no restrictions on verbal morphology between the root and Cause (phase-selecting).

Testing either feature should reveal the selection type of the causative, but testing both of them will allow to double check the findings. The table below summarizes these criteria.

	Root-selecting	Verb-selecting	Phase-selecting
1. VP modification of caused event possible?	No	Yes	Yes
2. Verbal morphology possible between the root and Cause?	No	Yes	Yes
3. Agent-oriented modification of caused event possible?	No	No	Yes
4. High applicative morphology possible between the root and Cause?	No	No	Yes

(Pylkkänen, 2008, p. 106)

It is important to note that testing high-applicative morphology is important in crosslinguistical testing, but for English language causatives, unfortunately it must be left out,

as it does not exist. (Pylkkänen). High applicative construction would result from aplicativizing static verbs or unergative, yielding sentences as in (1), which are ungrammatical in English.

(1) a. *I held Susan the door.

(I held the door for Susan.)

b. *Tony died Peter.

(Tony died for Peter.)

Moving on to the second parameter Voice-bundling, I will check if the structure can have nonaccusative causatives. Nonaccusative causatives have no external arguments, that is, there is no causer, even implicitly. Yet their causative nature needs to be retained.

If it is possible to create nonaccusative causatives with the examined structure, it will be a Non-Voice-bundling causative, if not, it will be a Voice-bundling causative.

With that the analysis of the causative structure within Pylkkänen's framework should be complete, and it can be placed in the table (). I will now move forward with the analysis of the selected causatives.

4.2. Make somebody do something

First of all, I am going to take a closer look at the *make somebody do something* construction, a typical causative structure in the English language. I will start with analysing the size of the complement of the causative. Then I will look at the causatives Voice-bundling properties. To determine whether it is root-selecting, verb-selecting or phrase-selecting, I will first examine the restrictions of morphology between the root and Cause, and after that I will look at its features with regards to adverbial modification.

4.2.1. Selection

To start the analysis of the morphological restriction between the make somebody do something causative and the root, I will check whether verbal morphology is allowed between the root and the cause. I will turn to English prefixes to test this criterion.

(2) a. Catherine's mother made her use the straw.

b. Catherine's mother made her reuse the straw.

Looking at the two sentences (2) we can state the morphological change happened under the scope of the causative. However, it might be difficult to argue the adding the prefix 're-' is actually *verbal* morphology as opposed to non-category-defining. Considering it is commonly found in nominal environments, as Pylkkänen (2008) points out, one could argue that the prefix selects a category-independent root, and root-selecting, category-defining morphology can still be applied to it. For example, 're-' selects the root √appl, and through additional morphology it can become either the verb 'reapply' or the noun 'reapplication'. As an analogical, overt nominalisation or verbalisation of the root √use is not available, the precise answer to this question remains in the present paper a mystery.

Alternatively, the limitations of verbal morphology between Cause and the root can be tested with the help of suffixes. Pylkkänen (2008) states that almost all verbal suffixes in English create verbs with a causative meaning (discussed in more detailed at a later point in present paper). This makes their combination with another layer of causativization somewhat awkward; still, the structure in (3) yields a grammatical sentence.

(3) The father made the children tighten their seatbelts.

This result confirms that *make somebody do something* is not a root-selecting causative.

The final step of the analysis would be testing whether High-applicative morphology (Pylkkänen, 2008) can happen between the root and the Cause. Unfortunately, English only has

low applicative constructions, so this criteria cannot be tested. Embedding a low applicative structure under the *make somebody do something* causative is, however, grammatical.

(4) I made him give the crocodiles meat.

Although the examination of possible verbal morphology below Cause could not be completed for *make somebody do something* causative, it is possible to determine the size of the complement it selects for, using the other criteria that need to be tested: the scope of adverbial modification. To fully confirm the finding so far out, that is ruling out the root-selecting option, I will carry out the complete analysis of VP modifiers from the start.

In order to test whether it is possible to modify the VP of the caused event in case of *make somebody do something* causatives, I will select a non-accusative verb and a non-agent oriented VP modifier that is able to grammatically and meaningfully modify the verb when not embedded under a causative structure. (5)

(5) His brother cried loudly.

When this sentence embedded under a *make somebody do something* type of causative, the sentence is still grammatical and meaningful. (6) More importantly, the meaning of the sentence does not make it necessary for the causing event carried out by Jonathan to be loud. We can then conclude that this type of causative makes it possible for non-agentive VP modifiers to take a lower scope, and modify the caused event, indicating that it is either verb-selecting or phase-selecting, as we expected.

