

Restructuring in Slovene

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Contents

1	Introduction	1
2	Restructuring in Slovene	5
2.1	Clitic climbing	5
2.2	Non-focus scrambling	7
2.3	Long passive with <i>se</i>	8
2.4	Complementisers	11
2.5	Internal arguments	13
2.6	Control	16
2.7	Anaphor binding	18
2.8	Adverbial modification	20
2.9	Negation	22
2.10	Events	23
2.11	Restructuring verbs	26
2.12	Conclusion	31
3	Approaches to restructuring	33
3.1	Bi-clausal approaches	33
3.1.1	Clause union through structure changing rules	33
3.1.2	Clause union through head movement	36
3.1.3	Clause union through XP movement	41
3.2	Mono-clausal approaches	42
3.2.1	Restructuring as morphology	42
3.2.2	Restructuring as verb complementation	43
3.2.3	Restructuring as functional structure	49
3.2.4	Restructuring as light verb constructions	51
3.2.5	Mono-clausal or bi-clausal?	52
4	Restructuring in l-syntax	57
4.1	The theory of l-syntax	57
4.2	Overt evidence for l-syntactic relations	65
4.3	Restructuring and non-restructuring in l-syntax	68
4.3.1	Non-restructuring configurations	68

4.3.2 Restructuring configurations	72
5 Conclusion	83

Chapter 1

Introduction

Infinitival constructions have been widely examined in different syntactic theories. Their precise syntactic and semantic characterisation has proven to be a challenging task. Different studies of infinitival constructions in languages such as Italian, Spanish and German have shown that overtly identical infinitival constructions in these languages such as

- (1) a. John intended to build a house.
- b. John planned to build a house.

differ significantly in their syntactic and semantic properties. In particular it has been suggested that in some cases the matrix verb and its non-finite complement form a single syntactic domain (1a) but in others each verb projects its own domain (1b). The evidence for this comes from the observation that processes such as clustering of clitics, passive formation, scrambling and adverbial modification operate in the domain of both verbs in the first case, but are restricted to the domain of each respective verb in the second case. As a result, these processes sometimes became known as long-distance processes and are referred to as *clitic climbing*, *long passive* and *long scrambling*.

The first analysis of the phenomena in the framework of generative grammar is given in Rizzi (1976), who noticed these properties in Italian, and by Aissen and Perlmutter (1976) who gave their account for Spanish. These authors observe that although transparency effects seem to be available only with certain verbs such as *intend*, there exist many situations where these long distance operations fail to apply even if that particular verb is available. The solution given is that all matrix verbs with non-finite complements project the same initial structure consisting of two untransparent domains, which in some cases can become *restructured* [cf. Rizzi (1976)] or *reduced* [cf. Aissen and Perlmutter (1976)] into a single domain. Since then, numerous analyses of the phenomena have been proposed, not all of which assume that two syntactic/semantics classes of infinitives initially project

identical structures and are related by structure changing transformations. Nonetheless the phenomenon continues to be known as *restructuring*.

Slovene is a South Slavic language which exhibits the same transparency or *restructuring* properties that were observed for Italian, Spanish and German. The first goal of this thesis will be to provide the evidence for the existence of at least two distinct types of non-finite constructions in Slovene and describe in detail their syntactic and semantic properties.

Another goal is to provide an analysis. Since Rizzi (1976), many analyses have been proposed, but most of them are severely limited by the considerations and assumptions made by the prevailing syntactic theories. Since we do not necessarily share their assumptions, most of them cannot be maintained. In general, we will follow the development in syntactic theory known as *The Minimalist Program*, as outlined in Chomsky (1993), by assuming that syntactic processes do not include arbitrary structure changing rules, nor are there universal structural templates to which lexical items project. Instead, syntactic structures are built to project only those projections which contribute to their syntactic and semantic interpretation. Since structures where *restructuring* has applied seem to have different syntactic/semantics properties than those with no restructuring, it follows that they should also be structurally different. Indeed, this is the main thesis defended by Wurmbrand (2001).

The third goal of this thesis is to show how syntactic and semantic differences that are observed with the two types of infinitives, *restructuring* and *non-restructuring*, follow from the structure that we propose for them. In this respect, we would like to adopt an *explanatory approach*.

We believe that this is only possible if we provide an analysis that accounts for their syntax as well as semantics simultaneously. Since Rizzi's analysis, *restructuring* was considered a syntactic phenomenon, and it was generally accepted that no or very little semantic differences between the structures exist. If semantic differences were discussed, they were usually restricted to those that follow from their immediate syntactic structure. For example, for restructuring infinitives it is standardly claimed that the event described by the matrix verb must receive the same temporal reference as the event described by the non-finite complement, since both of them are dominated by the same tense node. On the other hand, there are also a few purely semantic analyses of restructuring [cf. Napoli (1981)]. These recognise that semantics of restructuring configurations and verbs are fundamentally different than that of non-restructuring ones, but only if restructuring applies. It seems that besides a syntactic restructuring rule we would also need a parallel semantic restructuring rule which changes the semantics of matrix verbs and their non-finite complements, a conclusion made by Napoli.

It thus appears that restructuring and non-restructuring infinitival constructions can only be adequately described and explained by interfacing syntax with semantics. This will be the main claim of our thesis. We will

show that syntactic as well as semantic properties of Slovene infinitival constructions conform to the model of the syntax-semantics interface proposed in Hale and Keyser (1993). Hale and Keyser argue that an important aspect of the semantics of verbal predicates, their argument and event structure, is constructed purely by syntactic processes. We conclude that *restructuring* represents one more case which supports the validity of their theory.

This thesis is organised as follows. In the second chapter we present a detailed survey of the syntactic and semantic properties of Slovene infinitival constructions. We show that they should be analysed as belonging to at least two classes which behave differently in terms of clitic climbing, long passive, scrambling, adverbial modification, control and anaphor binding. We show that they differ in their argument structures and that restructuring infinitives do not allow embedded tense, negation or complementisers. We discuss the semantics of restructuring and non-restructuring constructions particularly in relation to their event structure.

In the third chapter we present a survey of various analyses of restructuring proposed in the literature and conclude that restructuring infinitives are not reduced or restructured versions of non-restructuring constructions, but initially project different syntactic structures consisting of a single clausal domain.

In the fourth chapter we outline the theory of *lexical syntax* proposed by Hale and Keyser (1993) and provide syntactic/semantic analysis of restructuring and non-restructuring infinitives in that framework. We conclude by considering how the proposed structures can account for the syntactic and semantic properties of two classes of infinitives previously described.

Chapter 2

Restructuring in Slovene

We begin by providing an overview of restructuring properties or transparency effects in Slovene that seem to split infinitival constructions in at least into two classes.

