

**MODIFICATION AT A DIFFICULT JUNCTURE:  
A FACTIVE INFINITIVE IN ENGLISH\***

*Matthew Whelpton (whelpton@hi.is)*

## 1. INTRODUCTION

In this paper I'm going to discuss some of my work on the external syntax of modification. I'm going to focus on one particular modifier infinitive in English, though I will refer to two other related constructions where necessary. I'll be using the data from this infinitive to probe the effectiveness of four different approaches to the syntax of modification. So I will begin by introducing the infinitive itself; then I will present the four theories I'm interested in; then we will go through some of the relevant data. For reasons of time and space, we won't be able to cover all the relevant data, but I hope that this paper will give you an idea of the relevant cases.

The infinitive that I'm focusing on is shown in (1).

- (1) John<sub>1</sub> bought his friends some champagne [only PRO<sub>1</sub> to discover that they didn't drink].

The first systematic account of this infinitive is offered in my doctoral thesis (Whelpton, 1995) and I call it a Telic Clause. The infinitive is also discussed in Seth Minkoff's doctoral thesis (Minkoff, 1994). An example of a Telic Clause is actually also given in a footnote in the seminal work on modifier infinitives in English, Robert Faraci's 1974 doctoral thesis (Faraci, 1974: 45, fn 3), though Faraci treats it as a deviant example of what he calls a Rationale Clause. An example of a Rationale Clause is given in (2).

- (2) John<sub>1</sub> bought his friends some champagne [(in order) PRO<sub>1</sub> to show his generosity].

These two infinitives are in fact identical in their internal syntax (they both allow optional PRO subjects but no other gaps). However, they differ significantly in their semantics. Notice that if (1) is true, then John does actually discover that his friends don't like to drink (i.e. the infinitive is factive), whereas if (2) is true, then it need not be the case that John does in fact show generosity by buying the champagne. (2) merely asserts John's

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\* This paper is the text of a talk that I delivered at the University of Geneva on 31<sup>st</sup> October 2000. I would like to thank the Department of Linguistics for inviting me to present my research and especially Maya Arad for making all the arrangements and making my stay such a pleasant one. The seed for this talk was planted at the Gerona Summer School in Linguistics 1996 and I would like to thank the participants at this summer school for providing such a stimulating environment for discussion. I would particularly like to thank Professor Richard Kayne for his suggestion concerning a conjunction analysis of the Telic Clause. I would also like to thank Professor Terry Parsons at the University of California at Irvine for providing me seminar time (Summer 1999) to present the data used in this paper, as well as the participants in that seminar for their helpful suggestions. Needless to say, all faults and inadequacies are mine solely.

intention in acting as he did. The Rationale Clause has been more widely discussed than the Telic Clause and detailed accounts can be found in a number of studies (Español-Echevarría, 1998; Faraci, 1974; Jones, 1991; Minkoff, 1994; Whelpton, 1995; Whelpton, to appear).

Analysis of the Rationale Clause has largely been given in relation to a third modifier infinitive, which differs from it not only in semantics and external syntax but also in internal syntax. Following standard usage, I will call it a Purpose Clause in the general sense of (Jones, 1991: 26, fn 18). An example is given in (3).

- (3) John<sub>1</sub> bought his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party].

This infinitive is interpreted with respect to the Theme-object of the verb and indicates the purpose that the Theme comes to serve by virtue of undergoing the event: in this case, the champagne comes to be available for John's friends to take to the party, by virtue of him having bought it for them. This infinitive has been the primary focus of interest in the literature, containing as it does evidence of empty operator movement (Bach, 1982; Browning, 1987; Chierchia, 1989; Chomsky, 1977; Español-Echevarría, 1998; Faraci, 1974; Hegarty, 1989; Jones, 1991; Kirkpatrick, 1982; Minkoff, 1994; Nishigauchi, 1984; Whelpton, 1995; Whelpton, 1999a; Wilder, 1989).

This paper focuses on the Telic Clause, as it is the least well understood of these infinitives. I will refer to the four candidate analyses as the adjunction analysis, the simple subjunction analysis, the conjunction analysis, and the complex subjunction analysis. These four approaches represent different ways of accounting for the right peripheral position of the Telic Clause and reflect different attitudes to Richard Kayne's Linear Correspondence Axiom (Kayne, 1994). I will look at each of these approaches in turn and then consider the data relating to the external syntax of the Telic Clause and see how well each approach accounts for that data.

## 2. THE DIFFERENT ANALYSES

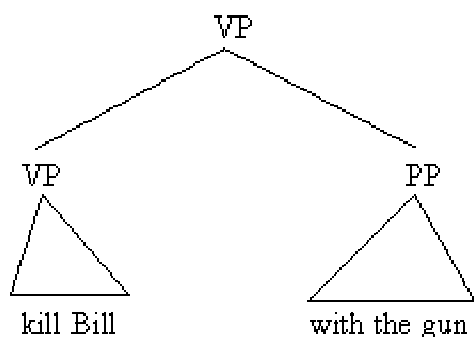
### 2.1. The adjunction analysis

The adjunction analysis is based on the classic observation that the complements of a verb appear to be more tightly associated with the verb structurally than canonical modifiers. So, for instance, when the content of a verb is questioned, the verb's complements must form part of the material questioned, where the modifier need not.

- (4) John killed Bill with the gun.  
 (5) \* What did John do Bill? – Kill.  
 (6) What did John do with the gun? - Kill Bill.  
 (7) What did John do? - Kill Bill with the gun.

Within the Government and Binding framework (Chomsky, 1981) it was assumed that the target of the question here was the Verb Phrase rather than just the Verb, and that the complements of the Verb, being its sisters, formed a necessary part of the Verb Phrase, whereas the modifier was added to the core Verb Phrase to form another extended Verb Phrase. This is shown in Figure 1.

