

Telicity-sensitive PPs modifying VP-shells

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1.	Introduction: Are the verb, the DO, and the IO sisters?	2
1.1	Double object structures	2
1.2	Problem 1 for V, DO, and IO as sisters: Coordination	3
1.3	Problem 2 for V, DO, and IO as sisters: Idioms	4
2.	The solution: The VP-shell analysis	6
3.	Supporting argument: Temporal modification of VP	9
3.1	Introduction to temporal modification of VP	9
3.2	Telicity and double objects (<i>give somebody something</i>)	10
3.3	Telicity and V-DP-PP (<i>give something to somebody</i>)	13
3.4	A potential link between these telicity-sensitive PPs and locality	16
4.	Conclusion	18
	References	18

Abstract

Looking at verb phrases (VPs) which contain both an indirect object and a direct object, e.g. *send my son a book*, the picture is slightly confusing. Data from e.g. coordination indicate that the indirect and the direct object form a constituent which excludes the main verb, whereas data from e.g. idiomatic expressions point toward the main verb and the direct object forming a constituent to the exclusion of the indirect object.

A parallel and similarly somewhat confusing picture results from the consideration of verb phrases (VPs) which contain both a direct object and a following preposition phrase (PP) as complement, e.g. *put something on the table/on the web*.

We hope to show how these seemingly contradictory data can be reconciled by means of the analyses in Larson (1988) and Kratzer (1995) (and also a much younger S. Vikner 1989) where the two objects/the object and the PP are not taken to be on the same level in the syntactic structure. This analysis will then be shown to also account for the fact that such VPs can be modified **both** by PPs that normally modify only atelic VPs (e.g. *for two years*) **and** by PPs that normally modify only telic VPs (e.g. *in two hours*), as in e.g.

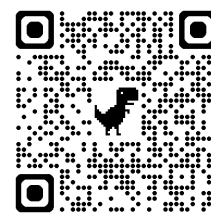
- (1) En. Because the club gave Liz the post of treasurer **for two years in two minutes**, ...
(2) Da. Fordi klubben gav Lis posten som kasserer **i to år på to minutter**, ...

Following the argumentation in Beck & Johnson (2004), we will also show why the two PPs cannot occur in the opposite order (i.e. telic before atelic, *in two minutes for two years*), and why only the telic PP (e.g. *in two hours*) can occur before the finite verb (*gave*) in (1) and (2).



←← This hand-out can be found under
<https://tinyurl.com/vikn-ZAS-telicity>

The SVG Syntax Tree Generator can be found under →→
<https://tinyurl.com/SVG-syntree>



1. Introduction: Are the verb, the DO, and the IO sisters?

1.1 Double object structures

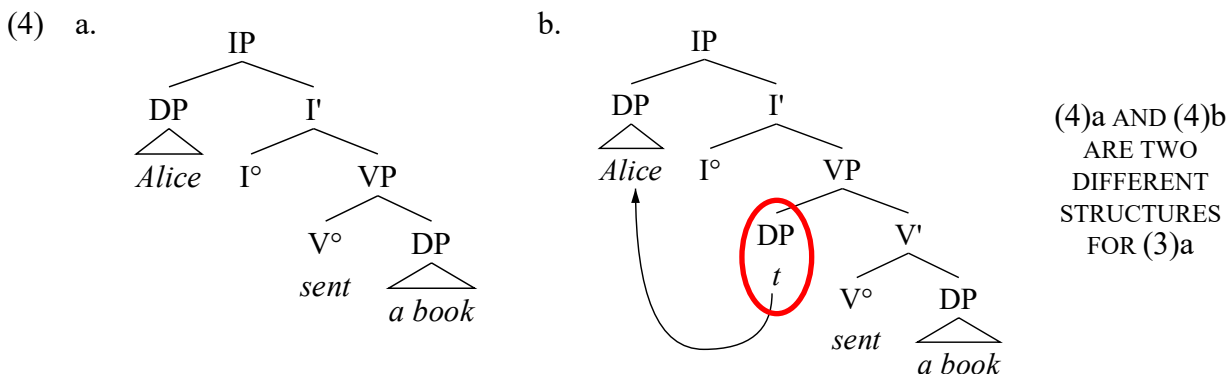
Some verbs in English (and other languages) have one object, and some have two objects: A single object, (3)a, or both a **direct object (DO)** and an **indirect object (IO)**, (3)b,c.

Because of their case in languages such as Faroese, German, Icelandic, Latin, and Old English, the direct object is sometimes called the **accusative object** and the indirect object the **dative object**, even if the single object of German (and Icelandic) verbs like *helfen* 'help', *folgen* 'follow', *gefallen* 'please' and *danken* 'thank' are (direct) objects, **not** indirect objects, despite having dative case.

When there are two objects, the direct object is typically associated with the θ -role **THEME**, whereas the indirect object is typically (not always) associated with the θ -role **BENEFICIARY/RECIPIENT**. These two θ -roles can be assigned either to a DP and a PP (e.g. *give something to somebody*, (3)b), or to two DPs, the so-called 'double-object construction' (e.g. *give somebody something*, (3)c).

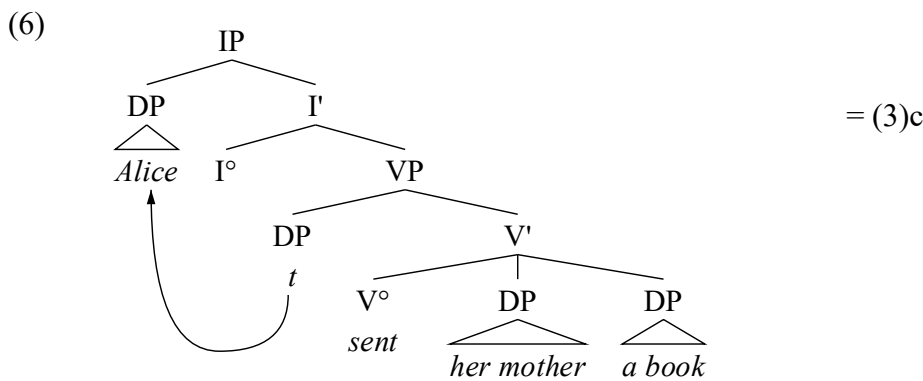
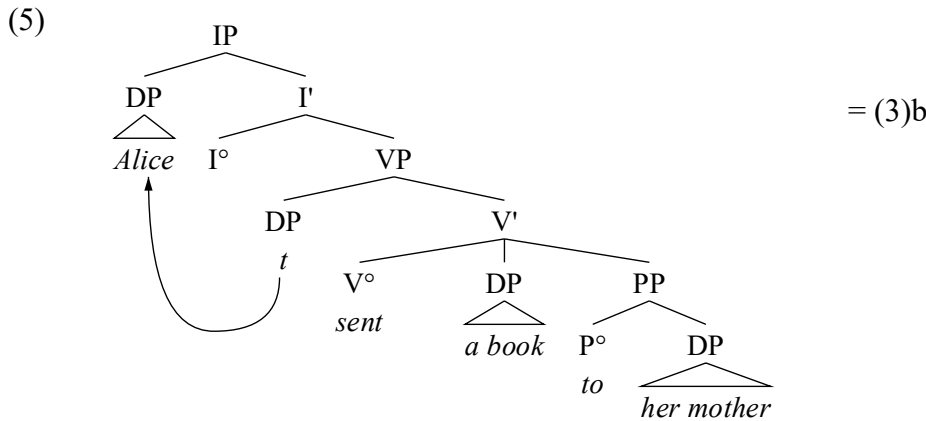
(3)	En. a.	Alice sent	[DP a book].
		SUBJ	OBJ
		AGENT	THEME
	b.	Alice sent	[DP a book] [PP to her mother].
		SUBJ	DIR OBJ \approx INDIR OBJ
		AGENT	THEME BENEFICIARY
	c.	Alice sent [DP her mother] [DP a book].	
		SUBJ INDIR OBJ DIR OBJ	
		AGENT BENEFICIARY THEME	

As we shall see, the structure of (3)a is relatively straightforward, whereas (3)b,c turn out to be much less so. However, first we want to introduce a complication to the analysis of all clauses, even (3)a: the so-called VP-internal subject analysis. Instead of taking the subject to be base-generated in IP-spec, as illustrated in (4)a, we will be using the analysis in (4)b that the subject is base-generated in VP-spec, and then it moves to IP-spec (e.g. for reasons of case assignment).



The VP-internal subject hypothesis goes back to Fillmore (1968) and McCawley (1970), but it receives the form it is given below in treatments like Fukui (1986, 55), Sportiche (1988), Koopman and Sportiche (1991), and McCloskey (1997). For two recent discussions applying this to Danish, see Vikner (2023a, 2023b).

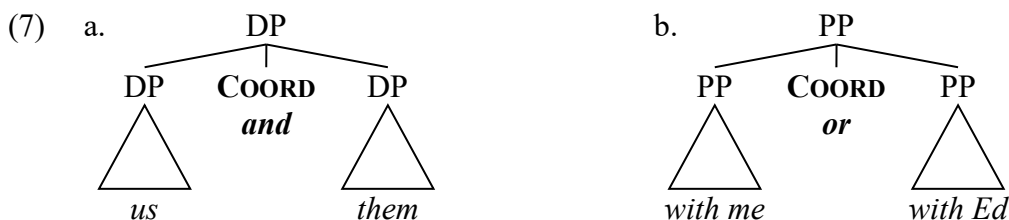
Perhaps the least complicated analysis of (3)b,c would be to give up the restriction to binary branching ("A node has at most two daughters") and allow VP to have three daughters, e.g.