2.1 Clitic climbing

One of the best known and most intriguing restructuring properties is *clitic climbing*. Clitics are usually defined in prosodic terms as unstressed words that cannot be prosodic words by themselves but must attach to some host. Although Slovene licenses a number of items that could be classified as clitics including prepositions, conjunctions, negation and modal particles, there is a special class which includes various forms of the auxiliary ‘to be’, genitive, dative and accusative pronominals and reflexives that exhibits quite a special and unusual behaviour. When these constituents occur in a clause they must appear in the second clausal position, immediately after the first constituent.¹ This position is also known as the *Wackernagel* position, named after J. Wackernagel who first pointed out this placement of clitics in Wackernagel (1892). Furthermore, the order of the clitics in the cluster is constrained as follows: (i) some forms of the auxiliary ‘to be’, (ii) reflexives, (iii) dative pronominals, (iv) accusative pronominals, (v) genitive pronominals, and (vi) the remaining forms of ‘to be’.² The clustering of clitics in a simple clause is shown below.³

¹Historically this was not so. Clitics immediately followed the first prosodic word and not a constituent. The variation between the prosodic and the syntactic placement is still visible today in a closely related Serbo-Croatian. See Progovac (1996).

²Orešnik (1985) accounts for the reasons why auxiliaries are split into two different cluster positions by pointing out that their forms comprise of two different morphological stems, the *s* and the *b* stem respectively, which historically became integrated into the cluster at different times.

³For the ease of exposition, clitics will be printed in italics throughout.

- (2) a. Janez *je* kupil Mariji rože.
 John-NOM is bought Mary-DAT flowers-ACC
 ‘John bought Mary flowers.’
 b. Janez *ji* *jih* *je* kupil.
 John-NOM her-DAT them-ACC is bought
 ‘John bought them to her.’

It is important to emphasise that apart from the auxiliary ‘to be’, the pronominals and reflexives also have full non-clitic forms which cannot occur in the cluster as shown in (3a) nor can the cluster be interrupted by some non-clitic element. Interestingly, by not cliticising the dative pronoun in (3a) we place additional focus to it which is expressed by stress in English. Furthermore, if we left both pronouns uncliticised, the result would be ungrammatical as shown in (3b). This is because we normally cannot focus more than one constituent. We can therefore conclude that in simple mono-clausal constructions cliticisation is obligatory and that full pronouns are used for some specific purpose such as focus.

- (3) a. Janez *jih* *je* kupil *njej*.
 John-NOM them-ACC is bought her-DAT
 ‘John bought them to HER.’
 b. *Janez *je* kupil *njej* *njih*.
 John-NOM is bought her-DAT them-ACC
 ‘John bought them to her.’

There is a considerable debate regarding the reasons, the mechanisms and the site to which clitics cluster, that go beyond the scope of this thesis and were elaborated in Sportiche (1996). What we are primarily interested in, is the behaviour of clitics in infinitival constructions which typically consist of an inflected main verb and its non-finite complement. Rizzi (1976) noticed for Italian that with some matrix verbs, clitics belonging to the complement verb can be cliticised either to the matrix or to the complement verb. The phenomenon whereby a clitic ‘climbs’ to the clitic cluster of another verb that is not its θ -role assigner is known as *clitic climbing*. On the other hand, with some matrix verbs, only cliticisation inside the domain of the second or the local verb seems to be available.

The same asymmetry also appears to be present in Slovene if we take verbs such as *nameravati* ‘intend’ and *načrtovati* ‘plan’ as shown by (4) and (5). The clitics *her* and *them*, the internal arguments of the verb *to buy*, can climb to the matrix verb *intend* but cannot do so with the matrix verb *plan*.⁴

⁴Notice that Rizzi sees restructuring as a lexical property of specific verbs that take non-finite complements. For the moment we will assume that this is so although we will later argue differently.

- (4) a. Janez *je* nameraval kupiti Mariji rože.
 John-NOM is intended to buy Mary-DAT flowers-ACC
 ‘John intended to buy Mary flowers.’
 b. Janez *ji jih je* nameraval kupiti.
 John her them is intended to buy
 ‘John intended to buy them to her.’
 c. Janez *je* nameraval, kupiti *ji jih*.
 John is intended to buy her them
 ‘John intended to buy them to her.’
- (5) a. Janez *je* načrtoval kupiti Mariji rože.
 John-NOM is planned to buy Mary-DAT flowers-ACC
 ‘John planned to buy Mary flowers.’
 b. *Janez *ji jih je* načrtoval kupiti.
 John her them is planned to buy
 ‘John planned to buy them to her.’
 c. Janez *je* načrtoval, kupiti *ji jih*.
 John is planned to buy her them
 ‘John planned to buy them to her.’

The fact that *intend* allows clitic climbing and *plan* does not is surprising, since lexically they appear to be identical. Furthermore, another question that needs to be answered is why clitics in (4c) do not climb to the matrix clitic cluster if climbing is available with verbs such as *intend*. It appears at first sight that clitic climbing is optional. However, we will show by the next property of restructuring infinitives that this is not the case.

2.2 Non-focus scrambling

Studies of scrambling show that scrambling of constituents without inducing focus effects is clause bound. On the other hand, if we scramble constituents across clausal boundaries they will receive focus. The latter is also known as *focus movement*. This asymmetry is also present in restructuring and non-restructuring infinitives. For example, if we scramble a constituent from a non-finite complement of a ‘restructuring verb’ the constituent does not receive focus as in (6a). However, if we do the same in the structure with a ‘non-restructuring verb’ it does (6b), and thus we mark the sentence ungrammatical.⁵ Scrambling of any kind is strongly ungrammatical with propositional verbs that presumably project a CP, especially if there is an overt complementiser (6c).

⁵Non-focus scrambling is used extensively to show restructuring properties of German, cf. Wurmbrand (2001).

- (6) a. Janez *je* rože_i nameraval kupiti t_i.
 John-NOM is flowers-ACC intended to buy
 ‘John intended to buy flowers.’
- b. *Janez *je* rože_i načrtoval kupiti t_i.
 John-NOM is flowers-ACC planned to buy
 ‘John planned to buy flowers.’
- c. *Janez *je* rože rekel, da bo kupil t_i.
 John-NOM *is* flowers-ACC said that will buy
 ‘John said that he will buy flowers.’

Let us consider a sentence such as (6a) but where the argument *flowers* appears as a clitic *them* which does not climb to the matrix verb but remains embedded in the non-finite complement, and *Mary* is a constituent to be scrambled as in (7a) below. If we scramble *Mary* to the matrix verb as in (7b) it receives focus and thus the sentence is, in our criteria, ungrammatical. On the other hand, non-focus scrambling appears to be available when the clitic *them* climbs to the matrix cluster as in (7c).