Figure 1

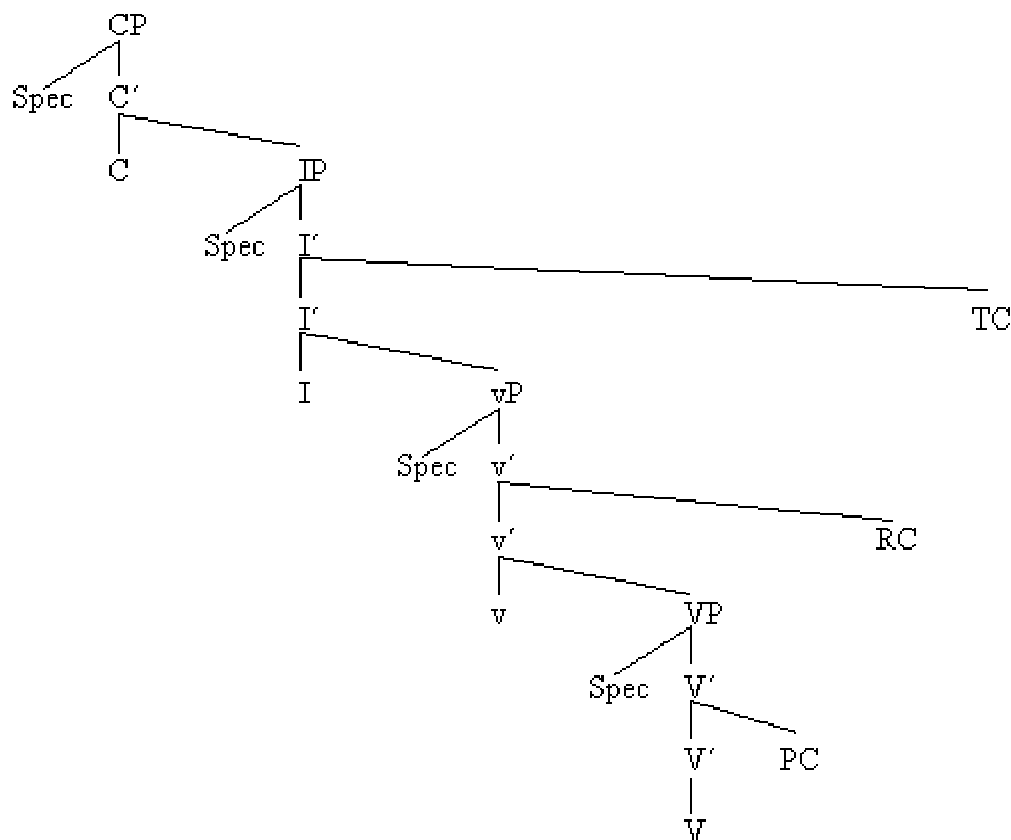


Robert May (May, 1985) argued further that each of these nodes represented a segment of the original, so that the segments did not individually represent a barrier to government though collectively they did.

An adjunction analysis assumes therefore that modifiers represent a syntactically optional piece of structure whose addition to the basic structure of the sentence does not change its essential organisation. It is because modifiers are taken to be excluded from the core constituent of the phrase that modifiers end up being less embedded than the phrases they modify.

An adjunction approach to the Telic Clause is adopted by both myself and Seth Minkoff in our doctoral theses (Minkoff, 1994; Whelpton, 1995). My own analysis is shown in Figure 2.

Figure 2 the adjunction analysis (Whelpton, 1995); TC = Telic Clause, RC = Rationale Clause, PC = Purpose Clause

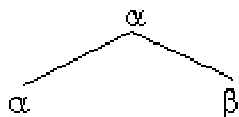


My thesis also shows how this analysis fits naturally with an account of how arguments are projected, both by the main predicate, and by the modifiers, using the theory of argument projection in Higginbotham (1985; 1989). A consequence of this view, though, is that the rightwardness of modifiers correlates with a lesser degree of embedding, contrary to Kayne's LCA. Since it is precisely the aim of this theory to restrict the range of possible structures available to the learner, this may be seen as an advantage of the LCA and a good reason to discount the adjunction analysis.

It is worth noting that this account fits smoothly into a minimalist account, though the term "adjunction" does not. The property that I am using the term "adjunction" to characterise is precisely its non-LCA property of mapping rightwardness of modifiers to upwardness in structure. I am not specifically concerned with the status of the phrasal segments produced by adjunction. From a Minimalist perspective (Chomsky, 1994; Chomsky, 1995) this terminology can cause confusion.

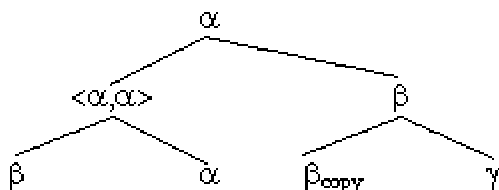
Chomsky characterises the structural result of Merge as in Figure 3.

**Figure 3: A structural result of Merge**



Notice that this structure is identical to the structure for traditional Chomsky-adjunction in Figure 1, where the mother node is identical to one of the daughter nodes. Pre-minimalist Chomsky-adjunction thus produces structures which are equivalent to Minimalist Merge. Minimalist adjunction is quite different from this, resulting from the application of Move. Chomsky assumes that Move-adjunction forms a two-segment category, as shown in Figure 4. This description is reminiscent in terminology but not in structure to May's two-segment adjunction.