However, (at least) two sets of facts speak **AGAINST** (5) and (6).

1.2 Problem 1 for V, DO, and IO as sisters: Coordination

The first of these two sets of problematic facts has to do with **coordination**, or to be more specific, it builds on the assumption that coordination always coordinates two constituents, cf. the following structures (where coordination itself is admittedly taken to be an exception both to binary branching and to headedness, i.e. "Every phrase is a projection of a head"):



The coordination-related problem for the analysis in (5) and (6) is that (8) and (9) are possible:

- (8) En. Alice sent [**a book to her mother**] and [**a bottle of wine to her father**].
 (9) En. Alice sent [**her mother a book**] and [**her father a bottle of wine**].

Such data provide support for the bracketed constituents, even though these bracketed constituents are **NOT** constituents under the analysis in (5) and (6).

1.3 Problem 2 for V, DO, and IO as sisters: Idioms

Let us now turn to the second problem for the analysis of V, DO, and IO as sisters. This second problem has to do with **idiomatic expressions**, where the data indicate that the main verb forms a constituent with the direct object, to the exclusion of the indirect one, even though the latter is closer to the verb. (Notice that underlining in this section indicates the idiomatic elements.)

It is commonly assumed that those parts of a clause that form an idiom also form a constituent (from Perlmutter 1970, 109; and McCawley 1988, 55, 66; to e.g. Carnie 2011, 264; Hornstein et al. 2005, 81; Koenenman and Zeijlstra 2017, 160; Larson 2010, 319; Poole 2011, 273; Radford 2009, 242; see also S. Vikner 2018).

Thus e.g. the VP in clauses with one object, (10)-(11), can constitute an idiom. This is why an idiomatic reading is retained even if the subject is changed, (10)b, (11)b, but it is lost if the verb or the object is changed, (10)c,d, (11)c,d. In the examples in this subsection, the idiomatic elements are underlined, and the elements that are changed from the first example in the set are in boldface.

- (10) En. a. Juliet stole his heart.
 b. **Joyce** stole his heart. (≈ a.)
 c. # Juliet **poached** his heart (≠ a.)
 d. # Juliet stole **his cardiac organ**. (≠ a.)
- (11) Da. a. Lars har lugtet luntten.
 b. **Linus** har lugtet luntten. (≈ a.)
 c. # Lars har **bemærket** luntten. (≠ a.)
 d. # Lars har lugtet **tændsnoren**. (≠ a.)
(L has smelled the fuse/the detonating cord, (a,b) = L has smelled a rat)

Also an entire VP in a double object clause can be an idiom:

- (12) En. a. Two massive - and, to give the devil his due, ...
 b. # Two massive - and, to **hand** the devil his due, ... (≠ a.)
 c. # Two massive - and, to give **the evil one** his due, ... (≠ a.)
 d. # Two massive - and, to give the devil **his reward**, ... (≠ a.)
 ... rather beautiful - bridges have been completed linking
 the island of Shikoku with the rest of Japan. (COCA)
- (13) Da. a. Lars rakte fanden en lillefinger.
 b. **Linus** rakte fanden en lillefinger. (≈ a.)
 c. # Lars **gav** fanden en lillefinger. (≠ a.)
 d. # Lars rakte **den onde** en lillefinger. (≠ a.)
 e. # Lars rakte fanden **en rebstige**. (≠ a.)
*(L handed/gave the devil/the evil one a little finger/a rope ladder,
 (a,b) = L gave the devil an inch ...)*

However, and this is crucial, in double object constructions (the *send my mother a book* examples) the verb cannot form an idiomatic expression with just the **indirect** object (according to Hudson 1992, 262; and O'Grady 1998, 304), even though the two are adjacent. Just as surprising is the fact that a verb in a double object construction can form an idiomatic expression with just the **direct** object, even though the verb and the direct object are **not** adjacent to each other on the surface. This is shown by only the verb and the direct object being crucial for the idiomatic reading, (14)c,e, (15)c,e:

- (14) En. a. Harry gave the lecture a miss.
 b. **Hector** gave the lecture a miss. (≈ a.)
 c. * Harry **handed** the lecture a miss. (≠ a.)
 d. Harry gave **the concert** a miss. (≈ a.)
 e. * Harry gave the lecture **an absence**. (≠ a.)
- (15) Da. a. Lars gav Morten den kolde skulder.
 b. **Linus** gav Morten den kolde skulder. (≈ a.)
 c. # Lars **rakte** Morten den kolde skulder. (≠ a.)
 d. Lars gav **Mette** den kolde skulder. (≈ a.)
 e. # Lars gav Morten **den frosne skulder**. (≠ a.)
 (*L gave/handed M the cold shoulder/the frozen shoulder*)

A completely parallel situation holds for data like (3)b, *Alice sent a book to her mother*. In such cases, the verb forms an idiom (and therefore a constituent at some level) together with the PP, but this constituent does not seem to include the direct object. Thus, the idiomatic reading is retained when the subject or the object is changed, (16)b,d, (17)b,d, but it is lost if the verb or the PP is changed, (16)c,e, (17)c,e:

- (16) En. a. Harry took Juliet to the cleaners.
 b. **Hector** took Juliet to the cleaners. (≈ a.)
 c. # Harry **accompanied** Juliet to the cleaners. (≠ a.)
 d. Harry took **Joyce** to the cleaners. (≈ a.)
 e. # Harry took Juliet **to the laundrette**. (≠ a.)
- (17) Da. a. Lars lagde lingvistikken på hylden.
 b. **Linus** lagde lingvistikken på hylden. (≈ a.)
 c. # Lars **anbragte** lingvistikken på hylden. (≠ a.)
 d. Lars lagde **fysikken** på hylden. (≈ a.)
 e. # Lars lagde lingvistikken **på reolen**. (≠ a.)
 (*L put/placed linguistics/physics on the shelf/bookcase, (a,b) = H stopped doing linguistics*)

Summing up the problems discussed in this and the previous subsection (§ 1.2 and § 1.3):

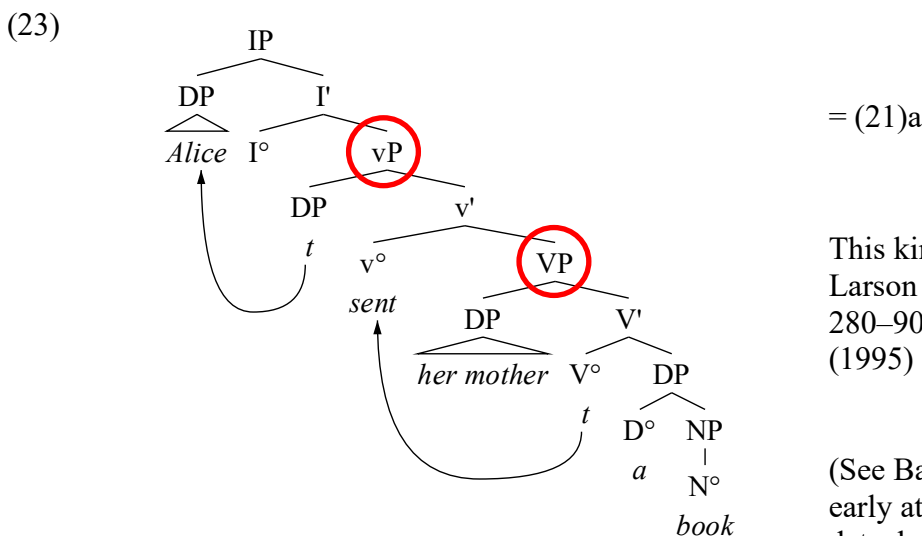
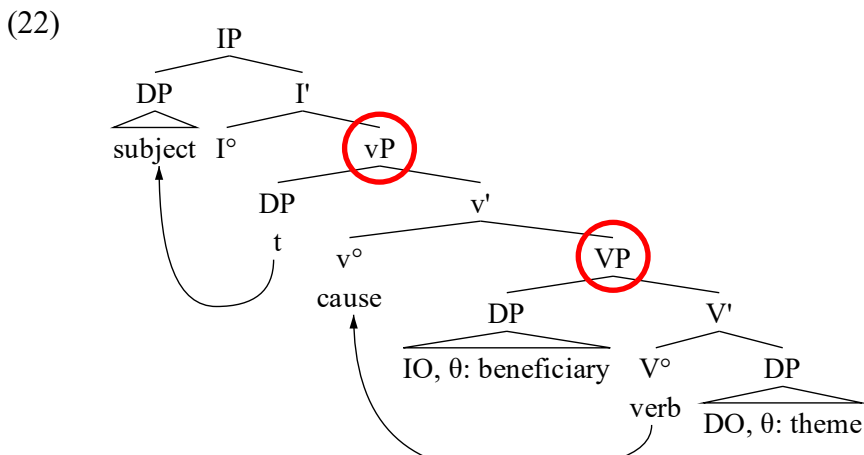
- (18) In the sequences V-DP-DP and V-DP-PP, it can be shown that the underlined parts of V-**DP-DP** and of V-**DP-PP** form a constituent, cf. the coordination data in (8)-(9) above.
- (19) In the sequences V-DP-DP and V-DP-PP, it can be shown that the underlined parts of **V-DP-DP** and of **V-DP-PP** form a constituent, cf. the data from idiomatic constructions in (14)-(17) above.
- (20) Finally, there is at least some indication that in the sequence V-DP-DP, it is **not** the case that **V-DP**-DP form a constituent.