(6) Jonathan made his brother cry loudly.

To identify whether the *make somebody do something* causative is verb-selecting or phase-selecting, we need to check if the agent-oriented modification of the caused event is

possible. For this, I will select an agentive modifier and a verb it can meaningfully modify without the presence of the causative structure.

(6b) The students practiced with dedication.

Incorporating this sentence into a *make somebody do something* type of causative yields a grammatical and meaningful sentence.

(7) The teacher made the students practice with dedication.

We can also state that the adverbial can be understood to modify the agent of the caused event, that is the students. Thus, the ambiguity expected in the case of phase-selecting causative, which allow for agient-oriented modification of the caused event, is present. In fact, we could argue that one of the functions of the marked variation of the sentence, (8), is to clear up the existing ambiguity of the unmarked representation of the structure, marking the 'causer' as the one who is affected by the modifier.

(8) With dedication, the teacher made the students practice.

This finding indicates that *make somebody do something* construction is a phase-selecting causative.

In conclusion the analysis of morphological restrictions below the causative, though incomplete, together with the examination of allowed adverbial modifications, confirms that *make somebody do something* is a phase selecting causative with regards to the size of its selected complement.

4.2.2. Voice-bundling

I will now move on to the other main parameter in Pylkkänen's framework, analysing whether Cause and Voice appear as separate heads, or Voice-bundling phenomenon is observable.

In the case of verb-selecting and phase-selecting causatives, the only feature that Pylkkänen observes setting Voice-bundling and Non-Voice-bundling causatives apart is the possibility of unaccusative causatives.

Looking at a sentence with the *make somebody do something* causative structure, it is easy to see that the argument occupying the specifier position of the verb 'make' is an external argument, or agent/causer in θ-role analysis.

(9) Peter made the door open.

'Peter caused an event that resulted in the door becoming open'

As the *make somebody to something* causative structure is not feasible without such an external argument, (10) no unaccusative causative can be produced with this structure.

(10) *Made the door open.

Importantly, eliminating the external argument via passivizing the causative is not a viable solution, as Pylkkänen (2008) stipulates that passivized causatives and unaccusative causatives are distinct structures, with the former actually having an implicit external argument. Therefore, we can conclude that the Voice and Cause heads are bundled.

In conclusion, by analysing the possible scope of adverbial VP modifiers, the verbal morphology that intervenes between Cause and root, as well as the potential of unaccusative causative, I have demonstrated that the *make somebody do something* type of causative can be classified as a phase-selecting, Voice-bundling causative in Pylkkänen's framework (2008).

4.3. Have something done

The next English causative structure that I am going to look at is the have something done structure. Chomsky (1965) demonstrates that the structure has a three-way ambiguity. The

sentence (11) can be interpreted as either ‘Somebody stole my book’; ‘I made somebody steal a book’ or ‘I stole a book’. (cf. I will have the work done).

(11) I had a book stolen.

(Chomsky 1965, p. 22)

Lyons (1967) points out that this structure is “grammatically unmarked” (p. 395) for the different θ-roles potentially filled by the pronoun “I” in the subject position and opines that ambiguities can be explained with the help of some more specific grammatical framework. He specifically identifies the subject of the second interpretation as a “causative agent” (p. 395), so that interpretation will be of particular interest to this paper. Nevertheless, I will attempt to place all three interpretations in Pylkkänen’s framework, as the analysis might help uncover the differences between them. I will move on to the analysis of have something done.

4.3.1. Selection

Once again, I will start by looking at the types of morphology that can intervene between the root and the Cause. First of all, to rule out to the possibility root-selecting option for the 'have something done' causative, I will examine the verbal morphology that can occur between the root and the Cause. The sentences in (12-13) show that both prefixal and suffixal morphology is feasible in the structure. Furthermore, all three possible interpretations of the *have something done* structure are accounted for.

(12) a. I often have my name mispronounced.

‘People often mispronounce my name’

b. The mayor wants to have the museum rebuilt.

‘The mayor wants to make somebody rebuild the museum’

c. You need to have your phone disconnected.

'You need to disconnect your phone'

(13) Jeremy had his tires flattened.