- (7) a. Janez *je* nameraval, kupiti *jih* Mariji.
 John-NOM is intended to buy them Mary-DAT
 ‘John intended to buy them to Mary.’
- b. *Janez *je* Mariji_i, nameraval kupiti *jih* t_i.
 John-NOM is Mary-DAT intended to buy them
- c. Janez *jih* *je* Mariji_i nameraval kupiti t_i.
 John-NOM them is Mary-DAT intended to buy

We can therefore conclude that ‘long scrambling’ relates to clitic climbing and vice versa. Furthermore, (7) shows that cases where a suitable restructuring verb is present but clitics do not climb, a situation which we observed in (4c), cannot be considered a restructuring construction since non-focus scrambling is never available here. Clitic climbing is thus never optional but is forced when restructuring occurs. Restructuring thus does not seem to be exclusively determined by the choice of a particular verb but there must be some other (structural) condition. For this reason, Wurmbrand (2001) concludes that we should not simply refer to restructuring verbs but rather to restructuring *configurations*.

2.3 Long passive with *se*

Passive constructions in Slovene can be of two types, *progressive* and *stative* passive. The progressive passive is formed with the accusative clitic anaphor *se* which seems to absorb accusative Case. The stative passive is formed with the auxiliary ‘to be’ and a participle ending on a suffix *-n/t*. In both

passives the internal argument of the verb is assigned nominative Case and is projected as sentential subject which agrees with the verb in gender and number. The following example shows both passives in simple mono-clausal constructions.

- (8) a. Janez gradi hišo.
 John builds house
 ‘John is building a house.’
 b. Hiša se gradi.
 house-FEM,SG SE building-3P,SG
 ‘A house is being built.’ (progressive passive)
 c. Hiša je zgrajena.
 house-FEM,SG is built-PART,FEM,3P,SG
 ‘The house is built.’ (stative passive)

If we turn to infinitival constructions, we observe that the progressive *se* passive is formed quite differently in restructuring and non-restructuring configurations.⁶ If we form a *se* passive of restructuring configurations (9b), the internal argument or the direct object of the embedded non-finite complement becomes the subject of the matrix verb and receives nominative Case as shown below. Note also that the matrix verb now agrees in gender and number with the argument of the non-finite complement. It appears that passivisation affects both verbs simultaneously, thus providing strong evidence that they belong to the same clausal domain.

- (9) a. Janez je nameraval zgraditi hišo.
 John-MASC,NOM is intended-MASC to build house-FEM,ACC
 ‘John intended to build a house.’
 b. Hiša se je nameravala zgraditi.
 house-FEM,NOM SE is intended-FEM to build
 Lit. ‘The house intended itself to be build.’
 ‘They intended to build a house.’

However, verbs such as *intend* also allow forming the *se* passive by leaving the argument *house* inside the non-finite complement as shown in (10). In this case the argument receives accusative Case, and the matrix passivised verb is specified for an empty subject which is morphologically marked on the participle as a third person singular neuter.

- (10) Nameravalo se je, zgraditi hišo.
 intended-NEU,3P,SG SE is to build house-FEM,ACC
 ‘They intended to build a house.’

⁶The stative passive is impossible across non-finite complements in Slovene altogether which contrasts with Italian, as reported in Cinque (1997a), where it can be formed, but only with some ‘restructuring’ verbs.

This construction is a non-restructuring configuration of *intend* and is identical to (4c) where clitics remained inside the non-finite complement. The non-restructuring is further supported by the fact that this is the only available passive construction with verbs that usually occur only in non-restructuring configurations such as *plan* as shown in (11) below.

- (11) a. Janez *je* načrtoval zgraditi hišo.
 John-MASC,NOM is planned-MASC,SG to build house-FEM,ACC
 ‘John planned to build a house.’
- b. *Hiša *se je* načrtovala zgraditi.
 house-FEM,NOM SE is planned-FEM,SG to build
 ‘They planned to build the house.’
- c. Načrtovalo *se je*, zgraditi hišo.
 planned-NEU,3P,SG SE is to build house-FEM,ACC
 ‘They planned to build a house.’

Furthermore, we can also apply ‘long scrambling to (10) and (11). If these constructions are restructuring configurations, scrambling of the argument *house* should be possible to a position preceding the matrix verb but following the clitic cluster. On the other hand, if these constructions are non-restructuring, (non-focus) scrambling should be blocked. As the following examples show, the latter does seem to be the case.⁷

- (12) a. *Včera_j *se je* hišo_i nameravalo zgraditi t_i.
 yesterday SE is house-ACC intended-NEU,3P,SG to build
 ‘They intended to build a house yesterday.’
- b. *Včera_j *se je* hišo_i načrtovalo zgraditi t_i.
 yesterday SE is house-ACC planned-NEU,3P,SG to build
 ‘They planned to build a house yesterday.’

Overall, it appears that in restructuring configurations the passivisation of the matrix verb affects the case assigning properties of the embedded non-finite complement resulting in the latter not being able to assign accusative Case, and thus its internal argument must raise to become the subject of the matrix clause. Non-restructuring configurations, however, are not transparent to syntactic processes; the embedded non-finite complement does not appear to be affected by the passivisation of the matrix verb and is thus able to assign its own accusative Case.

⁷Note that (12a) is only ungrammatical because the argument *house* is assigned accusative Case. If this were nominative assigned by the matrix verb the example would be, of course, grammatical.

2.4 Complementisers

Slovene licenses no infinitivals, restructuring or non-restructuring, that are introduced by a complementiser (13a). If a complementiser is present, the clause must be finite as in (13b).

- (13) a. *Janez *je* načrtoval, da zgraditi hišo.
 John is planned that to build house.
 ‘*John planned that to build a house.’
 b. Janez *je* načrtoval, da *bo* zgradil hišo.
 John is planned that will build-MASC,3P,SG house
 ‘John planned that he will build a house.’

However, it has been pointed out [cf. Broekhuis et al. (1995) and Wurmbrand (2001)] that there exist languages, such as Dutch, where infinitival clauses are believed to be introduced by complementisers. Although Wurmbrand (2001) shows that Dutch in fact does not license restructuring configurations comparable to the ones in German or Slovene, it appears that the presence of complementiser *om* as in (14) blocks certain transparency effects that would otherwise be available.

- (14) dat Jan heeft geprobeerd (om) zijn broer die brief te
 that Jan has tried COMP his brother the letter to
 schrijven
 write
 ‘that John has tried to write the letter to his brother.’

Furthermore, Rizzi (1976) shows that the presence of *si* ‘if’, which can be used in infinitivals in Italian, blocks clitic climbing (15a) that is otherwise available (15b). If the complementiser is present the clitic must remain with the embedded verb (15c). In Slovene, the comparable complementiser *če* necessarily requires a tensed clause.