2. The solution: The VP-shell analysis

In the analysis to be suggested of (3)c, i.e. (23) below, the verb *send* is taken to be a complex predicate the meaning of which includes something like "cause to have" or "cause to receive". In (21)a, *her mother* is the indirect object, the BENEFICIARY, while *a book* is the direct object, the THEME. The action described in (21)a causes the event in (21)b or the state in (21)c, where *a book* is still the direct object, the THEME, while *her mother* is now the subject.

(21) En. a.	Alice	sent	her mother	a book.	ACTION / CAUSE
	AGENT		BENEFICIARY	THEME	
b.	Her mother	received		a book.	RESULT
	BENEFICIARY			THEME	
c.	Her mother	has		a book.	RESULT
	POSSESSOR			THEME	

The parallels between (21)a,b are captured in the structure in (22), where there are two VPs instead of one, the lower one called **VP** and the higher one **vP** (sometimes, these are referred to as VP-shells, where the intuition is that they are different versions of the same VP, as they have the same verb at the centre). In the lower VP, the complement of V° is the direct object, the THEME, and the specifier (VP-spec) is the indirect object, the BENEFICIARY. The ditransitive verb then always has to move from the lower V° to the upper v° (the causative v°) where it precedes both objects: *give somebody something*.



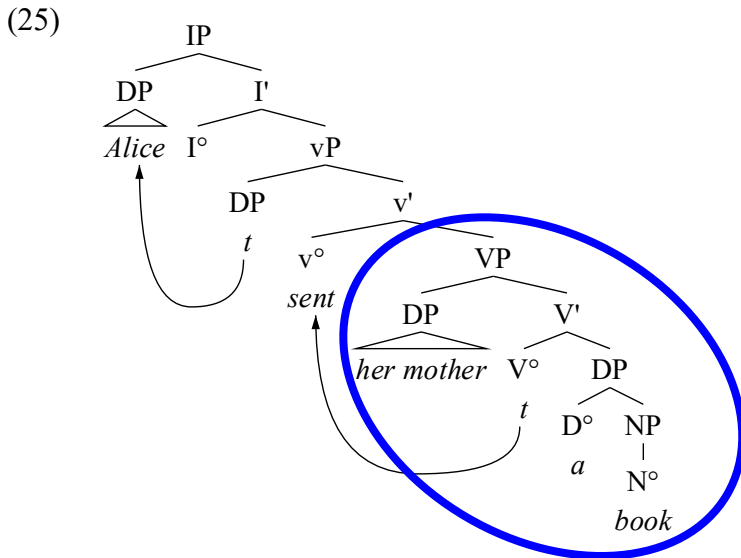
This kind of analysis goes back to Larson (1988), Chomsky (1995, 280–90, 302-307) and Kratzer (1995) (and also S. Vikner 1989).

(See Barss and Lasnik 1986 for an early attempt to account for such data, but without verb movement)

(Provided we take v° to be closely related to V° and very different from I° and C° , this analysis does not affect the generalisation that English main verbs always occur in V° (= v°/V°) and never leave the VP (= vP/VP), i.e. English main verbs never move to I° or C° .)

Now the data in (9), which were problematic for the analysis in (6) above, are much less problematic. The coordinated constituent in (9) = (24) corresponds to the (lower) VP in (22)/(23), which is a vP -VP analysis (= a VP-shell analysis) of *give somebody something*:

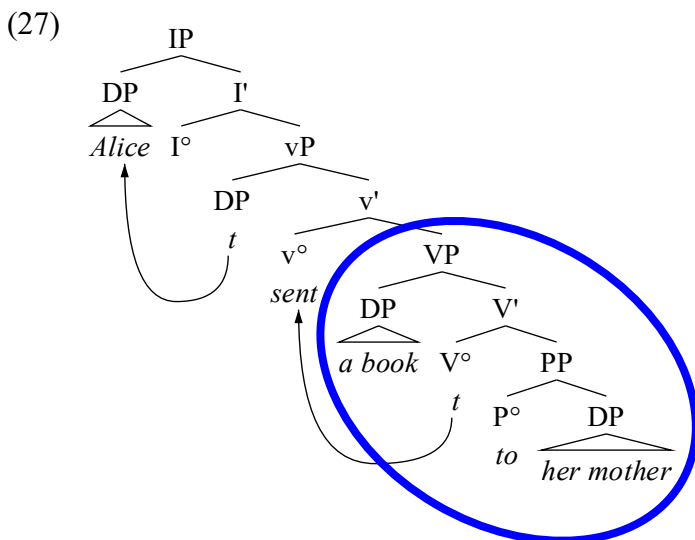
(24) En. Alice sent [vP **her mother a book**] and [vP her father a bottle of wine]. (=9)



Now [*her mother a book*] is a constituent, namely the VP, after *sent* has moved from V° to v° .

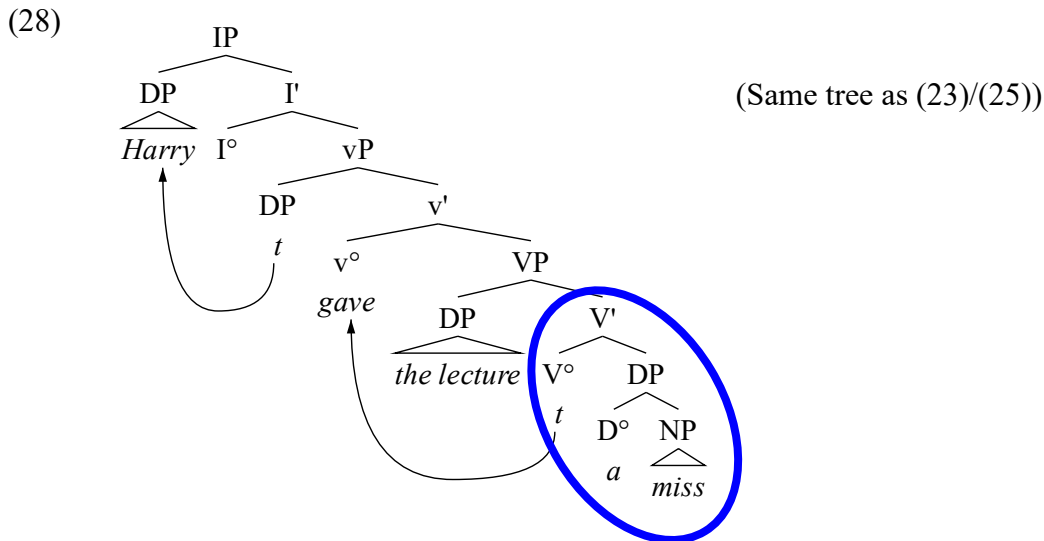
Similarly, the data in (8), which were problematic for the analysis in (5) above, are much less problematic. The coordinated constituent in (8) = (26) again corresponds to the (lower) VP in (22)/(23), which is a vP -VP analysis (= a VP-shell analysis) of *give something to somebody*:

(26) En. Alice sent [vP **a book to her mother**] and [vP a bottle of wine to her father]. (=8)



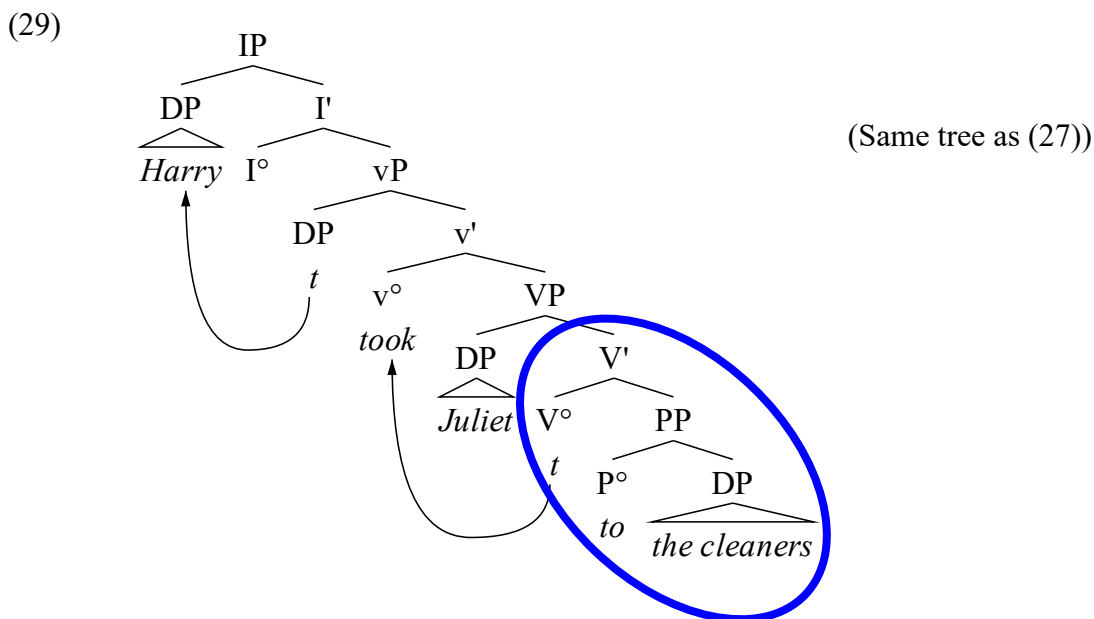
Now [*a book to her mother*] is a constituent, namely the VP, after *sent* has moved from V° to v° .