(a. 'Somebody flattened Jeremy's tires'

(b. 'Jeremy got somebody to flatten his tires'

(c. 'Jeremy flattened his tires'

This finding shows us that the *have something done* is not a root-selecting causative. The next step in the analysis of the verbal morphology inside the causative would be to test the feasibility of high applicative morphology. As mentioned above, English does not have high applicatives, so this cannot be tested.

Curiously, low applicatives cannot be embedded under the *have something done* structure, despite the fact that according to Pylkkänen's theory both verb-selecting and phase-selecting causatives should allow such construction (14-15).

(14) *I had the letter sent you.

(15) *I had you the letter sent.

Whether this finding indicates the further development of Pylkkänen's framework, or it contests the feasibility of interpreting *have something done* as a causative falls outside the scope of the present paper, and since Pylkkänen (2008) does not actually define low applicative morphology as a criteria in her framework, I will go on with the analysis.

For the sake of completeness, I will also the examine adverbial modification, as analysing it will reveal interesting information about the nature of the *have something done* structure.

If we work under the assumption that *have something done* is not a root-selecting causative, as the selection analysis showed, we predict the VP modification of the caused event is possible. However, the lower attachment site below Cause does not seem to be so easily available for modifiers, as possible grammatical adverbial modifications seem quite limited. (16) presents a viable construction for one of the three interpretations of the *have something done* structure, where we can interpret the caused event as the modified event.

(16) I must have my work finished quickly.

'I must finish my work quickly'

Sentence (17) appears to be a feasible example for another one of the three interpretations of *have something done*, with an appropriate adverbial modification of the caused event. However, upon closer inspection we might find that this adverbial does not actually rule out the possibility of root selecting causative.

(17) Many had their homes destroyed completely.

'Something/Someone completely destroyed the homes of many.'

Pylkkänen shows a similar modification of the root-selecting zero causative and argues, that modifiers akin to "completely" actually combine directly with the root, not the verb, which means that a root selecting causative can still select for the resulting structure. She proves this by showing that the modifier can attach to the root even in a non-verbal environment. Therefore, the fact that the phrase "completely destroyed home" is grammatical and non-verbal may indicate that (17) does not help determine the size of the complement of Cause. However, due to the semantics of this interpretation of the *have something done* structure, there are fewer potential verbs to create a causative with, and these do not seem to build meaningful sentences with the same VP modifiers as seen with the other interpretations of *have something done*.

(18) ?? I had my car stolen quickly.

a. 'I *quickly got somebody* to steal my car'

b. *'Somebody quickly stole my car.'

(18) can only be understood if the adverbial combines with the causing event, so there is no ambiguity of what the modified event is, which is what we would expect from verb-selecting and phase-selecting causatives. Further conclusion will be drawn from this incompatibility of this particular interpretation of *have something done* a little later.

The third way to interpret the structure is modifiable by adverbials as predicted, show in (19).

(19) You can have something done well, you can have something done fast, or you can have something done cheap.

'You can get somebody to *do something well*, you can get somebody to *do something fast*, or you can *get somebody for little money* to do something.'

Although there are two things to note here. Firstly, "well" can be analysed as an adverbial combining directly with the root, the same way as "completely". Luckily for us, "fast done thing" is ungrammatical, so "fast" does attach at the level that we need it to disprove that *have something done* is root-selecting.

(20) a well-done thing

Secondly, in "have something done cheap" the adverbial can only modify the Cause VP, the alternative interpretation, (get somebody to do something cheap) is not meaningful. Of course, this does not disprove the verb-selecting or phase-selecting quality of *have something done*, since the VP modification of the Cause is free in all causative types, and we already have 'fast' as the example that we needed.

Let us now move on to the agent-oriented modification of the caused event. This type of VP modification does not seem to be available for the *have something done* structure. The agentive modifier in all sentences in (21) can only be understood as VP modifiers of Cause, in all interpretations of *have something done*.

(21) a. I had my car stolen on purpose.

'I purposefully made somebody steal my car'

b. I had my work finished enthusiastically.

'I finished my work enthusiastically'

Although, since the causer/agent of the causative 'have' and the understood implicit agent of the caused event refer to the same participant ('I') in sentences like (21b), we can hardly determine which agent the agent-oriented modifier combines with. The third interpretation on the other hand, does not seem to be able to incorporate agent-oriented modifier at either under or above Cause.

(22) Carl had his money stolen unwillingly.

a. *'Somebody unwillingly stole Carl's money'

b. *'Carl unwillingly experienced that someone stole his money'

All in all, our findings suggest that *have something done* is a verb-selecting causative. I now move on the next step in the analysis, examining the Voice-bundling feature of the construction.