- (15) a. *Non *lo* so se fare.
 not it know-I if to do
 ‘I don’t know whether to do it.’
 b. Non *lo* so fare.
 not it know-I to do (climbing)
 c. Non so se far*lo*.
 not know-I if to do-it (no climbing)

It therefore appears that restructuring configurations cannot contain complementisers. On the other hand, it is frequently argued [cf. Rizzi

(1976), Kayne (1989) and Roberts (1997)] that *wh*-specifiers *are* possible in restructuring infinitives as shown below.⁸

- (16) a. ?Non *ti* *saprei* *che* *dire*.
 not you-DAT_i would-know-I what to say *t_i*
 ‘I wouldn’t know what to say to you.’
 b. ?Ne *bi* *ti* *vedel* *kaj* *reči*.
 not would you-DAT_i know-MASC,SG what to say *t_i*
 ‘I wouldn’t know what to say to you.’

However, their availability in restructuring configurations is questionable, if we consider the fact that they are only available with certain matrix verbs such as *know* (16b) and that sentences get considerably degraded if another restructuring verb such as *intend* is used (17).

- (17) *Ne *nameravam* *ti* *kaj* *reči*.
 not intend-I you-DAT_i what_j to say *t_i t_j*
 ‘I do not intend to say anything to you.’

It appears that the only *wh*-specifier that is available in this context is *kaj* ‘what’ and that other *wh*-elements such as *how* and *whom* produce far more degraded results.

- (18) *Ne *vem* *ti* *kako* *reči*, *da...*
 not know-I you-DAT_i how_j to say *t_i t_j* that
 ‘I don’t know how to tell you that...’

Moreover, the only clitic that is usually allowed to climb in these configurations is the dative pronominal *you*, whereas the accusative pronoun *it* gives far worse results.

- (19) *Ne *bi* *ga* *vedel* *komu* *napisati*.
 not would it_j know-MASC,SG whom_i to write *t_i t_j*
 ‘I wouldn’t know whom to write it.’

Finally, the set of verbs that occur as the non-finite complement is also restricted. The construction usually contains verbs such as *reči* ‘say’ and *dati* ‘give’. If we replace them with more lexically specific variants of the same verbs such as *podariti* ‘to give as a present’ or other verbs, the sentences become degraded again.

⁸This claim is usually made by approaches that assume that restructuring is brought about by head movement which we will discuss in the following chapter. It follows from their argument that a filled C position will intervene with head movement but a filled Spec of CP will not.

- (20) a. ?Ne vem *ti* kaj dati.
 not know-I you-DAT_i what_j to give t_i t_j
 ‘I don’t know what to give you.’
 b. *Ne vem *ti* kaj podariti.
 not know-I you-DAT_i what_j to give t_i t_j
 ‘I don’t know what to give you as a present.’

Taking all these properties of restructuring infinitives that supposedly occur with *wh*-specifiers into account, Napoli (1981) and Wurmbrand (2001) conclude that they are idiomatic expressions rather than productive syntactic constructions. This conclusion can be supported.

It should be pointed out that infinitival constructions where a *wh*-phrase moves to the specifier of the embedded CP, but where the clitic *you* remains in the embedded clitic cluster, i.e. non-restructuring configurations, are also degraded. This is to be expected, since the presence of a CP projection in Slovene seems to require the presence of tense, which is also evidenced by the lack of infinitival clauses introduced by a complementiser.

- (21) *Ne vem kaj reči *ti*.
 not know-I what_i to say you-DAT t_i
 ‘I don’t know what to say to you.’

In all preceding cases of *wh*-movement, tensed clauses with a modal (desiderative) particle *naj* are much preferred (22). We can conclude that both restructuring and non-restructuring configurations do not license overt complementisers nor *wh*-specifiers.

- (22) Ne vem, kaj naj *ti* dam.
 not know-I what DES you-DAT give-I
 ‘I don’t know what shall I give you.’

2.5 Internal arguments

It is frequently argued in the literature [cf. Napoli (1981), Rosen (1990) and Cinque (2000)] that verbs which standardly occur in restructuring configurations cannot be specified for internal arguments and are thus analysed best as *light verbs*. Although many verbs that occur in non-restructuring configurations, such as *plan*, are not specified for arguments other than their non-finite complements either, some of them also allow beneficiary arguments. The verb *groziti* ‘to threaten’ can optionally take such argument as shown below.

- (23) a. Janez *je* grozil osvojiti vrh.
 John-NOM is threatened to conquer peak-ACC
 ‘John threatened to conquer the mountain peak.’

- b. Janez *je* grozil Mariji, osvojiti vrh.
 John-NOM is threatened Mary-DAT to conquer peak-ACC
 ‘John threatened to Mary to conquer the mountain peak.’

It appears that restructuring properties such as ‘clitic climbing’ are available with *threaten*, but only if it does not take the beneficiary complement to *Mary*.

- (24) a. Janez *ga* *je* grozil osvojiti.
 John-NOM it-ACC is threatened to conquer
 ‘John threatened to conquer it.’
 b. *Janez *ji* *ga* *je* grozil osvojiti.
 John-NOM her-DAT it-ACC is threatened to conquer
 ‘John threatened to her to conquer it.’

(24b) is grammatical under a slightly more obscure interpretation, according to which the argument *her* belongs not to the matrix verb *threaten* but to the embedded non-finite verb *to conquer*. This gives the meaning that John threatened to conquer the mountain peak for Mary. Overall, we thus find that matrix verbs which are specified for internal arguments cannot occur in restructuring configurations.⁹

This also accounts for the fact that verbs which typically project an overt anaphoric or pronominal argument such as *self* or *to self* can never occur in these configurations. For example, motion verbs such as *iti* ‘go’ easily occur in restructuring configurations. However, *napotiti se* ‘make self/somebody on the way’ cannot.¹⁰

- (25) a. *Marija *se* *jo* *je* napotila zgraditi.
 Mary-NOM self-ACC it-ACC is make on the way to build
 Mary made herself to go and build it.’
 b. *Hiša *se* [*se?*] *je* napotila zgraditi.
 house-NOM self-ACC is make on the way to build
 ‘They made themselves to go and build a house.’

Notice that (25) is also ungrammatical because the clitic cluster contains two clitics of the same kind, which is impossible if we assume that there is only when projection where each clitic type is licensed.

Finally, Cinque (2000) shows that there cannot be any unaccusative restructuring verbs whose subjects would originate as internal arguments.

⁹Verbs that allow the optionality of *threaten* are, of course, rare. Napoli (1981) and Cinque (2000) report that in Italian this seems to hold for *sembrare* ‘seem’.

¹⁰As shown by the English paraphrase, these verbs contain a complex (causative) internal structure, which we will later argue is the main reason why these verbs cannot occur in restructuring configurations.

He shows that whenever the subject of an unaccusative verb remains in its underlying (object) position, clitic climbing becomes unavailable. In Italian this is the case, for example, when the argument is a partitive construction consisting of a pronoun *ne* ‘of them’ and a quantifier. It is believed that the argument’s original structural position is marked by the placement of the quantifier. The same partitive constructions are also available in Slovene, and here too clitic climbing is unavailable. Note also that when the overt subject argument remains in its underlying structural position, the participle is unmarked for gender and number.