**Figure 4: Structure resulting from Move-adjunction**



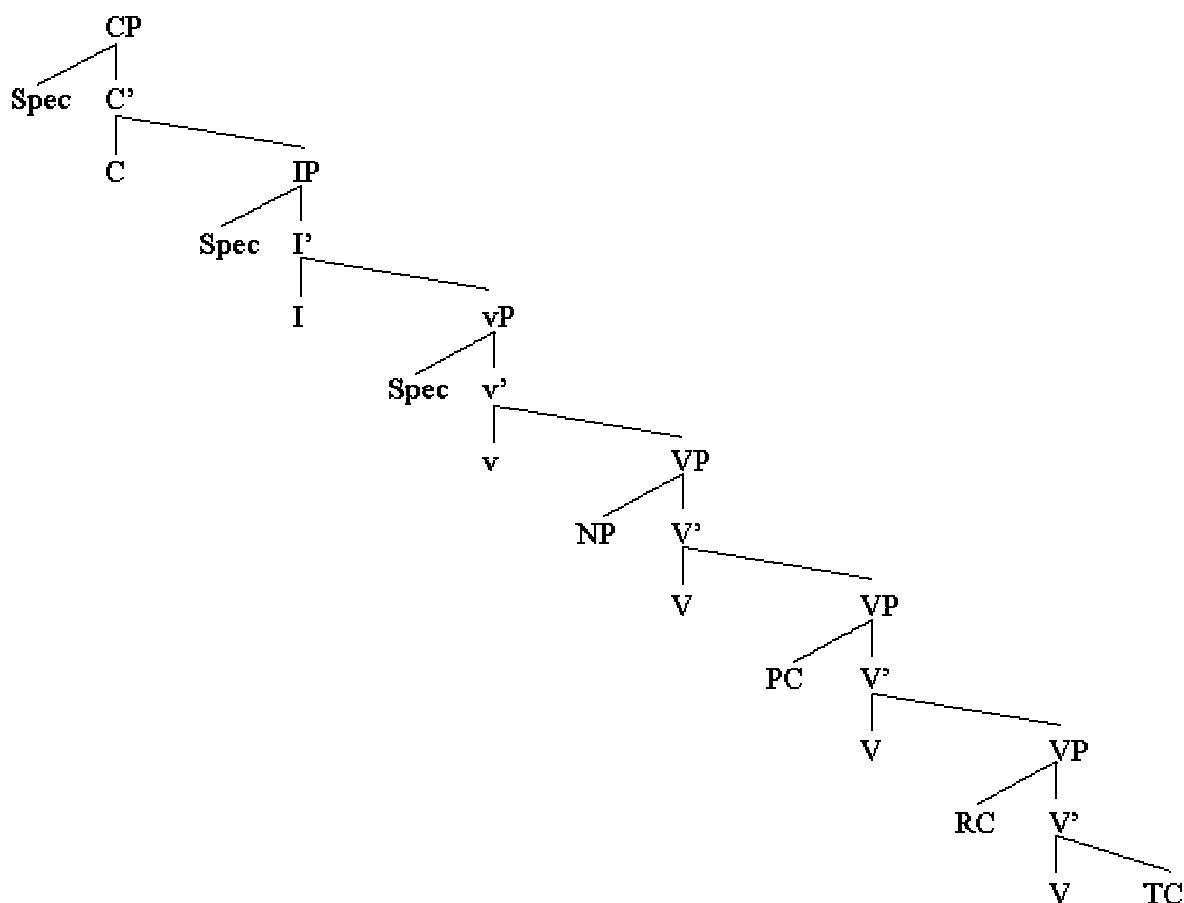
Here the mother of the category which is the target of adjunction is a pair of items, identical to the target. This structure is different from traditional Chomsky-adjunction and is formed exclusively by movement.

My assumption here is that traditional "adjunction" should be treated as a simple subcase of Merge and I discuss some of the implications of this in a 1997 unpublished manuscript (Whelpton, 1997). Unfortunately, there is no space to discuss the details further here.

## 2.2. The simple subjunction analysis

Returning then to the question of linearisation and structure, we come to the simplest way of providing an LCA-compatible account of the Telic Clause and its related infinitival modifiers: the simple subjunction analysis. In this view, which I base on discussions in Larson (1988), modifiers do not in fact differ at all from arguments, in that all modifiers are merged into a projection of the verb they modify, in either complement or specifier position. The further a modifier is to the right, the more deeply it is embedded. This is shown in Figure 5.

**Figure 5: subjunction analysis of modification (cf Larson, 1988)**



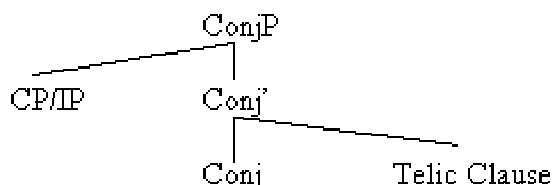
Here the requirements of the LCA are achieved in the simplest possible way, with rightwardness mapping transparently onto degree of embedding. As we will see, though, this simple view runs into numerous problems in accounting for the facts relating to the external syntax of the Telic Clause. I will therefore suggest two further more complicated ways of providing an LCA-compatible account.

## 2.3. The conjunction analysis

The first of these is based on an observation to me by Richard Kayne himself, who with his characteristic clarity and boldness, challenged the assumption that the Telic Clause is in fact subordinated in the traditional sense at all. Rather, he suggested, the Telic Clause should be treated as a covert example of conjunction. Its peripherality (as well as its semantics) is based on the fact that the second clause in a conjunct is always subsequent in order to the first and

often refers to a situation which is subsequent temporally to that described by the first conjunct. This is shown in Figure 6.

**Figure 6: the conjunction analysis (based on a suggestion by Richard Kayne)**

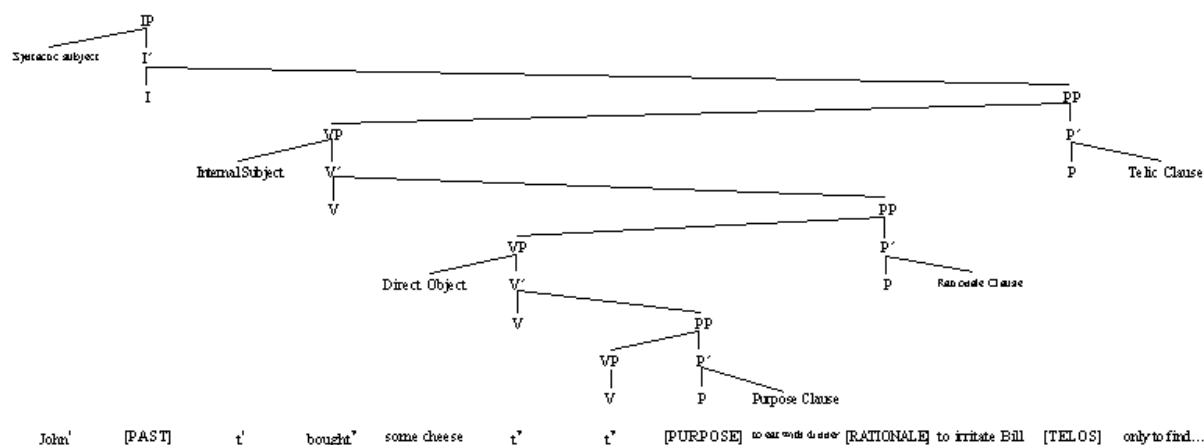


This is a suggestion for an analysis of the Telic Clause only and therefore as a basis for a systematic account of the semantics of these three modifier infinitives it is limited. However, it meets the requirements of the LCA in an insightful way, while avoiding the most obvious problems that confront the subjunction view. And as this paper is focused on the Telic Clause, it is an important contender.