4.3.2. Voice-bundling

As mentioned above, the main difference, or in case of verb-selecting causatives, the only difference observable between Voice-bundling and Non-Voice-bundling causatives is that

the latter can create unaccusative causatives, whereas in case of the former it is impossible. To argue that the *have something done* structure can build unaccusative causatives, we first need to determine if the argument in the subject position is not an external argument, that is, the causer.

As Pylkkänen suggests, we expect to be able to passivize a structure with an external argument. However, no passive structure is available for the *have something done* causative, regardless of the interpretation, which may suggest that the overt subject is not an external argument.

(23) *A book was had stolen (by me).

It still needs to be proven that there is no implicit causer present in the structure, and that the structure is actually causative. As per Pylkkänen (2008), adding a 'by' phrase (p.) to the structure may help recover implicit arguments, that is the external argument or potentially the causing event.

(24) I had my hair done by a professional.

'I made a professional do my hair'

(25) Ed had millions stolen by an old enemy.

'An old enemy stole millions from Ed'

(24-25) confirm that two of the interpretations of *have something done* do actually contain an external argument; therefore, they cannot build unaccusative causatives, and thus prove to be Voice-bundling.

As for the third interpretation, (26) illustrates an interesting case, where the 'by' phrase seemingly makes an implicit causing event overt, which is exactly what we were looking for.

(26) I almost had a book stolen by accident.

'I accidentally almost stole a book'

Indeed, the causative interpretation (An accident has caused my to almost steal a book) also seems viable. However, the fact that there is virtually no other way to show an implicit causing event in this interpretation of the structure, as well as the fact that by simply adding a qualifier to the phrase, the sentence becomes ungrammatical, (27) suggests that it is just an accidental lexical feature of 'accident that it can be inserted into the structure the way it can.

(27) *I almost had a book stolen by a funny accident.

In conclusion, we can identify the *have something done* causative as a verb-selecting, Voice-bundling causative. However, due to the multiple inconsistencies in the analysis in two of the three interpretations of the structure, we could argue that only the one that is compatible with Pylkkänen's framework can be viewed as a causative, which is coincidentally the same one that Lyons (1967) also pointed out.

4.4. Causativiser suffixes

As mentioned earlier, Pylkkänen (2008) observes that most overt verbal suffixes in English have a causitiviser meaning. In the next section I am going to analyse these English causativiser suffixes as causative constructions and place them in Pylkkänen's framework according to the same criteria as described above: first the selection parameter by examining adverbial modification and verbal morphology, then the Voice-bundling parameter. (28) lists the suffixes included in this analysis, as well as a derived verb for each as an example.

(28) a. -ate: activate = 'cause something to become active'

b. -en: sweeten = 'cause something to become sweet'

c. -(i/e)fy: humidify = 'cause something to become humid'

d. -ize/-ise: finalize = ‘cause something to become final’

It is important to note that many of the English verbs ending in one of these suffixes has a root that does not have an associated nominal form available in the English language, which should be no surprise considering their etymology. Still, their underlying causative meaning is recoverable.

Furthermore, all of these suffixes have significant variation in terms of the word categories that they combine with, or indeed, they often combine with category-less roots. The exact semantic changes they introduce to the roots they select are also often more complex than those in (28), or may not have a causative meaning at all (classify, threaten, agonize, urinate).

The scope of this analysis is restricted verbs with an indisputable causative meaning, with the general semantic scheme shown in (28), and for the sake of the current analysis I will hypothesise that instances where these suffixes carry a non-causitiviser meaning are a separate structure with identical surface representation. (cf. the non-causative meanings of the *have something done* structure)

(29) Mary activates the system.

Mary CAUSE [the system BECOME active]

I am going to treat these four suffixes as analogous in terms of structure for the sake of this analysis, until I discover a difference that is relevant to Pylkkänen’s framework.

4.4.1. Selection

Once more, my investigation of the selection parameter will start by examining the morphological elements that can appear between the root and the Cause. At earlier points in this paper we have utilized these same suffixes as examples, in fact, as the only reliable examples of verbal morphology occurring between the root and the analysed Cause to rule out the possibility that the Cause was root-selecting. Before jumping to the conclusion, however, that

these causativizer suffixes are root-selecting themselves, let us not discard the possibility of verbal morphology between the root and these suffixes.