- (26) a. *Prišlo jih je več, prinesi ti darilo.*
 come-PART,NEU them-GEN is many to bring you-DAT present
 ‘Many came to bring you a present.’
 b. **Prišlo ti jih ga je več prinesi.*
 come-PART,NEU you-DAT them-GEN it-ACC is many to bring
 ‘Many came to bring it to you.’

However, motion verbs occur frequently in restructuring configurations, as shown by the following non-partitive construction.

- (27) *Vsi so ti ga prišli prinesi.*
 everyone are you-DAT it-ACC come to bring
 ‘Everyone came to bring it to you.’

It appears that unaccusative verbs lose their ‘unaccusative’ property, i.e. the ability to project their subject as internal argument when they are used in restructuring configurations. It follows that their arguments must be external arguments. Since their argument structure in restructuring configurations is considerably different from that in non-restructuring ones, their semantics should also be different. We will provide a further support for this claim in the discussion of semantics of restructuring verbs at the end of this chapter.

We have seen in (23b) that matrix verbs with beneficiary arguments overtly marked by dative Case cannot occur in restructuring configurations. However, there are numerous cases of sentences in Slovene which superficially appear identical to (23b) but where restructuring does seem to apply, as shown by the following example.

- (28) a. *Janez je dovolil Mariji zgraditi hišo.*
 John-NOM is allowed Mary-DAT to build house-ACC
 ‘John allowed Mary to build a house.’
 b. *Janez ji jo je dovolil zgraditi.*
 John-NOM her-DAT it-ACC is allowed to build
 ‘John allowed Mary’s house building.’

There is an important difference between (23b) and (28). Although, in both cases the argument *Mary* is assigned the surface Dative case, semantically they behave quite differently. In particular, *Mary* in (28) cannot be interpreted as a beneficiary of John's allowing but only as the agent or the beneficiary of house-building. We will provide further support for the argument *Mary* can be the subject of the embedded non-finite verb in the discussion of *control* and *anaphor binding*.

We can conclude that matrix verbs in restructuring configurations cannot be specified for internal arguments and must be analysed as light verbs.

2.6 Control

Restructuring and non-restructuring configurations behave quite differently in the way the subject of the embedded non-finite verb is assigned reference. The literature on the semantics of infinitivals recognises a number of control relations such as *exhaustive*, *arbitrary*, *long-distance*, *implicit*, *split*, *partial/imperfect* and *variable control* or *control shift*.¹¹ These relations can be subsumed into two larger classes, *obligatory* and *non-obligatory* control, depending on whether the sentential subject is the exclusive controller of the embedded subject or not. It appears that whenever a non-finite complement is a part of a restructuring configuration, its subject must be interpreted as being obligatorily controlled. This is not a requirement for non-restructuring configurations where non-obligatory control is also available.

Non-restructuring configurations, for example, allow *partial control* in which the sentential subject represents only a part of the collective subject of a non-finite complement. The availability of partial control can be shown by constructing a configuration with a singular sentential subject *John/Mary* and a non-finite verb such as *gather* or *meet* that typically require plural subjects. Thus, the understood subject of *meet* in a non-restructuring configuration such as (29) below, is a collective subject including John and somebody else.

- (29) Janez *se je* odločil, srečati *se* na gradu.
 John_i SE is decided PRO_{i+j} to meet SE in castle
 ‘John decided to meet in the castle.’

On the other hand, (30a) and (30b), typical restructuring configurations, do not allow this kind of control. It appears that here the sentential subject *John* in (30a) and the argument *Mary* in (30b) are interpreted as the exclusive controllers of the embedded non-finite verb. Therefore, if this verb is a collective predicate such as *meet*, the predication results in semantic incompatibility and hence the sentences are ungrammatical.

¹¹For definitions and examples see Wurmbrand (2001), p.236ff.

- (30) a. *Janez *se bo* poskušal srečati na gradu.
 John_i SE will try-PART PRO_i to meet in castle
 ‘John will try to meet in the castle.’
- b. *Janez *se bo* Mariji dovolil srečati na gradu.
 John-NOM_i SE will Mary-DAT_j allow PRO_j to meet in castle
 ‘John will allow Mary to meet in the castle.’

Note that in (30b) the argument *Mary* must be interpreted as the exclusive subject of *meet*. The subject of *meet* cannot be *John* or a collective subject including John and Mary. This is surprising, since non-restructuring configurations are highly ambiguous in the interpretation of embedded subjects.

Let us consider a sentence which includes a beneficiary argument *Mary*. In this case, the controller of the non-finite verb can be either the subject or the object of the matrix verb, or some other contextually salient entity *k*.

- (31) Janez *je* predlagal Mariji, iti v gledališče.
 John-NOM_i is proposed Mary-DAT_j PRO_{i/j/k} to go to theatre
 ‘John proposed to Mary to go to the theatre.’

The phenomena is known as *variable control*. A further complication arises, if the beneficiary argument *Mary* could be interpreted as belonging to either the matrix or to the embedded verb, as shown below. In this case, the configuration gives rise to five potential readings.¹²

- (32) Janez *je* obljubil Mariji, zgraditi hišo.
 John-NOM is promised Mary-DAT to build house
 ‘John_i promised to Mary_j PRO_{i/j/k} to build a house.’
 ‘John_i promised PRO_{i/k} to build a house for Mary.’

The asymmetry between restructuring and non-restructuring configurations seems to suggest the following conclusions. The embedded non-finite complement must contain some covert subject for which reference is (contextually) constructed, otherwise the variation in non-obligatory control could not be successfully accounted for. On the other hand, the constrained control relations in restructuring configurations suggest that embedded non-finite complements contain no embedded covert subjects. The interpreted subject of the embedded infinitive must be identical to the subject of the matrix clause in (30a). Considering this and the fact that ‘restructuring verbs’ do not allow internal arguments as discussed in the previous section,

¹²This ambiguity of the dative argument is resolved if it is a clitic pronoun in which case it is bound to its local clitic cluster.

Mary in (30b) cannot be a beneficiary argument of the verb *allow* but only a structural subject argument of the embedded non-finite verb.

If, on the other hand, restructuring configurations contained an embedded covert subject for which the reference would be constructed to some available argument, it would be difficult to account for why the reference in (30a) is exclusive and why in (30b) only *Mary* and not *John* can be the interpreted agent of the embedded non-finite complement, something which is available in non-restructuring configurations. Some further unmotivated (semantic) stipulations would have to be introduced to impose these restrictions, whereas if we take both *John* and *Mary* as structural subject arguments the control restrictions are quite easily accounted for. In particular, the argument *Mary* in (30b) takes the precedence over the argument *John* because it is a closer potential structural subject for the embedded verb.