#### 2.4. The complex subjunction analysis

The final analysis I am going to look at is considerably more radical and I will call it the complex subjunction view. It is shown in Figure 7. It is based on a suggestion in my 1997 unpublished manuscript (Whelpton, 1997); it has structural similarities with (Español-Echevarría, 1998)'s thesis though it distinguishes between the Purpose and Rationale Clauses in a more structurally transparent way, includes the Telic Clause in the same structural analysis, and avoids the need for complex movement; it is also similar to a thesis pointed out to me by Chris Wilder on circumstantial adverbs by Nilsen (1998). This complex subjunction view takes elements from each of the previous suggestions. Like the adjunction analysis, it takes seriously the structural evidence for increasingly less embedding of each construction and it also correlates that with the need for a thematically coherent analysis which is tractable for a theory of argument projection. Like the simple subjunction analysis, it takes the modifier to be the complement of heads in the verb's extended projection, though in this case the heads are not empty slots provided for the convenience of the account itself but form standardly accepted parts of the verb's extended projection. Like the conjunction analysis, it takes the semantic head of the modifier to be a syntactic head, with the infinitive as its complement and the fragment of the verb's extended projection which it is modifying as its specifier.

Figure 7: complex subjunction analysis (see Whelpton, 1997)



Notice that the head of the Telic Clause construction takes the infinitive itself as its internal argument; as it modifies the projection of the verb that has discharged all of its thematic arguments (i.e. it is a pure event description), it takes the light verb phrase in its specifier position. The completed modificational complex then acts as complement to the next head in the extended projection of the verb — though clearly in this view the notion of an extended projection is shot to shreds. So, let's have a look at some of the data that will help us to decide between these competing analyses.

### 3. THE DATA AND THE PREFERRED ANALYSIS

#### 3.1. The rightward peripherality of Telic Clauses

An immediately obvious fact concerning the external syntax of the Telic Clause is that it must come at the extreme right periphery of the sentence it modifies, following not only the verb and its complements, but also the verb's other modifiers, including the Rationale Clause and Purpose Clause. The only possible ordering of Rationale Clause and Telic Clause is given in (8).

- (8) John<sub>1</sub> bought his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity], [only PRO<sub>1</sub> to discover that they didn't drink].

There is no other position in the sentence in which the Telic Clause can be placed.

- (9) \* John<sub>1</sub> bought his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party], [only PRO<sub>1</sub> to discover that they didn't drink], [(in order) PRO<sub>1</sub> to show his generosity].
- (10) \* John<sub>1</sub> bought his friends<sub>2</sub> some champagne<sub>3</sub>, [only PRO<sub>1</sub> to discover that they didn't drink], [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity].
- (11) \* John<sub>1</sub> bought his friends<sub>2</sub>, [only PRO<sub>1</sub> to discover that they didn't drink], some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity].

- (12) \* John<sub>1</sub> bought, [**only PRO<sub>1</sub> to discover that they didn't drink**], his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity].
- (13) \* John<sub>1</sub>, [**only PRO<sub>1</sub> to discover that they didn't drink**], bought his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity].
- (14) \* [**Only PRO<sub>1</sub> to discover that they didn't drink**], John<sub>1</sub> bought his friends<sub>2</sub> some champagne<sub>3</sub> [PRO<sub>2</sub> to take *e*<sub>3</sub> to the party] [(in order) PRO<sub>1</sub> to show his generosity].

The simplest explanation of this fact is provided by the conjunction analysis. It is a simple fact about conjoined clauses that the second conjunct follows the first. There simply is no way of re-ordering them.

- (15) John bought his friends some champagne, but then realised that they didn't drink.
- (16) \* Then realised that they didn't drink, John bought his friends some champagne, but.
- (17) \* But then realised that they didn't drink, John bought his friends some champagne.

In the conjunction view, the Telic Clause is in fact a covert example of conjunction, so the fixed final position of the Telic Clause follows automatically from general principles applying to conjunction.

In the complex subjunction view, the peripherality and rightwardness follow on the assumption that complements are to the right of their heads (a necessary assumption in an LCA view). However, there is no reason to assume that the infinitive could not be extracted from this position (we cannot appeal to a general class of examples which justify such a stipulation as we can in the conjunction view). We could, however, adopt a suggestion by Richard Kayne that extraction from complement position is banned (extractions are limited to Specifier position). This would capture the fixed right position of the Telic Clause, but it would cause problems for an analysis of the Rationale Clause, which appears to reposition fairly freely. As I am focusing on the Telic Clause here, I will set this question aside.

The adjunction view accounts for the fact that the Telic Clause must follow all the other infinitives: as it is attached so high in the structure it will be linearised after all the material that is attached lower down. The problem for the adjunction view is that there is nothing which requires an adjunct to adjoin after rather than before the phrase it modifies. Technically therefore the Telic Clause should be able to appear at the very beginning of the sentence as well as at the very end—and this never happens. The adjunction view therefore accounts for the peripherality of the Telic Clause but not for its rightward peripherality.

The simple subjunction view offers the least convincing account of this data. The Telic Clause is on the right periphery in this view because it is the most embedded phrase, but there is no reason *a priori* for why it is the most embedded phrase. In fact, the cart is very much before the horse here: the reason that the Telic Clause is placed in most embedded position is just because it does appear in final position. Unlike the adjunction analysis there will be no further supporting evidence for why it appears in that position in the structure. Given that there is no particular reason, other than observation of the facts, for placing the infinitive in this position in this view, there is obviously no reason why it couldn't be placed in a range of other positions.

As far as linearisation goes, therefore, the conjunction approach has the simplest explanation; the complex subjunction view can offer a simple account if certain assumptions are made about movement possibilities, though those are problematic for the other infinitives;



the adjunction view explains the peripherality but not the rightwardness; and the simple subjunction view explains nothing, although it can represent the facts. Let's now look at how some other data applies to the problem.