Let us now return to the data from idiomatic constructions of the V-DP-DP type, where the problem was that the verb seemed to form a constituent together with the direct object, excluding the indirect object which occurred in between the two. Here is an analysis of (14)a (and by extension of (15)a) along the lines of (22)/(23), i.e. a vP-VP analysis (= a VP-shell analysis):



Here *give* does form a constituent together with *the cold shoulder* at a particular point, namely the V', before the movement of *put* from V° to v°. Given that the verb (trace) forms a constituent with only the direct object (the V'), whereas that it never forms a constituent with only the indirect object, the asymmetric distribution of idiomatic expressions is accounted for (i.e. that an idiom may consist of the verb and the direct object and exclude the indirect object, but no idiom consists of the verb and the indirect object excluding the direct object).

If we now return to the idiomatic constructions of the V-DP-PP type, where the problem was that the verb seemed to form a constituent together with the PP, excluding the direct object which occurred in between the two. Here is an analysis of (16) (and by extension of (17)) along the lines of (22)/(23), i.e. a vP-VP analysis (= a VP-shell analysis):



Now [*put on the map*] does form a constituent at a particular point, namely the V', before the movement of *put* from V° to v°.

3. Supporting argument: Temporal modification of VP

3.1 Introduction to temporal modification of VP

Following Vikner (2021) and Vikner and Heycock (2024), there is a further argument in support of VP-shells as in (22)/(23), and it has to do with temporal modification by means of a PP. As in Vikner and Vikner (1997, 270) (and in discussions referred to there), we assume (at least) the following aspectual verb classes (*Aktionsarten*): events, processes, and states.

Processes and **states** have in common that they are temporally unbounded (= atelic), see (30)a,b, because the speaker abstracts away from their beginning and end. They are different in that states are completely static, involving no change at all, whereas processes are dynamic, as they admit gaps and internal changes. In other words, in a process, every subpart is slightly different from the preceding subpart, whereas in a state every subpart is exactly like the preceding subpart. (In Vendler 1967, 104, processes are called “activities”.)

	ASPECTUAL VERB CLASSES (AKTIONSPORTER):	(see also Aarts 2011, 273)
(30) a.	Sue <u>hates</u> cheese. STATE	
b.	Sue <u>danced</u> at the party. PROCESS (= ACTIVITY)	
c.	Sue <u>painting</u> her house. COMPLEX EVENT (= ACCOMPLISHMENT)	
d.	Sue <u>recognised</u> her old friend. PUNCTUAL EVENT (= ACHIEVEMENT)	

In contrast, **events**, both **complex** and **punctual** ones, are bounded (= telic), see (30)c,d, as they finish with a completion, i.e. they have a built-in endpoint. (In Vendler 1967, 102–3, complex and punctual events are called “accomplishments” and “achievements”.)

Telicity can be tested for in various ways, e.g. the following (cf. Dowty 1979, 57): If somebody were asked halfway through *X-ing* whether they had *X-ed*, the answer would be *yes* for atelic *Aktionsarten* (e.g. *Have you looked for the book?*, (32), (33)), but *no* for telic *Aktionsarten* (e.g. *Have you found the key?*, (35), (36)). All *Aktionsarten* are thus either telic or atelic:

- (31) a. **atelic** (is not temporally bounded): processes and states
 b. **telic** (has an endpoint): complex events and punctual events

Depending on the telicity of an example, different types of temporal modification are allowed, as described for English, French and Danish in C. Vikner (1994, 148–49) (and in many other places, incl. Vendler 1967, 101; Fillmore 1975, 36; Dowty 1979, 56, 60; Dahl 1981, 79, 84; Krifka 1989, 166–70; Smith 1991, 157–59; Krifka 1992, 32).

states

(atelic, En. *for*/Da. *i*)

- (32) En. a. ... because she missed licorice **for** three years.
 b. * ... because she missed licorice **in** three years.
 Da. c. ... fordi hun savnede lakrids **i** tre år.
 d. * ... fordi hun savnede lakrids **på** tre år.

processes

(atelic, En. *for*/Da. *i*)

- (33) En. a. ... because he looked for the book **for** half an hour.
 b. * ... because he looked for the book **in** half an hour.
 Da. c. ... fordi han ledte efter bogen **i** en halv time.
 d. * ... fordi han ledte efter bogen **på** en halv time.

- (34) En. a. ... because they worked in Trondheim **for** three years.
 b. * ... because they worked in Trondheim in three years.
 Da. c. ... fordi de arbejdede i Trondheim **i** tre år.
 d. * ... fordi de arbejdede i Trondheim på tre år.

complex events

(telic, En. *in/Da. på*)

- (35) En. a. * ... because he found the book for half an hour.
 b. ... because he found the book **in** half an hour.
 Da. c. * ... fordi han fandt bogen i en halv time.
 d. ... fordi han fandt bogen **på** en halv time.
- (36) En. a. * ... because they wrote the essay for three hours.
 b. ... because they wrote the essay **in** three hours.
 Da. c. * ... fordi de skrev opgaven i tre timer.
 d. ... fordi de skrev opgaven **på** tre timer.

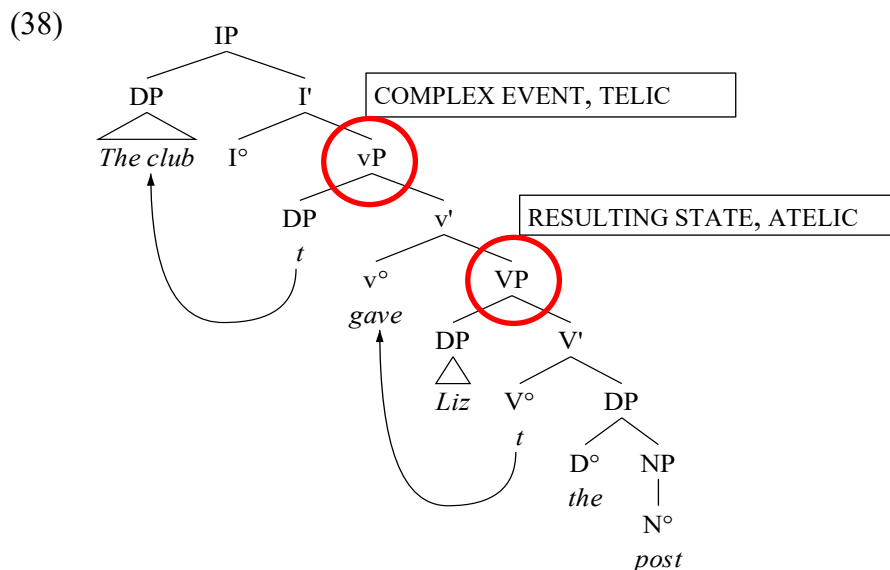
So far, the two types of telicity-sensitive PPs would seem to be in **complementary distribution**, but this may be about to change.

3.2 Telicity and double objects (*give somebody something*)

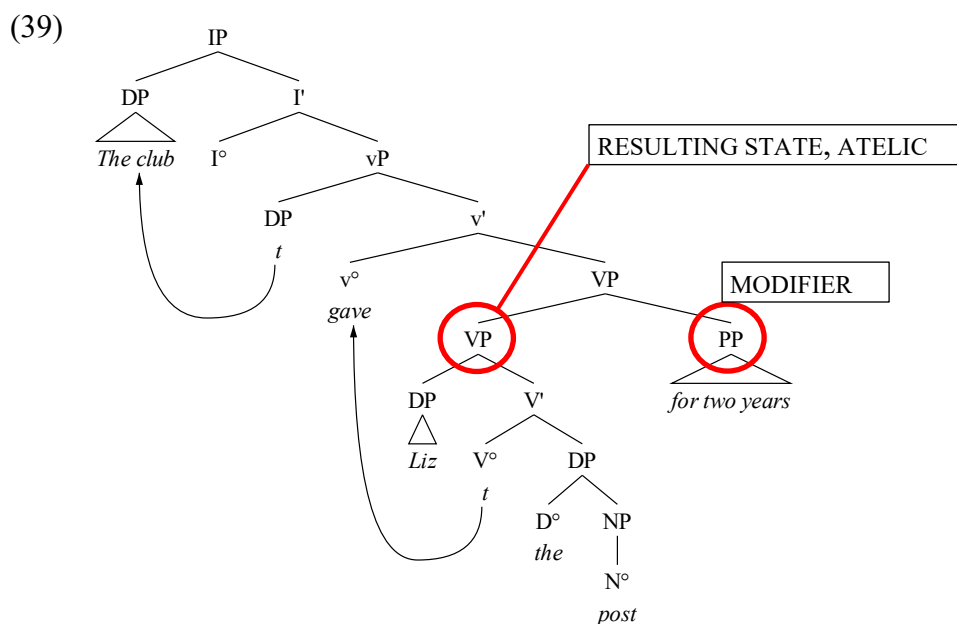
A surprising fact concerning clauses with double objects is that they allow **both** types of temporal modification (although these unsurprisingly have two rather different interpretations):

- (37) En. a. ... because the club gave Liz the post as treasurer **for** two years
 b. ... because the club gave Liz the post as treasurer **in** two minutes.
 Da. c. ... fordi klubben gav Lis posten som kasserer **i** to år.
 d. ... fordi klubben gav Lis posten som kasserer **på** to minutter.