In sum, it follows that in restructuring configurations control is highly constrained—the controller of the embedded non-finite complement can only be the closest agent argument. This contrasts with non-restructuring configurations where control is free and even contextually defined. The facts from control in restructuring configurations together with the fact that ‘restructuring verbs’ cannot project internal arguments conclusively suggest that dative arguments such as *Mary* in (30b) are structural subjects of the embedded non-finite complements.

2.7 Anaphor binding

The last property that distinguishes restructuring and non-restructuring infinitives and relates to their argument structure is how they bind anaphors.¹³ Slovene licenses anaphors such as *sebi* ‘self’ and *svoj* ‘self’s’ which are unspecified for gender, person or number. The anaphor binding is particularly interesting in those restructuring cases for which we argued to contain two subjects, the matrix and the embedded subject, as repeated in the examples below.

- (33) a. Janez *je* dovolil Mariji govoriti o sebi z
 John-NOM_i is allowed Mary-DAT_j to talk about self_{i/j} with
 novinarji.
 journalists
 ‘John allowed Mary to talk about himself/herself with the press.’
 b. Janez *je* dovolil Mariji brati svojo knjigo.
 John-NOM_i is allowed Mary-DAT_j to read self’s_{i/j} book
 ‘John allowed Mary to read his/her book.’

¹³For some observations on anaphor binding in Slovene non-finite constructions see Bolta (1986), Bolta (1989) and Bolta (1990).

(33) is important for two reasons. Firstly, it shows that embedded anaphors can bind the argument *Mary* and thus provides further evidence that *Mary* is a subject argument. It is namely a property of Slovene (as well as other languages) that anaphors can only bind subjects (*John* but not object arguments (*Mary*) as exemplified in a simple sentence in (34a). In order to establish a reference with the object argument, a pronominal must be used instead (34b).

- (34) a. Janez *je* dal Mariji svojo knjigo.
 John-NOM_i is given Mary-DAT_j self's_{i/*j} book
 'John gave Mary his own book.'
 b. Janez *je* dal Mariji njeno knjigo.
 John-NOM_i is given Mary-DAT_j her_{j/k} book
 'John gave Mary her book.'

Secondly, (33) also shows that in restructuring configurations anaphors are able to bind either available subject argument *John* or *Mary*, making the sentences ambiguous. This contrasts sharply with non-restructuring configurations where the anaphors can only bind the interpreted subject of the non-finite complement. In (35), for example, the anaphor *self* cannot be bound to *John* if the interpreted agent of the talking event is *Mary* and vice versa. Equally, the anaphor cannot be bound ambiguously to the subject of the embedded verb (*Mary*) and to the subject of the matrix verb (*John*), as this is the case in restructuring configurations.

- (35) Janez *je* obljubil Mariji, govoriti o sebi
 John-NOM_i is promised Mary-DAT_j PRO_{i/j} to talk about self_{i/j}
 z novinarji.
 with journalists
 'John promised to Mary that he will talk about himself.
 John promised to Mary that she will be able to talk about herself.'

These facts suggest that in restructuring configurations both subject arguments *John* and *Mary*, and consequently also their verbs, belong to the same anaphor binding (clausal) domain, whereas in non-restructuring configurations two separate domains must exist.

The assumption can be confirmed by examining anaphor binding in the connection to clitic climbing. In (33) above, the anaphor *self* was used with a preposition and as such cannot cliticise, but when it occurs in accusative *sebe* or dative *sebi* Case it can. The relevant forms are *se* and *si* as shown below.

- (36) a. Janez *je* dovolil Mariji pomagati sebi.
 John-NOM_i is allowed Mary-DAT_j to help self-DAT_{i/j}
 'John allowed Mary to help him/herself.'

- b. Janez *je* dovolil Mariji pomagati *si*.
 John-NOM_i is forbidden Mary-DAT_j to help self-DAT_{*i/j}
 ‘John allowed to Mary to help herself.’
- c. Janez *si* *je* dovolil Mariji pomagati.
 John-NOM_i self-DAT is allowed Mary-DAT to help
 ‘John allowed Mary to help him.’
 ‘John allowed himself to help Mary.’
- d. Janez *si ji je* dovolil pomagati.
 John-NOM self is allowed Mary to help
 ‘John allowed her to help him/herself.’

In (36a) the anaphor occurs in its full, non-clitic form and can refer to both subjects as we argued to be the case in restructuring configurations. However, if it is cliticised it can either stay in the embedded non-finite complement, if a construction is a non-restructuring one, or it can climb to the matrix verb in the case of restructuring. If it stays in the embedded clitic cluster, it can only refer to *Mary*, since *Mary* is the interpreted subject of the non-finite complement as in (36b). If the clitic anaphor climbs to the matrix cluster and the argument *Mary* remains behind, it can only bind *John* (36c). This is because in this configuration *Mary* does not c-command the anaphor. The anaphor can bind either argument *John* or *Mary* again if *Mary* appears as a clitic *her* that climbed to the matrix cluster as shown in (36d).

In this section we have shown again that in terms of anaphor binding, restructuring configurations should be analysed as single clausal domains and non-restructuring configurations as separate clausal domains. The anaphor binding in non-restructuring configurations shows that these are bi-clausal structures, since anaphors can only bind the embedded covert subject argument but not the matrix subject. This, however, is possible in restructuring configurations.

2.8 Adverbial modification

Restructuring and non-restructuring configurations also behave differently in terms of adverbial modification. It appears that in non-restructuring configurations the adverb modifies each verb independently, whereas in restructuring configurations independent modification of the matrix verb is not available. For example, a manner adverb such as *again* will give rise to ambiguity if projected between two verbal predicates in a non-restructuring case (with no clitic climbing) such as (37a) since it can be interpreted as modifying either of them. (37a) either means (i) that John resolved in another intention to ask her and he has not asked her before, or (ii) that John resolved to approach her with another question. The ambiguity is quickly

resolved by introducing an intonational break or by changing the position of the adverb. Thus, we only get the first reading if the adverb is unambiguously projected with the matrix verb as in (37b), and we only get the second reading if the adverb is projected within the non-finite complement (37c).

- (37) a. Janez *je* nameraval znova vprašati *jo*.
 John is intended again to ask her
 ‘John intended once more to ask her.’
 ‘John intended to ask her a second time.’
 b. Janez *je* znova nameraval, vprašati *jo*.
 John is again intended to ask her
 ‘John intended once more to ask her.’
 c. Janez *je* nameraval vprašati *jo* znova.
 John is intended to ask her again
 ‘John intended to ask her a second time.’