### 3.2. Telic Clauses as part of IP

An important question to ask, given the peripherality of the construction, is whether the Telic Clause really is a syntactic part of the sentence it apparently modifies at all. One way to test this is to look at subordinate sentences that are modified by a Telic Clause. If a Telic Clause is merged into IP and that IP is embedded under a verb of thinking or saying, then the interpretation of the Telic Clause must form part of the content of the thought or report. If the Telic Clause is in fact syntactically separate from IP (though perhaps linearised with it), then its interpretation should not form part of the content of the thought or report. The evidence suggests that the Telic Clause is indeed part of IP.

- (18) John knows/believes/doubts/regrets that Mary went to California, only to experience terrible weather.
- (19) John said/reported/stated/confirmed that Mary went to California, only to experience terrible weather.

Here Mary's experience of bad weather is part of the content of John's mental state or verbal statement. The significance of this can be seen more clearly by looking at cases of "peripheral elements" that do not necessarily have this property.

There are cases of lexical S-adverbs and non-restrictive relative clauses, where the element in question is clearly embedded in, and associated with a constituent of, a subordinate clause, but where that item does not form part of the content of the mental state or verbal statement reported.

- (20) John believes that Mary is, frankly, not up to the job.
- (21) John said that Cherie Booth -- who is the wife of the British Prime Minister Tony Blair -- had supported the move.

It is entirely possible that the adverb *frankly* in (20) expresses the utterer's evaluation of the frankness of the statement rather than forming part of his description of John's belief that it is a frank statement. Similarly, the non-restrictive relative clause in (21) may well be additional information provided by the utterer to the addressee as background to John's utterance, rather than part of what John himself actually said. Neither of these complications arise with the Telic Clauses in (18) and (19): they form part of John's mental attitude or verbal statement. This requires that the Telic Clause form part of the IP which is the complement to the subordinating complementiser.

#### 3.2.1. Interrogation and negation

This observation also holds for simple questions without focus.

- (22) Did Mary go to California, only to experience terrible weather?

There are contexts in which this question will sound extremely marginal and we will return to these below, but as a simple question without special focus on any element of the proposition, this is well-formed. Once again, the semantics of the question will require that

the Telic Clause form part of the propositional content of the IP which is the complement of the interrogative  $C^0$ . This evidence supports the adjunction analysis and both subjunction analyses. It is compatible with the conjunction analysis on the assumption that the result of the covert conjunction is a compound sentence, parallel to the one in (23).

- (23) John knows/believes/doubts/regrets that Mary went to California but experienced terrible weather.

If the Telic Clause is indeed merged into IP, then an important question is how deeply it is embedded in the clausal structure. The fact that it is merged very high in the structure is suggested by the interpretation of the Telic Clause with negated sentences.

Consider the interpretation with respect to negation of the Rationale Clause, in (24), as opposed to that of the Telic Clause, in (25).

- (24) John didn't cook the steak to annoy Pierre.  
 (25) John didn't cook the steak, only to remember Pierre's feelings about steak tartar.

The natural reading of (24) is that in which John's intention in cooking the steak was not to annoy Pierre (he had some other intention or none at all). So, the Rationale Clause can fall within the scope of negation. However, (24) is ambiguous. It could also mean that John did *not* cook the steak and that his intention in omitting to do so was to annoy Pierre (who hates steak tartar and is sick of being served it because he is French). This means that the Rationale Clause can also fall outside of the scope of negation.

The natural interpretation of (25) is that John *didn't* cook the steak but having omitted to do so, he significantly remembers Pierre's feelings on the subject, presumably that he hates steak tartar and resents being given it. Significantly, no other reading is available. (25) cannot mean that John *did* cook the steak but then realised that he shouldn't have done, though not because he remembered Pierre's feelings on the subject. In other words, you cannot have a continuation as in (26).

- (26) \* John didn't cook the steak, only to remember Pierre's feelings about steak tartar but only to realise that it was supposed to be for the dog.

The sheer difficulty involved in grasping the structure required for this interpretation is an indication of the significance of the structural difference between the Rationale and Telic Clauses.<sup>1</sup>

Assuming that the scopal domain here includes the verb and light verb projections but not the inflectional projection, then this is evidence against the simple subjunction analysis

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<sup>1</sup> Hagit Borer (p.c.) has pointed out that there are in fact cases where the Telic Clause appears to be within the scope of negation.

- (i) I didn't come all this way, only to be told that I can't see him.

Here the Telic Clause forms part of the proposition being negated. However, the negation here is not standard negation. (i) does not deny that the speaker came all this way and was then told that she couldn't see him; in fact, in the natural context, one imagines that this is precisely what has happened. Rather, (i) expresses objection or defiance of this fact and an intention to reverse this state of affairs. The negation here would therefore appear to be metalinguistic. The fact that the only available reading of the Telic Clause "within the scope of negation" is in fact not a standard one thus supports the view that the Telic Clause is peripheral in its attachment to the sentence, unlike the Rationale Clause.

which takes the Telic Clause to be in the scope of all operators in the sentence. It is however compatible with the adjunction, conjunction, and complex subjunction analyses.

I have presented the analysis from negation and interrogation so far in terms of simple scope but it turns out that the data relating to these is considerably messier and relates to the focusing of elements as the locus of denial or questioning. These facts relating to focusing is also relevant to the rather subtle data from VP-anaphora.

### 3.2.2. *Focus*

We have already seen that the Telic Clause can form part of a proposition whose truth value is questioned, in a simple yes-no question, as in (22), repeated here as (27).

(27) Did Mary go to California, only to experience terrible weather?

However, if the question contains a particular focus, things change. Any element of the main clause may be focused, and an alternative explicitly provided, but neither the Telic Clause nor its contents may be focused in this way.

- (28) Did Mary go to California, only to experience terrible weather, or Sally?  
 (29) Did Mary go to California, only to experience terrible weather, or Arizona?  
 (30) \* Did Mary go to California, only to experience terrible weather, or only to get caught in an earthquake?  
 (31) \* Did Mary go to California, only to experience terrible weather, or cold and unfriendly people?