As detailed earlier, we have reason to believe that prefixes are non-category-defining, which means they are not plausible examples of verbal morphology. Verbs like in the example (30) exist; however, it is either not sound to argue that that the prefix combined with the root before the suffix, (*destabil, *dissatis, *reawake) or even if it plausibly could (invalid + ate), it does not form a verb from the root, the suffix does.

(30) a. destabilize

b. dissatisfy

c. invalidate

d. reawaken

Let us move on to the other feature of causatives that reveals information about the size of their complement, the adverbial VP modification of the caused event.

It is clear that the agent-oriented adverbial modifiers in sentences in (31-34) cannot be understood as pertaining to the caused event. This is unsurprising, since the caused event in case of the causativizer suffixes is virtually never agentive (‘become humane/glorious etc.).

(31) The author humanized the villain on purpose.

(32) The people of a country should not glorify a tyrant willingly.

(33) John unwillingly alienated all of his friends.

(34) Jennifer enthusiastically enlightened George.

As we expect causativiser suffixes to be root-selecting causatives, it is not enough to show that agent-oriented modification is impossible for caused events in order to confirm they are not verb-selecting. Due to the semantics of causativiser suffixes, it is somewhat tricky to distinguish whether an non-agent-oriented adverbial modifies the caused event or the causing

event, considering that the main difference between the two events is the agent. In case of (35) for example, how can we differentiate the potential meanings?

(35) I quickly finalized my answer.

a. ??‘I *quickly caused* my answer to become final’

b. ?? ‘I caused my answer to *quickly become* final’

Consider however the sentences in (36-37).

(36) I quickly sweetened the tea before serving it.

(37) Jonathan started to slowly fertilized the soil.

(38) The farmer immediately electrify the fence when he arrived.

These causatives entail a caused event, the speed of which is unaffected by that of the causing event. If we interchanged the adverbial between the sentences, it would only affect the causing event, it would take the same amount of time for the sugar to dissolve in the tea, the soil to become fertile or the fence to be filled with electricity. Therefore, we can rule out the interpretations in (39-41).

(39) *‘I caused the tea to *quickly become* sweet before serving it.’

(40) *‘Jonathan started to cause the soil to *slowly become* fertile.’

(41) *’The farmer caused the fence to *immediately become* electric when he arrived.’

Similarly (42) demonstrates a sentence where it becomes clear that the VP-modifier affects the causing event only.

(42) Christopher detonated the bomb remotely.

‘Christopher *remotely caused* the bomb to detonate.’

In conclusion, our findings suggest that causativizer suffixes indeed exemplify root-selectin causatives, based on their both of the examined features. I will now continue with testing the Voice-bundling properties of the construction.

4.4.2. Voice-bundling

In this section we need to examine if unaccusative causatives are possible with causativizer suffixes, so we can identify if they are Voice-bundling or non-voice bundling. Unaccusative causatives cannot have external arguments, which are essential for causitivizer suffixes, as shown in the semantic representation in (29).

We might consider the following examples, however, where the 'causer' of the sentence can seemingly be removed:

(43) The soldiers detonated the bomb. – The bomb detonated.

(44) John awakened Mary. – Mary awakened.

(45) The chemists crystallized the copper. – The copper crystallized.

(46) The students solidified the liquid. – The liquid solidified.

Certain verbs with causativizer suffixes can act like ergatives, though importantly, this is not a universal property of any of the four suffixes.

(47) *The belief validated.

(48) *The pig fattened.

(49) *The answer finalized.

(50) *The fence electrified.

The question is whether the sentences without the 'causer' argument retain the causative meaning. Pylkkänen (2008) states that it is not the case. In her study, she examines a pair of verbs with the suffix -en, and identifies two homophonous phonemes, one causative and one

intransitive, both of which can attach to the root √hard or √awake, but not to √flat. We can infer that the same stand for the other three suffixes.

Having considered all the relevant features of the causativizer suffixes, we can conclude that they can be classified as root-selecting, non-voice bundling causatives in Pylkkänen's framework.

5. Double object construction

At this point I will turn my focus back to double object constructions. Various different approaches have been introduced to account for the special workings of the DOC including its arguments and alternation with the to-construction. Halliday (1967), for example, identifies the PP as an adjunct, arguing for a slight difference in meaning between the DOC and the to-construction. As demonstrated in Lipécz's (2010) comprehensive examination on the evolution of DOC analysis, a diverse array of linguistic theories have been utilized outside of the mainstream generative theory (Chomskyan framework), ranging from Lexical-Functional Grammar, to Construction Grammar, and the event structure approach of Rappaport Hovav and Levin (2008).