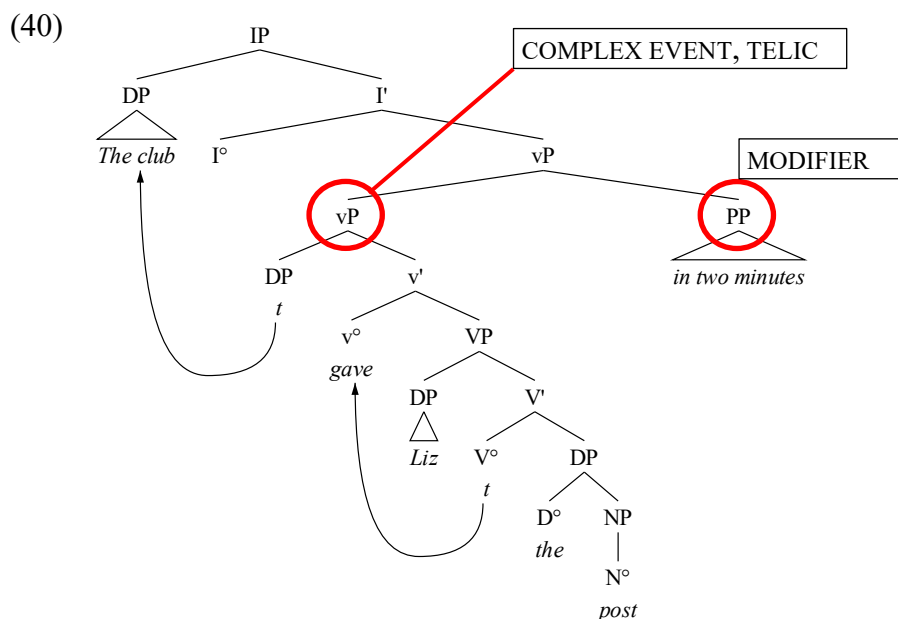
This can be accounted for within the analysis in (22)/(23) above, as seen in (38) below (following the argumentation in Beck and Johnson 2004). VP is a resulting **state** (atelic, temporal modification with *for/i*), whereas the entire vP is a **complex event** (telic, temporal modification with *in/på*):



The final PP *for two years* in (37)a,c is interpreted as right-adjoined to VP, i.e. modifying the atelic resulting state, so that the resulting state (i.e. Liz having the post) lasted for two years:



The final PP *in two minutes* in (37)b,d, is interpreted as right-adjoined to vP, i.e. modifying the whole complex event, so that the complex event (i.e. the club giving Liz the post) took two minutes:

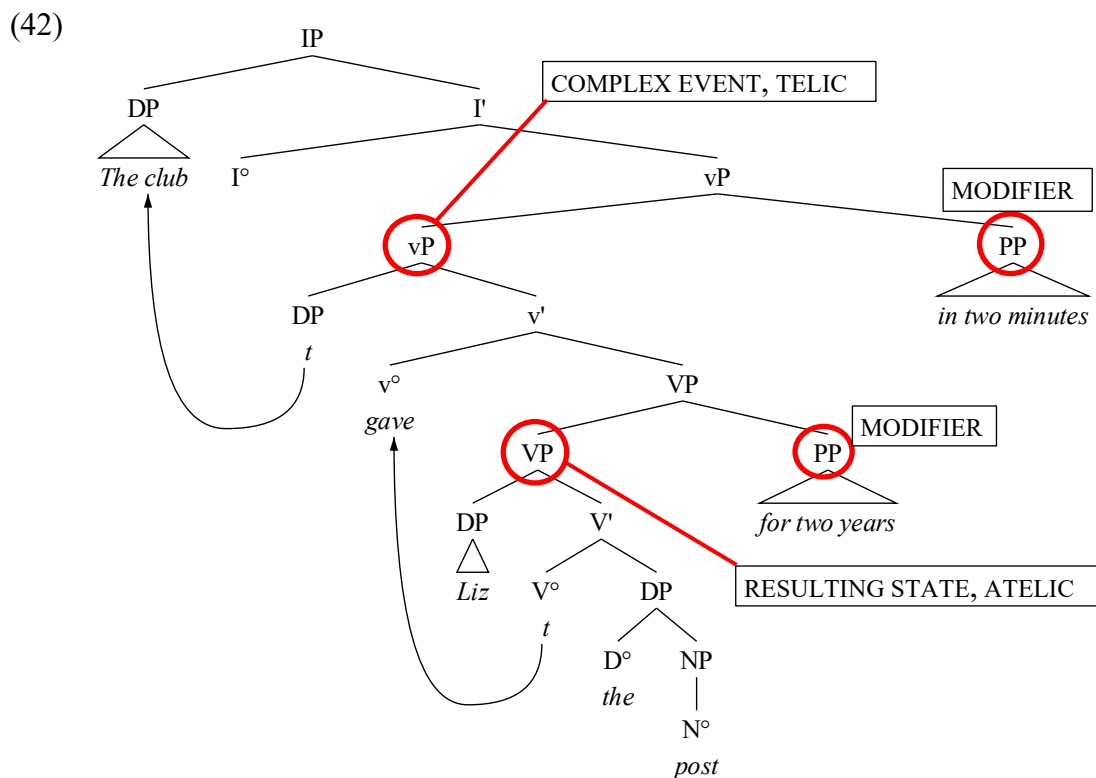


This analysis not only accounts for the data in (37), it also makes two further predictions. The first is that both types of PP may be present at the end of the clause only in one of the two logically possible orders. Because the VP is inside vP, the *for/i*-PP that modifies the atelic VP must precede the *in/på*-PP which modifies the telic vP:

- (41) En. a. ... because the club gave Liz the post as treasurer **for** two years **in** two minutes.
 b. # ... because the club gave Liz the post as treasurer **in** two minutes **for** two years.
 Da. c. ... fordi klubben gav Lis posten som kasserer **i** to år **på** to minutter.
 d. # ... fordi klubben gav Lis posten som kasserer **på** to minutter **i** to år.

((41)b,d are actually possible, hence no *, but they have a slightly strange interpretation, hence #, where the club repeatedly gives/transfers the post to Liz over a period of two years, and each transfer takes two minutes. In this interpretation, *gave Liz the post as treasurer* must be a telic vP since it can be modified by *in two minutes*, but *gave Liz the post as treasurer in two minutes* is then re-interpreted as a repeated/habitual event, an atelic vP, which is then modified by *for two years*, cf. (54)d/(55)d below).

Abstracting away from the fine print immediately above, the structure of (41)a,c is as follows:



Admittedly, a potential alternative account for the difference in grammaticality between (41)a,c and (41)b,d could be that in (41)a,c, it is the the direct object DP which is modified by the *for/i*-PP, i.e. that in (41)a,c, there is a DP [*the post of treasurer for two years*]/[*posten som kasserer i to år*]. This is not a viable analysis, however, as this constituent does not seem particularly well-formed e.g. in cleftings, whereas cleftings of the DP without the *for/i*-PP as modifier are perfectly fine:

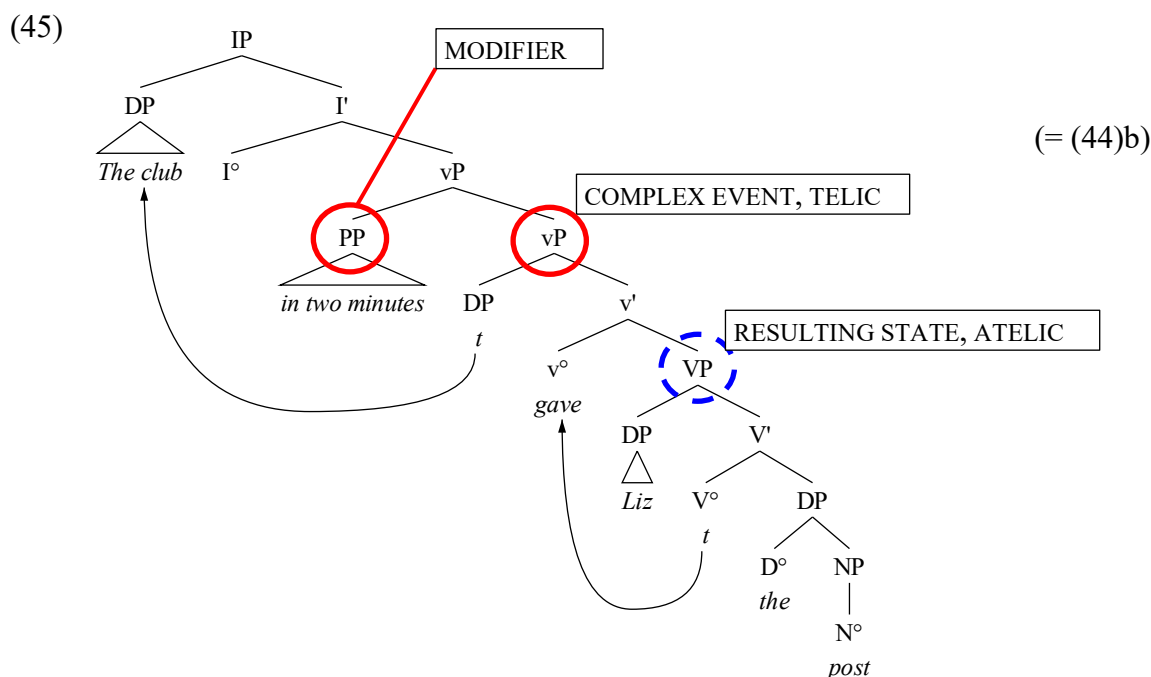
- (43) En. a. ?? It was the post of treasurer for two years that I heard that the club gave Liz ____.
 b. It was the post of treasurer that I heard that the club gave Liz ____ for two years.
 Da. c. ?? Det var posten som kasserer i to år som jeg hørte at klubben gav Lis ____.
 d. Det var posten som kasserer som jeg hørte at klubben gav Lis ____ i to år.