On the other hand, in restructuring configurations (with clitic climbing), no such ambiguity exists regardless of the position of the adverb. In all cases the adverb can only modify the embedded non-finite complement, or both verbs simultaneously as we will later conclude.¹⁴

- (38) a. Janez *jo je* nameraval znova vprašati.
 John her is intended again to ask
 ‘John intended to ask her a second time.’
 b. Janez *jo je* znova nameraval vprašati.
 John her is again intended to ask
 c. Janez *jo je* nameraval vprašati znova.
 John her is intended to ask again

The same holds for adverbs of time and place. Furthermore, since temporal adverbial modification interacts with tense, here too some interesting differences between restructuring and non-restructuring emerge. It appears that in restructuring configurations such as (39), the non-finite complement cannot be modified by a temporal adverb which is incompatible with the tense of the matrix verb. If we attempt to add an adverb like *tomorrow* to the non-finite complement of a matrix verb that is specified for past, the construction becomes ungrammatical. It appears that restructuring configurations require both ‘intending’ and ‘asking’ occurring at the same point in the past. Adding *tomorrow* creates scope over both verbs and this results

¹⁴Napoli (1981), 851ff. shows that manner adverbs can intervene between both verbs in restructuring configurations whereas this is impossible with adverbs of place and time. She shows that the same is also true for constructions consisting of an auxiliary verb and a past participle.

in semantic incompatibility with the matrix tense. Hence, (39a) is ungrammatical precisely for the same reason as (39b) is, where the adverb is placed with the matrix verb.

- (39) a. *Janez *jo je* nameraval vprašati jutri.
 John her is intended to ask tomorrow
 ‘John intended to ask her tomorrow.’
 b. *Janez *jo je* jutri nameraval vprašati.
 John her is tomorrow intended to ask
 ‘*John intended tomorrow to ask her.’

On the other hand, in corresponding non-restructuring configurations adverbs take scope over a single verb or tense specification only, as shown in (40). Thus, the temporal specifications of non-finite complements can be modified independently and the insertion of *tomorrow* does not clash with the past specification of the matrix verb (40a), unless the adverbial modifier is projected in its domain (40b). The only temporal requirement in non-restructuring infinitives is that the temporal reference of the non-finite complement should follow the temporal reference of the matrix verb, which is the reason why (40c) is ungrammatical.

- (40) a. Janez *je* nameraval, vprašati *jo* jutri.
 John is intended to ask her tomorrow.
 ‘John intended to ask her tomorrow.’
 b. *Janez *je* jutri nameraval, vprašati *jo*.
 John is tomorrow intended to ask her
 ‘*John intended tomorrow to ask her.’
 c. *Janez *je* nameraval včeraj, obiskati *jo*
 John is intended yesterday to ask her
 predvčerajšnjim.
 the day before yesterday
 ‘*John intended yesterday to ask her the day before yesterday.’

In this section we have seen that restructuring verbs cannot be independently modified by adverbs, nor can the entire configuration receive two distinct temporal specifications. However, both are possible with non-restructuring configurations.

2.9 Negation

The properties of adverbial modification in restructuring and non-restructuring configurations also hold for negation. For example, in non-restructuring configurations each verb can be negated separately (41).

- (41) a. Janez *se je* odločil, ne zgraditi hišo.
 John-NOM SE is decided not to-build house-ACC
 ‘John decided not to build the house.’
 b. Janez *se ni* odločil zgraditi hiše.
 John-NOM SE not-is decided to build house-GEN
 ‘John didn’t decide to build a house.’

In restructuring configurations, however, we can only negate the verbal complex as a whole. If we attempt to embed negation inside a restructuring non-finite complement, the construction becomes a non-restructuring one (42b).

- (42) a. Janez *ni* poskušal zgraditi hiše.
 John-NOM not-is tried to build a house-GEN
 ‘John did not try to build a house.’
 b. Janez *je* poskušal, ne zgraditi hišo.
 John-NOM is tried not to build house-ACC
 ‘John tried not to build a house.’

This can be shown by applying the *se* passive. (42a) can be turned into a long passive structure (43a). On the other hand, (42b) cannot, as shown in (43b). In this case only the matrix verb can be passivised (43c), thus providing the evidence that (42b) is truly a case of non-restructuring.

- (43) a. Hiša *se ni* poskušala zgraditi.
 house-FEM,NOM SE not-is tried-PART,FEM,SG to build
 ‘They did not try to build the house.’
 b. *Hiša *se je* poskušala ne zgraditi.
 house-FEM,NOM SE is tried-PART,FEM,SG not to build
 ‘They tried not to build the house.’
 c. Poskušalo *se je*, ne zgraditi hišo.
 tried-PART,NEU,3P,SG SE is not to build house-ACC
 ‘They tried not to build the house.’

2.10 Events

The preceding discussion of properties of restructuring and non-restructuring configurations shows that they must have distinct syntactic structures. Assuming that some semantic relations are driven by syntactic representations, it should follow that their semantics are also distinct. Let us consider again a construction with a typical verb that can occur in both restructuring and non-restructuring configurations such as *intend*.

- (44) a. Marija *je* nameravala napisati pismo.
 Mary is intended to write letter
 ‘Mary intended to write a letter.’
 ‘Mary was about to write a letter.’
- b. Marija *je* nameravala napisati *ga*.
 Mary is intended to write it-MASC
 ‘Mary intended to write it.’
- c. Marija *ga je* nameravala napisati.
 Mary it-MASC is intended to write
 ‘Mary was about to write it.’

According to all structural properties discussed before, (44a) can be a non-restructuring or a restructuring configuration. Indeed, this is confirmed if we cliticise the argument *letter* as the clitic pronoun *ga* which can either appear in the clitic cluster of the non-finite complement (44b) or that of the matrix verb (44c).

We should expect that (44a) is also ambiguous semantically, and indeed two interpretations seem to exist. The first interpretation consists of one proposition expressing that Mary intended or planned some distinct second proposition, namely that she or somebody else will write a letter. To represent the semantics of these propositions we adopt a Davidsonian semantic representation [Davidson (1976)] in which each verb, in addition to its arguments, also contains an event variable which can be modified by adverbs or bound as an argument by another verb. For example, a verb such as *write* would have the following argument structure $\text{write}(e_2, x, y)$. The semantics of the first interpretation are thus as follows.

$$(45) \quad \exists e_1 \exists e_2 \exists y \exists x [\text{mary}(x) \wedge \text{letter}(y) \wedge \text{intend}(e_1, x, e_2) \wedge \text{write}(e_2, x, y)]$$

The above notation marks that there exists some event of intending e_1 , by agent x , denoting *Mary* of another writing event e_2 by agent x denoting *Mary* and a patient y denoting a *letter*. The same semantics can be equally expressed in a construction with a complementiser clause as shown below.

- (46) Marija *je* nameravala, da *bo* napisala pismo.
 Mary is intended that will write-PART,FEM letter
 ‘Mary intended that she will write a letter.’

These are the semantics of non-restructuring configurations since this is the single available meaning of structures when clitics appear in the clitic cluster of the infinitive (44b), a sentence which we have shown to be a non-restructuring one. Furthermore, these are also the semantics we get in constructions with the verb *plan* which typically occurs only in non-restructuring configurations.