Lyons (1967) draws a strong semantical parallel between causatives and DOCs. He claims that the ditransitive *give* is essentially a causative is to "stative" and "dynamic" (p. 392) posessive sentences. The interpretation of double object construiction as a causative is of particular interest to this present paper.

5.1. Double object construction as causative

Apart from Lyons (1967), many others have also interpreted DOCs, or the ditransitive *give* in particular, as causative, including Oehrle (1976) and Harley (2000). (51) shows the semantic representation of this idea:

(51) a. I gave Mary a book.

b. I CAUSE [Mary HAVE a book]

(Pylkkänen, 2008, p. 15)

If we interpret the double object construction as a causative not only semantically, but structurally, we should be able to analyse it within Pylkkänen's framework classifying causative structures. I would like to point out, however, that in her study Pylkkänen (2008) argued against the causative reading of DOC, saying that the causative interpretation is hard to maintain across all ditransitive verbs, because verbs other than 'give' do not always entailed the resultant state expressed in (51), desired for causatives. Indeed, analyses of DOC as a causative often restrict their focus solely on *give.* (Harley, 2000)

In any case, I will attempt to apply Pylkkänen's classification system to DOCs, as it should help determining the soundness of such a theory, as well as potentially make further discoveries about the nature of both DOC and Pylkkänen's system. I will hypothesize that the causative interpretation can be expanded to all DOC structures, but I will keep a special focus on *give*.

In my analysis of the DOC, I am going to examine the same features as with other causative constructions. As such, I will start with analysing the selection parameter, first by examining the morphological restrictions, if any, the VP-modification. After that I will move on to the Voice-bundling features of DOC.

Before I start this analysis, however, further clarification regarding the construction is required. Since we are going to look at the selection of the causative head, as well as the morphology between the Cause and the root, we need to define what exactly we identify the causative head and the root of the caused event is in DOC, as it is not self-explanatory just by looking at the surface representation of the structure:

(52) Billy gave Hannah flowers.

For an answer, I will turn to the analysis of Newson et al. (2006) on the construction. They provide the following event structure to describe the ditransitive *give*:

e = e1 → e2 → e3 :

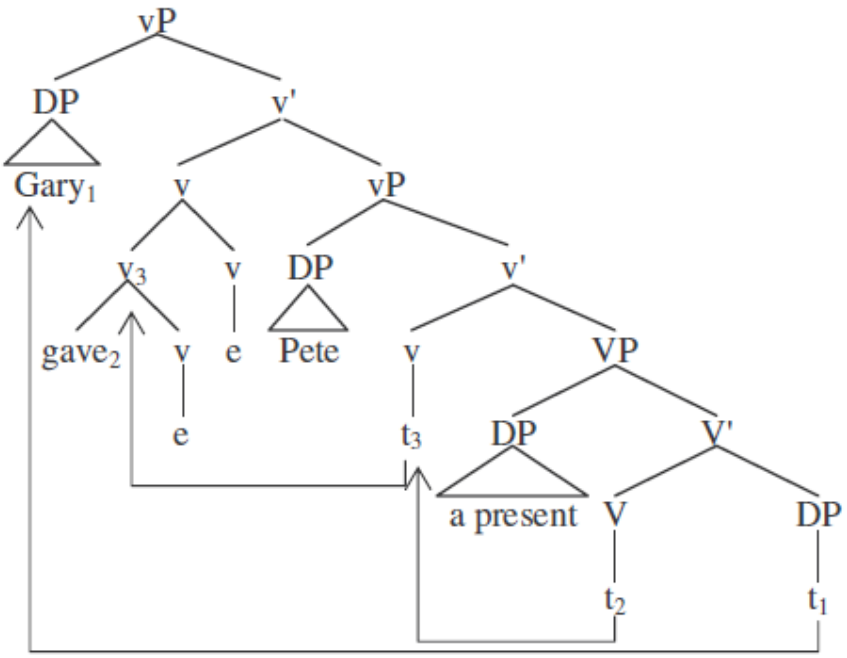
e1 = 'X does something'

e2 = 'Y changes location or possession'

e3 = 'Y is in a certain location or possession'

(Newson et al., 2006, p. 187)

Based on this event structure, they propose an analysis of the DOC that helps interpret it in the framework of X-bar theory:



(Newson et al., 2006, p. 188)

As visible in the tree above, they suggest that *give* is base generated as the head of the VP, and two further light verbs (vPs) appear as bound zero morphemes, prompting the movement of *give*.