This cannot in simple terms have to do with the syntactic scope of the interrogative marker. We have already seen that the Telic Clause falls in the scope of the interrogative complementiser and so if surface scope were sufficient to license interrogative focus then the Telic Clause should be available for focus. Rather it appears that focus is assigned to a phrase within a domain which is itself in the scope of the interrogative marker. Notice that all of the arguments of the verb (and in fact most modifiers) can in fact be focused in this way. In particular, the Rationale Clause, like temporal modifiers, can be focused in this way.

- (32) Did Mary go to California (in order) to escape her family or (in order) to find a job in the film industry?  
 (33) Did Mary go to California during the summer or during the winter?

We might therefore assume that any phrase which falls within the domain of argument projection of the main predicate (here the verb *go*) can be focused: i.e. anything within the maximal VP-shell (following Chomsky (1995), vP). If the Telic Clause is positioned outside of vP, it will also be unavailable for interrogative focus, even though it is within the scope of the interrogative marker itself.

Similarly, we could argue that the Telic Clause is outside of the domain of negative focus, as it does not allow the specification of alternatives, either as a phrase in apposition, or as part of a separate clause.

- (34) \_ Mary went to California, only to experience terrible weather, not Sally.  
 (35) \_ Mary didn't go to California, only to experience terrible weather; Sally did.  
 (36) Mary went to California, only to experience terrible weather, not Arizona.

- (37) Mary didn't go to California, only to experience terrible weather; she went to Arizona.
- (38) \* Mary went to California, only to experience terrible weather, not only to get caught in an earthquake.
- (39) \* Mary didn't go to California, only to experience terrible weather; she went only to get caught in an earthquake.
- (40) \* Mary went to California, only to experience terrible weather, not cold and unfriendly people.
- (41) \* Mary didn't go to California, only to experience terrible weather; she experienced cold and unfriendly people.

This resistance to focus and the generation of alternate sets may also be behind the ungrammaticality of the simple cleft construction for the Telic Clause.

- (42) \* It was only to experience terrible weather that Mary went to California. [wrong reading]

It therefore appears that constructions which introduce focus can only focus phrases which are merged within the thematically-active projections of the verb.

### 3.2.3. *Negative polarity items*

This domain of negative focus also appears to be relevant to the licensing of negative polarity items. A first generalisation is that sentential negation does not license negative polarity items in a Telic Clause, though it can in a Rationale Clause (though the Rationale Clause must be interpreted inside the scope of negation).

- (43) John didn't cook the steak, only to remember something important.  
"John didn't cook the steak, but then he remembered something important."  
\* "John did cook the steak, but he didn't then remember something important."
- (44) John didn't cook the steak, only to remember anything important.  
\* "John didn't cook the steak, but then he remembered anything important."  
\* "John did cook the steak, but he didn't then remember anything important."
- (45) John didn't cook the steak (in order) to offend someone.  
"John didn't cook the steak and thereby he intended to offend someone."  
"John did cook the steak but thereby he didn't intend to offend someone."
- (46) John didn't cook the steak (in order) to offend anyone.  
\* "John didn't cook the steak and thereby he intended to offend anyone."  
"John did cook the steak but thereby he didn't intend to offend anyone."

This apparently fits straightforwardly with the facts already observed from the interpretation of negation: negative polarity items are only licensed where the clause containing that item is interpreted in the scope of negation; the Telic Clause is never interpreted in the scope of negation, so negative polarity items are never licensed in the Telic Clause.

However, it turns out that the situation with respect to negative polarity items is considerably more complex. It happens that negative polarity items are never licensed in the Telic Clause, even when a negative word apparently assumes syntactic scope over the infinitive. We will see evidence later that the Telic Clause is in the scope of the syntactic

subject position; yet a negative phrase in syntactic subject position does not license negative polarity items in the Telic Clause.

- (47) \* No-one cooked a steak, only to remember anything important.  
 (48) \* No-one came home that evening, only to find anyone in their bedroom.  
 (49) \* No-one submitted an entry to the competition, only to be criticised unfairly by anyone on the judge's panel.

Nor in fact are negative polarity items licensed in the Telic Clause when negative phrases are raised to the front of the sentence.

- (50) \* Never had John come home in the evening, only to find anyone in his bedroom.  
 (51) \* Never had John submitted an entry to the competition, only to be criticised unfairly by anyone on the judge's panel.

Given that we already have evidence that the Telic Clause is indeed embedded within IP, it seems unlikely that the ill-formedness of these examples shows that the Telic Clause is not in the scope of CP-Spec (and we will see later that Telic Clauses are compatible with across-the-board extractions providing good evidence that they are within the scope of the wh-filled matrix CP-Spec; see example (84)). Rather I would like to suggest that the ill-formedness here is related to the observation made earlier that focus assignment is relative to the domain in which the verb is thematically active. Only phrases merged within a thematically active projection of the verb which are in the scope of the negative phrase can contain negative polarity items. Notice that, as well as excluding the Telic Clause, this definition includes the one important case associated with negative phrase topicalisation in English: negative polarity items in subject position.

- (52) \* Anyone had never spoken to Mary in that way.  
 (53) Never had anyone spoken to Mary in that way.

Here the subject comes to be in the surface scope of the negative phrase; the subject is a phrase originally merged into the Spec of vP, a thematically-active projection of the verb. It can therefore be realised as a negative polarity item. This suggests that peripherality is not just a matter of being attached high up in the clause structure but also of being attached outside of the thematically-active projections of the verb. The Telic Clause is merged in such a peripheral position but the Rationale Clause is not.

### 3.3 Telic Clauses are merged outside of vP

The idea then is that all phrases merged within the thematically-active projection of the verb (vP) are available for focus. This includes the internal subject, all complements and any modifiers attached within VP and vP (including the Rationale Clause). The focus assigner typically focuses one of these available items and the remainder are not negated. So, for instance, (35) denies that Mary did something, it does not deny that anyone went to California, or that anyone experienced terrible weather; (37) on the other hand asserts that Mary did indeed go somewhere and that she did experience terrible weather, but it denies that the relevant destination was California. The reason for this in this view is not that *Mary* and *California* have two positions of merger, one standard and one peripheral, but rather that, within their standard positions of merger, they are part of a vP which is itself within the scope of negation. The two readings of the Rationale Clause, like the two readings of *Mary* and

*California*, relate to focus assignment not movement. Similarly, the Telic Clause does not have two readings and is never focused by negation because it is merged outside of vP and is therefore never available as a focus item in the first place.