Given that (41)a,c are also perfectly fine, it would seem justified to take them to be related to (43)b,d rather than to (43)a,c, even though it must be admitted that examples with the structure of (43)a,c do exist, e.g. *They gave her [the post of president for life]*.

A further consideration against the reanalysis of (41)a,c along the lines of (43)a,c is that such a reanalysis is not at all possible in the otherwise parallel case of (50)a,c below.

The second prediction following from (39)/(40) is that an *in/på*-PP is possible in the clause medial adverbial position preceding the finite main verb (i.e. left-adjoined to vP), but not a *for/i*-PP:

- (44) En. a. # ... because the club **for** two years gave Liz the post as treasurer
 b. ... because the club **in** two minutes gave Liz the post as treasurer
 Da. c. # ... fordi klubben **i** to år gav Lis posten som kasserer
 d. ... fordi klubben **på** to minutter gav Lis posten som kasserer



The reason why only the PPs that modify telic events are possible here is that the position of the PP in (44) precedes the finite main verb, the position of which is inside the vP but outside the VP, as seen in (45) above. Thus a PP preceding the finite main verb can be interpreted as adjoined to (and modifying) the telic vP (i.e. the club giving Liz the post) but not as adjoined to (and modifying) the atelic VP (i.e. Liz having the post).

(Also here, (44)a,c are actually possible, with the slightly strange reading where the club repeatedly gives the post to Liz over a period of two years. In this interpretation, *gave Liz the post as treasurer* is interpreted as a repeated/habitual event, an atelic vP, which is then modified by *for two years*.)

An analysis in terms of vP and VP can thus account for (37), which shows that some clauses with two objects (i.e. examples of the type *give somebody something*) contain both a telic vP and an atelic VP (with the atelic VP inside the telic vP), as modification is possible both with an *in/på*-PP and with a *for/i*-PP. This also accounts for some possible and impossible orders of an *in/på*-PP and a *for/i*-PP in (41)a,b as well as for the interpretation of a temporal PP in medial position i (44)a,b.

3.3 Telicity and V-DP-PP (*give something to somebody*)

Another vP-VP analysis was already applied to V-DP-PP cases, as shown in (29) above, and given in (47) below in a form completely parallel to (38) above. This shows that a vP-VP analysis can also account for data like those in (46), which illustrate that also clauses with an object and a following PP-complement (i.e. examples of the type *give something to somebody*) can have both a telic and an atelic interpretation, just as we have already seen in the double object examples (i.e. *give somebody something*), in that modification is possible **both** with an *in/på*-PP and with a *for/i*-PP:

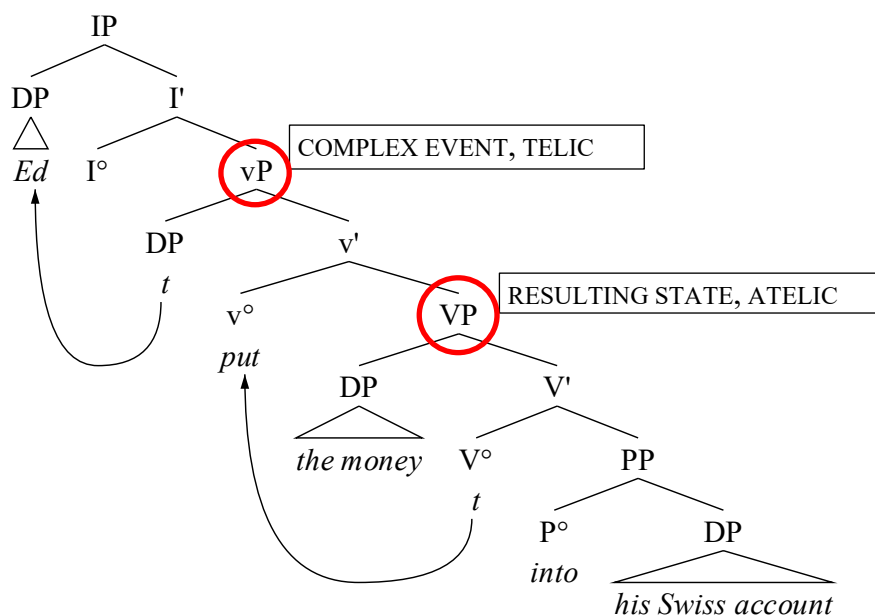
- (46) En. a. ... because Ed put the money into his Swiss account **for** two years
 b. ... because Ed put the money into his Swiss account **in** two minutes.
 Da. c. ... fordi Ib placerede pengene på sin schweiziske konto **i** to år.
 d. ... fordi Ib placerede pengene på sin schweiziske konto **på** to minutter.

As already mentioned above, the relevant reading of (46)a,c is the one in which there is a single event of depositing the money, which remains in the account for two years.

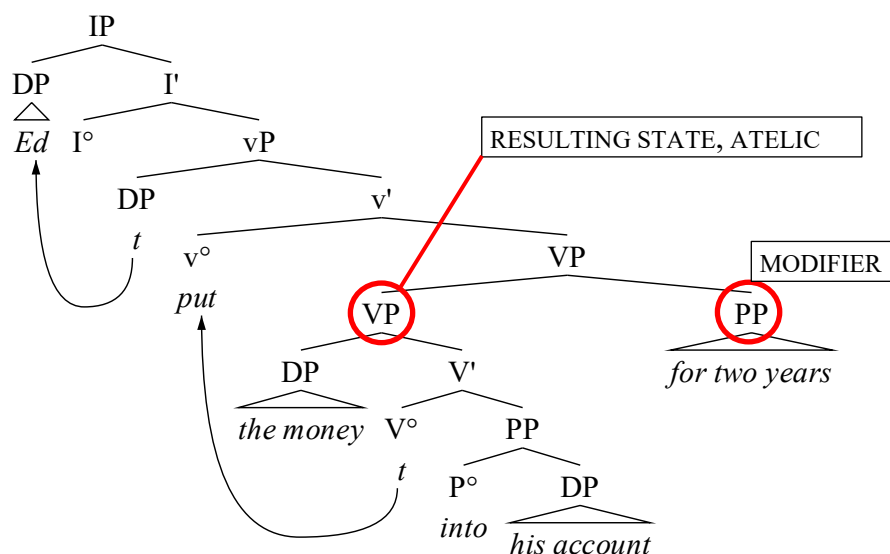
(There is an additional reading of (46)a,c —not yet relevant for our purposes—where *put the money into his Swiss bank account* is interpreted as a repeated/habitual event, where Ed/Ib repeatedly puts the money into the account over a period of two years. On this reading, *for two years* would be modifying this atelic vP.)

This is nicely compatible with the analysis in (38) above, because again the VP is a resulting **state** (atelic, temporal modification with *for/i*), whereas the entire vP is a **complex event** (telic, temporal modification with *in/på*):

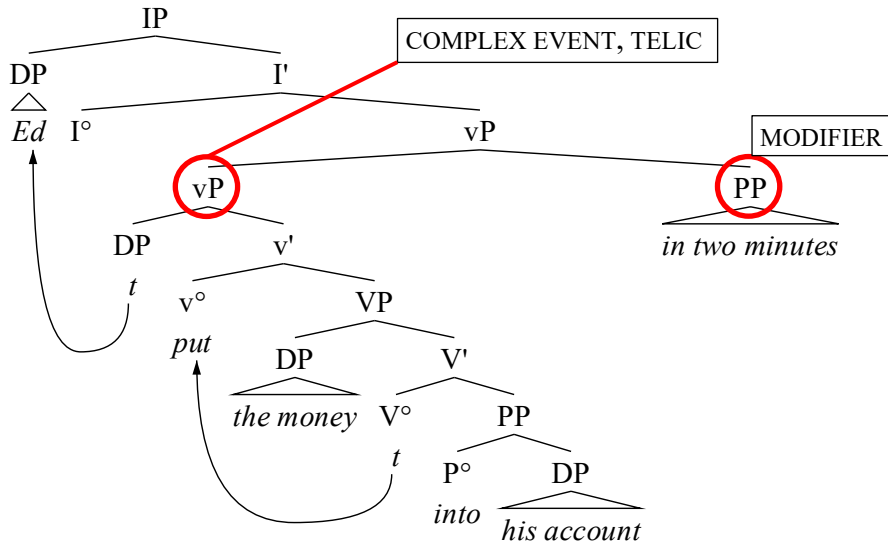
(47)



(48)



(49)