Following this theory, I will hypothesize that the causative head is a bound zero morpheme, similarly as in the zero causative (Pylkkänen), and *give* constitutes the root of the caused event. I will analyse the construction based on this hypothesis to fit it into Pylkkänen's framework.

5.1.1. Selection

To determine the selection size of the causative, I will first examine the morphological restrictions between the root and the Cause.

Clearly, *give*, the primary focus of the causative interpretation of DOCs, has no suffixes or prefixes attached before it combines with the hypothesized causative zero morpheme. Looking at other ditransitive verbs, we can find both suffixes and prefixes on them:

(53) The authorities refused him a visa.

(54) Several patients were waiting to be allocated a bed.

Following the expanded causative interpretation of DOCs, this finding seems to disprove that they are root-selecting causatives.

As high applicative morphology cannot be tested in the English language, I am going turn to the other criterion that differentiates verb-selecting causatives and phase-selecting causatives, agent-oriented modification of the caused event.

(55) Billy gave Hannah flowers enthusiastically.

(56) I happily sent my sister some money.

In (55-56) clearly only the 'causer', that is *Billy* and *I*, can be understood as enthusiastic and happy, respectively, the "agent" of the caused event cannot. In fact, the caused event can hardly be considered agentive (cf. Lyons (1967, p. 392) describing the resultant event of ditransitives as "stative"). This finding proves that DOCs cannot be phase-selecting causatives.

Similar to causativizer suffixes, it is hard in case of DOCs to draw the line between adverbial modifications of the caused event and the Cause, if we only examine non-agent-oriented modifiers. Therefore, in a sentence like (57) it would be all but impossible to determine whether *quickly* can modify the caused event or not.

(57) He quickly gave her some flowers.

Fortunately, we would only need the answer to decide between verb-selecting and root-selecting, and we have already determined that DOCs cannot be root-selecting causatives due to the verbal morphology that is possible between the root and the causative head. We can then conclude that DOC is a verb-selecting causative.

5.1.2. Voice-bundling

The only question remaining to fully place the DOC within Pylkkänen's framework is deciding whether they have Voice-bundling properties or not. In order to find it out we need to determine if unaccusative causatives are possible with DOC constructions or not.

Missing the external argument, which unaccusative causatives entail, does not seem to be feasible with DOCs. In fact, Harley (2000) specificcaly identifies double object verbs as having external argument selecting head. Marantz (1993, as cited in Pylkkänen, 2008 p. 12), too identifies external arguments as a necessary part of such constructions.

Thus, the impossibility of unaccusative causatives identifies double object constructions as Voice-bundling verb-selecting causatives.

6. Conclusion

This paper has briefly covered some of the biggest challenges that causative and double object constructions mean for syntactic analyses, as well as the different theories that have been used to explain or examine their unique behaviour. Pylkkänen's (2008) framework, designed to account for the features of causative structures and to classify causatives, provides a novel alternative way to approach these constructions.

I have argued that it could be worthwhile to expand this framework to analyse further causative constructions of English, beyond the one that was included in Pylkkänen's own study. Furthermore, as many linguists have suggested a close relation or analogy between double object constructions and causatives, I have attempted to include this construction in the framework as well. The ensuing comparative analysis, presented in a table alongside other tested causative structures, is presented in the table below:

	Root-selecting	Verb-selecting	Phase-selecting
Voice-bundling	zero causative, causativizer suffixes	have something done, double object constructions	make somebody do something
Non-Voice-bundling			

The analysis not only offers an alternative syntactic analysis of DOC, but it revealed interesting data regarding the examined causative construction. For example, it has challenged the causativity of the *have something done* constructions certain interpretations.

The analysis within the framework devised by Pylkkänen not only offers valuable insights into the syntactic features of causative and double object constructions but also lays the foundation for future research trajectories. Even more insight could be gained on

Pylkkänen's system as well as English causative syntax, for example the *have somebody do something,* the *get somebody to do something,* and the *cause somebody to do something* structures. Furthermore, even the to-construction variation of DOCs could be included in the scope of the analysis, since there are linguists (e.g., Harley, 2000) who suggest that this construction is also interpretable as a causative.

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