### 3.3.1. Principle C effects

Assuming then that the Telic Clause is merged outside of vP, the question is whether it is merged in the scope of the subject. First consider Principle C effects. It turns out that Principle C effects only occur with a Telic Clause containing a proper name when that proper name is co-referential with a subject pronoun: direct objects do not trigger Principle C effects with the Telic Clause.

- (54) John<sub>1</sub> sent the book to Los Angeles [only for the publishers to send it back to him<sub>1</sub> by return of post].
- (55) ?\* He<sub>1</sub> sent the book to Los Angeles [only for the publishers to send it back to John<sub>1</sub> by return of post].
- (56) They sent John<sub>1</sub> to Los Angeles [only for the publishers to refuse to meet him<sub>1</sub> properly].
- (57) They sent him<sub>1</sub> to Los Angeles [only for the publishers to refuse to meet John<sub>1</sub> properly].

In a simple conjunction of clauses, Principle C effects do not occur at all.

- (58) He<sub>1</sub> sent the book to Los Angeles but the publishers sent it back to John<sub>1</sub> by return of post.
- (59) They sent him<sub>1</sub> to Los Angeles but the publishers refused to meet John<sub>1</sub> properly.

These facts suggest that the Telic Clause is in fact in the scope of the subject but not of the object. This is therefore evidence against the simple subjunction analysis which predicts that the Telic Clause will be in the scope of both subjects and objects; and it is also evidence against the conjunction analysis which predicts that the Telic Clause will not be in the scope of any phrase in the main clause, just as the second clause in a conjunct is not in the scope of any phrase in the first conjunct. The facts are consistent with both the adjunction and the complex subjunction analyses.

### 3.3.2. Control

Now, let us look at the second piece of evidence relating to subject scope — control. It turns out that the only phrase which can control the reference of PRO in the Telic Clause is the subject. This is shown most clearly in the alternation between active and passive.

- (60) Cassius<sub>1</sub> gave Marcus<sub>2</sub> the new slave<sub>3</sub>, only PRO<sub>1</sub> to discover that he<sub>3/2/1</sub> had an infectious disease.
- (61) Marcus<sub>2</sub> was given the new slave<sub>3</sub> (by Cassius<sub>1</sub>), only PRO<sub>2</sub> to discover that he<sub>3/2/1</sub> had an infectious disease.
- (62) The new slave<sub>3</sub> was given to Marcus<sub>2</sub> (by Cassius<sub>1</sub>), only PRO<sub>3</sub> to discover that he<sub>3/2/1</sub> had an infectious disease.

In (60), the controller is the Agent of the verb, *give*; in (61), the controller is the Goal of the verb, *give*; and in (62), the controller is the Theme of the verb, *give*. The unacceptability

of binding by the agentive phrase in the passive is clear when the infinitival verb takes a reflexive object.

- (63) Claudia<sub>1</sub> gave Marcus<sub>2</sub> the new slave<sub>3</sub>, only PRO<sub>1</sub> to buy herself<sub>1</sub> a new one at the market the next day.
- (64) \* Marcus<sub>2</sub> was given the new slave<sub>3</sub> (by Claudia<sub>1</sub>), only PRO<sub>1</sub> to buy herself<sub>1</sub> a new one at the market the next day.
- (65) \* The new slave<sub>3</sub> was given to Marcus<sub>2</sub> (by Claudia<sub>1</sub>), only PRO<sub>1</sub> to buy herself<sub>1</sub> a new one at the market the next day.

This contrasts strongly with the Rationale Clause, where binding by an overt agentive phrase is always possible.

- (66) Cassius<sub>1</sub> gave Marcus<sub>2</sub> the new slave<sub>3</sub> (in order) PRO<sub>1</sub> to demonstrate his<sub>2/3/1</sub> importance.
- (67) Marcus<sub>2</sub> was given the new slave<sub>3</sub> by Cassius<sub>1</sub> (in order) PRO<sub>1</sub> to demonstrate his<sub>2/3/1</sub> importance.
- (68) The new slave<sub>3</sub> was given to Marcus<sub>2</sub> by Cassius<sub>1</sub> (in order) PRO<sub>1</sub> to demonstrate his<sub>2/3/1</sub> importance.

In each case, PRO in the Rationale Clause is controlled by the phrase bearing the agent role, however that is realised.

This is evidence against the simple subjunction analysis, which predicts that any phrase in the main clause should be able to control PRO in the Telic Clause (and if control is limited by minimality then it should be the object in most cases). It is also apparently evidence against the conjunction view, given that in that view the subject of the main clause does not c-command PRO in the Telic Clause. Here however we run into an interesting complication.

### 3.4. Telic Clauses are not part of a conjunction construction

If you make conjoined clauses, where the second clause is subjectless, you also get apparent subject-orientation.

- (69) Cassius<sub>1</sub> gave Marcus<sub>2</sub> the new slave<sub>3</sub> but discovered that he<sub>3/2/1</sub> had an infectious disease.  
“Cassius discovered...”
- (70) Marcus<sub>2</sub> was given the new slave<sub>3</sub> (by Cassius<sub>1</sub>) but discovered that he<sub>3/2/1</sub> had an infectious disease.  
“Marcus discovered...”
- (71) The new slave<sub>3</sub> was given to Marcus<sub>2</sub> (by Cassius<sub>1</sub>) but discovered that he<sub>3/2/1</sub> had an infectious disease.  
“the new slave discovered...”

This is true even if we try to avoid what looks like simple VP-conjunction by adding a modal verb.

- (72) Cassius<sub>1</sub> should give Marcus<sub>2</sub> the new slave<sub>3</sub> but will discover that he<sub>3/2/1</sub> has an infectious disease.  
“Cassius discovered...”

- (73) Marcus<sub>2</sub> should be given the new slave<sub>3</sub> (by Cassius<sub>1</sub>) but will discover that he<sub>3/2/1</sub> has an infectious disease.  
 “Marcus discovered...”
- (74) The new slave<sub>3</sub> should be given to Marcus<sub>2</sub> (by Cassius<sub>1</sub>) but will discover that he<sub>3/2/1</sub> has an infectious disease.  
 “the new slave discovered...”