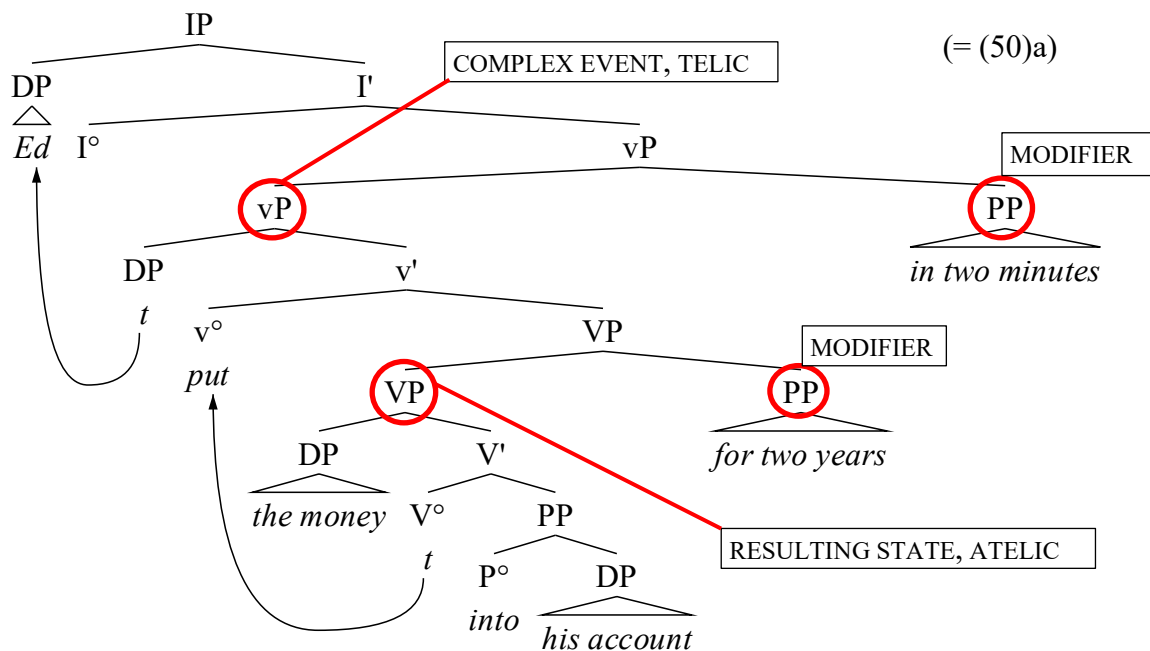
As in § 3.2 above, this analysis not only accounts for the data in (46), it also makes two further predictions.

The first prediction is about the sequence of the PPs when both are present and final. The *for/i*-PP (which modifies VP) must precede the *in/på*-PP (which modifies vP):

- (50) En. a. ... because Ed put the money into his Swiss account
 for two years in two minutes.
 b. # ... because Ed put the money into his Swiss account
 in two minutes for two years.

- Da. c. ... fordi Ib placerede pengene på sin schweiziske konto i to år på to minutter.
 d. # ... fordi Ib placerede pengene på sin schweiziske konto på to minutter i to år.

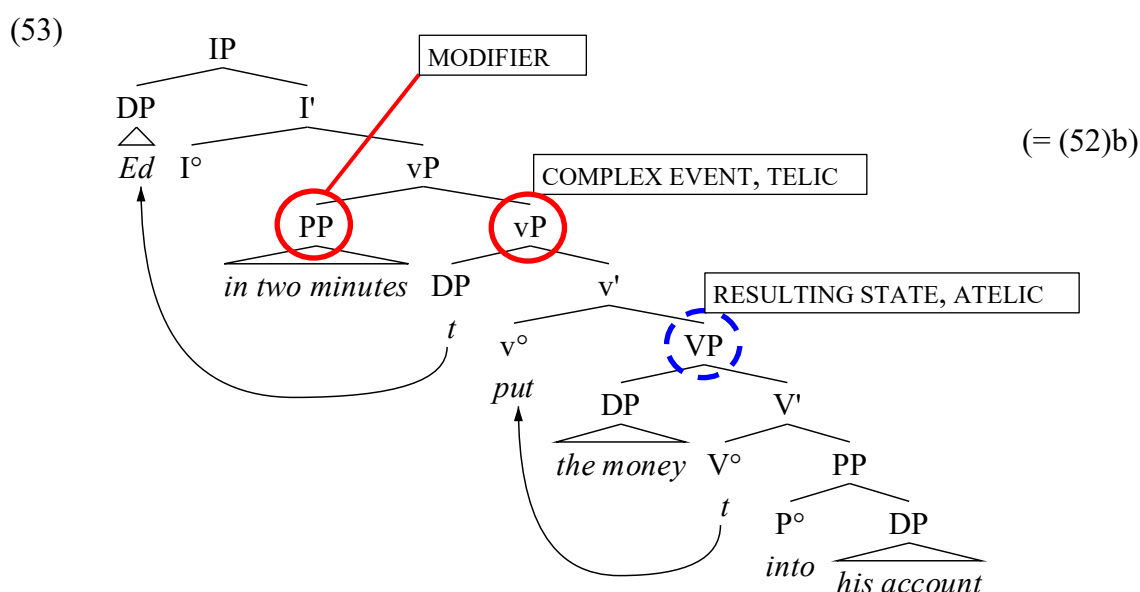
(51)



The second prediction is about medial adverbials, and it is that an *in/på*-PP is possible in the medial position (i.e. an adverbial left-adjoined to vP), but a *for/i*-PP is not, as the medial position precedes the verb, which means that such a medial PP may be a sister of vP (which is a complex event and thus telic), but it cannot be interpreted as a sister of VP (which is a state and thus atelic). It is therefore predicted that (52)b,d are much better than (52)a,c:

- (52) En. a. # ... because Ed for two years put the money into his Swiss account.
 b. ... because Ed in two minutes put the money into his Swiss account.
 Da. c. # ... fordi Ib i to år placerede pengene på sin schweiziske konto.
 d. ... fordi Ib på to minutter placerede pengene på sin schweiziske konto.

(As expected, (50)b,d as well as (52)a,c are actually acceptable to the extent that it is possible to give them the slightly strange reading where the vP *put the money into his Swiss account (in two minutes)* has a repeated/habitual reading. This makes it atelic, and it can therefore be modified by *for two years*.)



An analysis in terms of vP and VP can thus account for (46), which shows that some clauses with an object and a following PP-complement (i.e. examples of the type *give something to somebody*) contain both a telic vP-constituent and an atelic VP (with the atelic VP inside the telic vP), as modification is possible both with an *in/på*-PP and with a *for/i*-PP. This also accounts for some possible and impossible orders of an *in/på*-PP and a *for/i*-PP in (50)a,b as well as for the interpretation of a temporal PP in medial position i (52)a,b.

The analysis in terms of vP/VP (VP-shells) thus makes the desired predictions concerning the various possibilities of modification by different types of temporal PPs sensitive to telicity.

3.4 A potential link between these telicity-sensitive PPs and locality

When both the two PPs are present (*in two minutes* and *for two years*), only the higher one of the two can be topicalised. To us, this very much has the feel of a locality violation (cf. Rizzi 1990):

- (54) En. a. In two minutes, the club gave Liz the post as treasurer **for** two years ____.
- b. In two minutes, the club gave Liz the post as treasurer ____.
- c. * For two years, the club gave Liz the post as treasurer ____ **in** two minutes.
- d. # For two years, the club gave Liz the post as treasurer **in** two minutes ____.
- e. For two years, the club gave Liz the post as treasurer ____.
- (55) Da. a. På to minutter gav klubben Lis posten som kasserer **i** to år ____.
- b. På to minutter gav klubben Lis posten som kasserer ____.
- c. * I to år gav klubben Lis posten som kasserer ____ **på** to minutter.
- d. # I to år gav klubben Lis posten som kasserer **på** to minutter ____.
- e. I to år gav klubben Lis posten som kasserer ____.

The only reading of (54)a,b/(55)a,b is the one in which there is a single event (lasting for two minutes) of giving/transferring the post to Liz (and furthermore, in (54)a/(55)a, Liz has the post for two years). This reading is impossible in (54)c,d/(55)c,d, but in (54)e/(55)e, it is one of two possible readings.

Instead, as also discussed above (in the fine print), the same surface word order as in (54)c/(55)c is possible but with the slightly strange reading where the club repeatedly gives the post to Liz over two years, and on each occasion, this takes two minutes. This is actually the structure given in (54)d/(55)d, where first *gave Liz the post as treasurer* must be a telic vP as it can be modified by *in two minutes*, but then *gave Liz the post as treasurer in two minutes* must be re-interpreted as a repeated/habitual event, an atelic vP, which is then modified by *for two years*, hence the clause final trace position in (54)d/(55)d.

In (54)e/(55)e, either of these two readings of *for two years* are possible, i.e. either as a modifier of an atelic VP, as in (54)a,b/(55)a,b, or as a modifier of an atelic vP, as in (54)d/(55)d.

In other words, the extraction of a lower, VP-modifying (atelic) *for*-PP is blocked by the presence of a higher vP-modifying (telic) *in*-PP. If the *in*-PP is present, the *for*-PP must be interpreted as having come from a higher position, (54)d/(55)d, whereas this is just one of two options if the *in*-PP is absent, (54)e/(55)e.

- (56) En. a. In two minutes, Ed put the money into his Swiss account **for** two years ____.
- b. In two minutes, Ed put the money into his Swiss account ____.
- c. * For two years, Ed put the money into his Swiss account ____ **in** two minutes.
- d. # For two years, Ed put the money into his Swiss account **in** two minutes ____.
- e. For two years, Ed put the money into his Swiss account ____.
- (57) Da. a. På to minutter placerede Ib pengene på sin schweiziske konto **i** to år ____.
- b. På to minutter placerede Ib pengene på sin schweiziske konto ____.
- c. * I to år placerede Ib pengene på sin schweiziske konto ____ **på** to minutter.
- d. # I to år placerede Ib pengene på sin schweiziske konto **på** to minutter ____.
- e. I to år placerede Ib pengene på sin schweiziske konto ____.

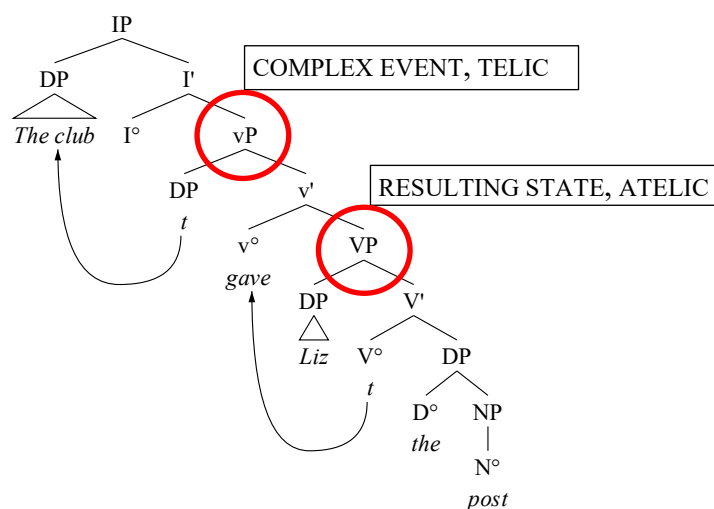
In the V-DP-PP cases, the extraction facts are very similar to the ones discussed for the double objects immediately above. The only reading of (56)a,b/(57)a,b is the one in which there is a single event (lasting for two minutes) of depositing the money. This reading is not possible in (56)c,d/(57)c,d, even though (56)d/(57)d are possible, but here *put the money into his Swiss bank account in two minutes* is reinterpreted as a repeated/habitual event, an atelic vP, which can be modified by *for two years*, hence the clause final trace position. Finally, in (56)e/(57)e, either of these two readings is possible.

In other words, also in the V-DP-XP case, the extraction of a lower, VP-modifying (atelic) *for*-PP is blocked by the presence of a higher, vP-modifying (telic) *in*-PP. If the *in*-PP is present, the *for*-PP is interpreted as having come from a higher position, whereas this is just one of two options if the *in*-PP is absent.

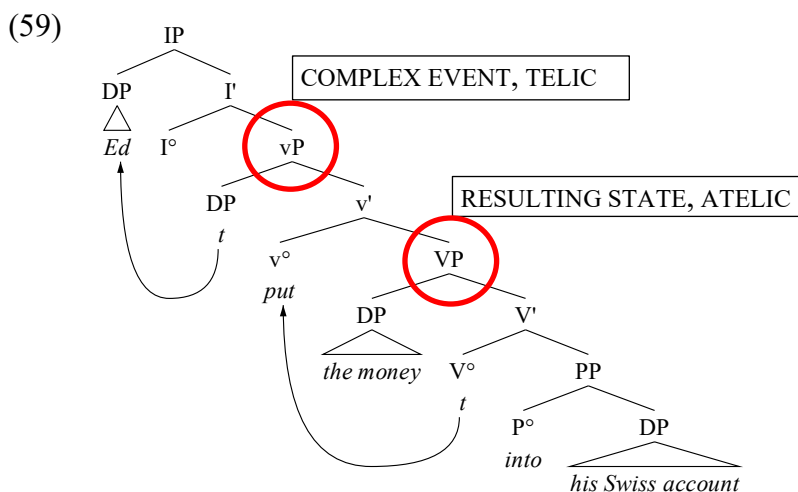
4. Conclusion

In § 1, we saw that earlier analyses of double object examples were not satisfactory, and also that simple fixes did not yield satisfactory analyses either, as the problems concerning coordination (§ 1.2) and idiomatic expressions (§ 1.3) were not solved.

§ 2 then introduced the more complex (58) VP-shell analysis, where both a VP and a vP is built up around the same main verb, e.g. *give* or *send*, and where this main verb always moves from V° to v° (irrespective of whether it is finite or not, and regardless of it being a main verb). It was also shown how this analysis not only covers double object clauses ((23)≈(38)=(63), *give somebody something*) but also V-DP-PP clauses ((27)≈(47)=(64), *give something to somebody*).



In § 3, it was shown that temporal modification by means of a PP was rather different depending on whether the clause was atelic (like states and processes, which do not have an endpoint) or telic (like events which do have an endpoint). Armed with tests derived from such data and with a VP-shell analysis, it was possible to account for the facts that on one hand, both double object clauses ((38)=(63)), *give somebody something* and V-DP-PP clauses ((47)=(64)), *give something to somebody* allowed for both types of modification in the same clause, and on the other hand, that such modification was not possible under all circumstances and in just any order.



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Structures for SVG Syntax Tree Generator

(<https://tildeweb.au.dk/au132769/syntaxtree/> = <https://tildeweb.au.dk/au572/syntaxtree/> = <https://syntaxtree.abitcreative.co/>):

- (4)a = [IP [^DP Alice][I' [I° []][VP [V° sent][^DP a book]]]]
- (4)b = [IP [^DP_j Alice][I' [I° []][VP [DP t<j>][V' [V° sent][^DP a book]]]]]
- (5) = [IP [^DP_j Alice][I' [I° []][VP [DP t<j>][V' [V° sent][^DP a book][PP [P° to][^DP her mother]]]]]]]
- (6) = [IP [^DP_j Alice][I' [I° []][VP [DP t<j>][V' [V° sent][^DP her mother][^DP a book]]]]]]]
- (22) = [IP [^DP_j subject][I' [I° []][vP [DP t<j>][v' [v°_k [cause]][VP [^DP IO, θ: beneficiary][V' [V° verb<k>][^DP DO, θ: theme]]]]]]]]]
- (23) = (25) = [IP [^DP_j Alice][I' [I° []][vP [DP t<j>][v' [v°_k sent][VP [^DP her mother][V' [V° t<k>][^DP [D° a][NP [N° book]]]]]]]]]]]
- (27) = [IP [^DP_j Alice][I' [I° []][vP [DP t<j>][v' [v°_k sent][VP [^DP a book][V' [V° t<k>][PP [P° to][^DP her mother]]]]]]]]]
- (28) = [IP [^DP_j Harry][I' [I° []][vP [DP t<j>][v' [v°_k gave][VP [^DP the lecture][V' [V° t<k>][DP [D° a][^NP miss]]]]]]]]]
- (29) = [IP [^DP_j Harry][I' [I° []][vP [DP t<j>][v' [v°_k took][VP [^DP Juliet][V' [V° t<k>][PP [P° to][^DP the cleaners]]]]]]]]]
- (38) = [IP [^DP_j The club][I' [I° []][vP [DP t<j>][v' [v°_k gave][VP [^DP Liz][V' [V° t<k>][^DP [D° the][NP [N° post]]]]]]]]]]]
- (39) = [IP [^DP_j The club][I' [I° []][vP [DP t<j>][v' [v°_k gave][VP [VP [^DP Liz][V' [V° t<k>][^DP [D° the][NP [N° post]]]]]] [^PP for two years]]]]]
- (40) = [IP [^DP_j The club][I' [I° []][vP [vP [DP t<j>][v' [v°_k gave][VP [^DP Liz][V' [V° t<k>][^DP [D° the][NP [N° post]]]]]]]] [^PP in two minutes]]]
- (42) = [IP [^DP_j The club][I' [I° []][vP [vP [DP t<j>][v' [v°_k gave][VP [VP [^DP Liz][V' [V° t<k>][^DP [D° the][NP [N° post]]]]]]]] [^PP for two years]]]] [^PP in two minutes]]]
- (45) = [IP [^DP_j The club][I' [I° []][vP [^PP in two minutes] [vP [DP t<j>][v' [v°_k gave][VP [^DP Liz][V' [V° t<k>][^DP [D° the][NP [N° post]]]]]]]]]]]
- (47) = [IP [^DP_j Ed][I' [I° []][vP [DP t<j>][v' [v°_k put][VP [^DP the money][V' [V° t<k>][PP [P° into][^DP his Swiss account]]]]]]]]]
- (48) = [IP [^DP_j Ed][I' [I° []][vP [DP t<j>][v' [v°_k put][VP [VP [^DP the money][V' [V° t<k>][^PP [P° into][^DP his account]]]]]] [^PP for two years]]]]]
- (49) = [IP [^DP_j Ed][I' [I° []][vP [vP [DP t<j>][v' [v°_k put][VP [^DP the money][V' [V° t<k>][PP [P° into][^DP his account]]]]]]]] [^PP in two minutes]]]
- (51) = [IP [^DP_j Ed][I' [I° []][vP [vP [DP t<j>][v' [v°_k put][VP [VP [^DP the money][V' [V° t<k>][PP [P° into][^DP his account]]]]]]]] [^PP for two years]]]] [^PP in two minutes]]]
- (53) = [IP [^DP_j Ed][I' [I° []][vP [^PP in two minutes] [vP [DP t<j>][v' [v°_k put][VP [^DP the money][V' [V° t<k>][PP [P° into][^DP his account]]]]]]]]]]]