Here we must be cautious, however. While it is generally accepted that infinitives have PRO in subject position, that is not generally accepted for conjoined clauses of the sort given here. This is because all the cases of conjunction above can be analysed as involving two clauses sharing one phrase. How then do we know whether we have control of a PRO by a c-commanding subject or rather two partial sentences sharing one subject?

As it turns out, there is in fact striking evidence that in the Telic Clause we have a PRO whose reference is dependent on the first clause but not necessarily on the subject, whereas the conjoined examples simply involve sharing of one subject. To see this, consider first the Rationale Clause in (75) in an interpretation where *John* and *him* refer to the same person.

- (75) John<sub>1</sub> hid<sub>e</sub> behind the curtain PRO<sub>e</sub> to give him<sub>1</sub> a clear view of the room.  
 “...hiding behind the curtain gave him a clear view of the room.”  
 \* “...John<sub>1</sub> gave him<sub>1</sub> a clear view of the room.”

Notice that the subject of the infinitive *give* here must be the event of hiding rather than John himself, because the pronoun *him* cannot be co-referential with *John* as subject. This implies that there really is an unexpressed subject of the infinitive whose reference is dependent on the first clause but independent of any particular phrase in it.

This construction can also occur with the Telic Clause.

- (76) Derby<sub>1</sub> won<sub>e</sub> the match 6-2, PRO<sub>e</sub> to give them<sub>1</sub> a shot at the championship.  
 “...winning the match 6-2 gave them a shot at the championship.”  
 \* “...Derby<sub>1</sub> gave them<sub>1</sub> a shot at the championship.”

We are only interested here in the reading in which Derby winning does in fact give them the shot at the championship (i.e. it is not an intention but an actual outcome). Once again the fact that the pronoun *them* refers to *Derby* means that the subject of the Telic Clause is not simply the subject of the main clause: the unexpressed subject of the infinitive is dependent on the main clause but not on a specific phrase in it. Significantly this kind of reading is not possible with a simple co-ordination.

- (77) \* Derby<sub>1</sub> won the match 6-2 and gave them<sub>1</sub> a shot at the championship.

This suggests that the subject of the second verb in the conjoined construction is simply the same as the subject of the first verb: there is no dependency between an unexpressed subject in the second clause and an overt subject in the first clause. This then means that the apparent subject-control in the conjoined clauses is an illusion: once again, the Telic Clause and the conjoined clauses do not have the same behaviour. I will therefore continue to assume that evidence from control supports the adjunction and complex subjunction analyses over the conjunction analysis.

A final set of evidence in support of the view that the Telic Clause is not part of a conjunction construction comes from restrictions on extraction. Consider a Telic Clause and an equivalent example involving simple conjunction.



- (78) John<sub>1</sub> bought his friends some champagne [only  $e_1$  to discover that they didn't like alcohol].
- (79) John bought his friends some champagne but discovered that they didn't like alcohol.

A strong restriction on conjoined clauses is that you cannot question a phrase in only one clause.

- (80) \* What did John buy his friends \_\_\_ but discovered that they didn't like alcohol?
- (81) \* What did John buy his friends some champagne but discovered that they didn't like \_\_\_?

The only way of forming a question from two conjoined clauses is to question a phrase which occurs in both of them.

- (82) ? What did John buy his friends \_\_\_ but discovered that they didn't like \_\_\_?

This is called across-the-board extraction. As you can see in the above example, the effect is still sometimes marginal.

Like the conjoined clauses, it is impossible to extract from just the Telic Clause.

- (83) \* What did John<sub>1</sub> buy his friends some champagne [only  $e_1$  to discover that they didn't like \_\_\_]?

Also like the conjoined clauses, it is possible to extract from the Telic Clause as long as you extract from the main clause at the same time — that is, across-the-board.

- (84) What did John<sub>1</sub> buy his friends \_\_\_ [only  $e_1$  to discover that they didn't like \_\_\_]?

Notice, however, that this is already more acceptable than its conjoined clause equivalent.

A clear difference from conjoined clauses emerges, however, in extraction from the main clause.

- (85) What did John<sub>1</sub> buy his friends \_\_\_ [only  $e_1$  to discover that they didn't like alcohol]?

This is systematically available in the Telic Clause but not in the equivalent conjoined construction.

- (86) It became cloudy during the morning, only to clear up again before the match.
- When did it become cloudy, only to clear up again before the match?
  - \* When did it become cloudy, but then clear up again before the match?
- (87) Many people are surviving the fight against their illnesses, only to have had their livelihoods taken away already.
- What are many people surviving the fight against, only to have had their livelihoods taken away already?
  - \* What are many people surviving the fight against, but have had their livelihoods taken away already?

- (88) She survived the Holocaust, to spend the rest of her life fighting against prejudice and discrimination.
- What did she survive, to spend the rest of her life fighting against prejudice and discrimination?
  - \* What did she survive, and spend the rest of her life fighting against prejudice and discrimination?
- (89) Blossoms fell from the tree, to collect in piles at the side of the street.
- Where did the blossoms fall from, to collect in piles at the side of the street?
  - \* Where did the blossoms fall from, and collect in piles at the side of the street?

Allowing extraction from the main clause but not from the second clause is characteristic of standard modifiers, where there is no suggestion of underlying conjunction.

- (90) John read the book because he had liked the film?  
 (91) \* What did John read the book because he had liked?  
 (92) What did John read because he had liked the film?

The Telic Clause is therefore apparently not an example of covert conjunction but of standard modification.

#### 4. CONCLUSION

Our discussion leaves us with the classic adjunction analysis and the complex subjunction analysis. The choice between these as things stand depends on one's attitude to a trade off between the simplicity of structure to linear order mapping introduced by the LCA and the complexity that results in the structures necessary to account for modification in an LCA view. Notice that all of our assumptions about verb movement, raising, and extended projections must be revised in the complex subjunction view, whereas all are straightforwardly accommodated in the classic adjunction view. Following Ockham's razor, my own feeling is that the adjunction view remains the best bet, though the problems it faces with respect to accounting for the linearisation facts is disturbing. Clearly the complex subjunction view remains a serious contender to be considered in more detail.

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