Under the second reading of (44a) the two verbs seem to form a closer relationship than under the first reading. Under this reading Mary's intending was involved in some way with the letter writing process and can be paraphrased 'she tried to write a letter' or 'she was about to write a letter'. It appears that under this reading the matrix verb has some modal and/or aspectual denotation and does not constitute an independent event that would take $\text{write}(e_2, x, y)$ as its argument. For the moment, we will simply represent its semantics with adverbs such as *about to* and *almost*, which seem to roughly correspond to the interpretation of *intend* in this particular configuration.¹⁵

$$(47) \quad \exists e_1 \exists y \exists x [\text{mary}(x) \wedge \text{letter}(y) \wedge \text{write}(e_1, x, y) \wedge \text{about_to/almost}(e_1)]$$

The above notation marks that there exists some writing event e_1 by agent x denoting *Mary* and a patient y denoting a *letter*, and that the initiation or the completion of the event e_1 did not succeed. These semantics, when the entire construction is interpreted as a single event, correspond to restructuring configurations since this is the only available reading when clitic climbing occurs as in (44c). Furthermore, if restructuring configurations contain only a single event variable e_1 this also accounts for the fact that restructuring verbs or their non-finite complements cannot be independently modified by adverbs, since adverbs are believed to modify events.

There is also syntactic evidence to show that our intuition that restructuring configurations denote single events and non-restructuring configurations denote multiple events is correct. There seems to exist a parallelism between entities and events since events, just like entities, allow pronominal reference as in (48a) or they can be nominalised and thus consequently turned into entities (48b).

- (48) a. Jones did *it* slowly, deliberately, in the bathroom, with a knife, at midnight. [Davidson (1976)]
 b. Jones buttered the toast.
 Jones' buttering of the toast

For example, Napoli (1981) shows for Italian that restructuring verbs cannot be independently referenced in the context created by the following clause. A sentence such as

- (49) In to *je* tudi storila.
 and that is also did-PART,FEM,SG
 'And she did it.'

¹⁵Note that this is because *intend* is an *irrealis* verb and as such does not presuppose the successful outcome of its non-finite complement. The same is also true for non-restructuring cases in (45).

can contextually follow a sentence in (44b) but cannot follow (44c), a restructuring case. I contend that this is because *intend* in (44c) does not denote a separate semantic event and hence pronominal reference cannot be established to it.

Furthermore, it appears that restructuring and non-restructuring configurations behave differently when we nominalise them. If we take a non-restructuring version of (44a) we are left with two possibilities. We can either nominalise only the matrix verb (50a), or both verbs (50b). When both verbs are nominalised, the matrix verb, now the head noun, receives nominative case whereas the arguments of this verb, including the non-finite verb, receive genitive Case. In this respect the example is identical to the English sentence in (48b). This confirms our semantic analysis of non-restructuring configurations according to which non-finite complements are treated as arguments of the matrix verb.

- (50) a. Marijino nameravanje/načrtovanje [napisati pismo]
 Mary's intending/planning to write letter
 'Mary intending/planning to write a letter'
- b. Marijino nameravanje/načrtovanje pisanja pisma
 Mary's intending/planning-NOM writing-GEN letter-GEN
 'Mary's intending/planning to write a letter.'

If we turn to restructuring configurations, it appears that matrix/restructuring verbs cannot be nominalised. The following nominal phrases do not convey the semantics that we argued are characteristic of restructuring configurations.

- (51) a. *Marijino nameravanje [napisati pismo]
 Mary's intending to write letter
 'Mary's intention to write a letter.'
- b. *Marijino nameravanje pisanja pisma
 Mary's intending-NOM writing-GEN letter-GEN
 'Mary's intention to write a letter'

This provides conclusive evidence that in restructuring configuration the matrix verb does not constitute an independent semantic event which would take non-finite phrases as its arguments. Otherwise nominalisation should be available.

2.11 Restructuring verbs

From the beginning of our discussion we assumed that restructuring is only available with certain verbs but not with others, and that it is their lexical property. Studies of restructuring across different languages show that

transparency effects are always available with modal verbs, causatives, aspectual verbs and motion verbs. With the exception of motion verbs, these verbs *only* project as restructuring configurations and thus alternative restructuring and non-restructuring readings are unavailable.

On the other hand, there is a class of *irrealis* verbs (*intend*, *plan*, *decide* etc.) and a class of *speech act* verbs or implicatives which seem to be split into two parts: verbs that allow transparency effects (*intend*) and verbs that do not (*plan*). It is these groups of verbs that show a considerable variation in their ability to occur in restructuring configurations across different languages as well as between individual speakers of one language.

Finally, some languages such as German [cf. Wurmbrand (2001)] allow infinitival constructions with *factive* (*angeben* ‘declare’, *vergessen* ‘forget’ and *zugeben* ‘admit’) and propositional verbs (*annehmen* ‘assume’, *erwähnen* ‘mention’ and *glauben* ‘believe’) which never occur in restructuring configurations. In Slovene these verbs rarely occur in infinitival constructions and are usually projected with a complementiser clause.

Returning to verbs that do occur in restructuring configurations, the coherence of classes across different languages on the one hand, and speaker and language variation of certain classes on the other, present us with a difficulty regarding whether the ability to occur in restructuring configurations is a lexical property of certain verbs and hence specified for each individual verb in the lexicon, or whether restructuring is in fact a result of some syntactic or semantic process.

Let us assume that the class of restructuring verbs is defined as a list in the lexicon. This assumption would easily accommodate for modals, aspectuals and causatives since these are generally assumed to be thematically empty and thus can only project as light verbs or auxiliaries with another thematically strong verb. A possible support for this analysis is given by the fact that these verbs usually can never occur in non-restructuring configurations or have a non-restructuring semantic interpretation.

The problems arise if we claim that motion verbs, irrealis verbs and implicatives are also specified as light verbs in the lexicon. We have seen that only a subset of irrealis verbs and implicatives allow restructuring, and that all these verbs can be quite easily used in non-restructuring configurations. This would lead us to conclude that these verbs are lexically ambiguous and hence should be listed as different lexical items, restructuring and non-restructuring. However, because the number of such verbs is relatively large this appears to be an unwelcome approach.

Furthermore, our investigation of semantics of restructuring and non-restructuring configurations showed that a significant part of semantics of matrix verbs in restructuring configurations must be structurally determined. For example, the verb *intend*, when used in restructuring configuration, means ‘try to—but not succeed’ and not ‘make plans’ which is its non-restructuring meaning. Similarly, *think* in restructuring configurations

does not denote ‘employ someone’s mental capacity’ but rather ‘try to—but not succeed’ again. In this respect both verbs when used with restructuring reduce to the meaning of a simple verb *try*.

Of course, these could be lexically specified strong and light variants of one verb, but we believe this cannot be the case. Let us consider a verb such as *plan* which we saw is the obligatory non-restructuring counterpart of *intend* as in (52a). We have shown that since the construction is a non-restructuring one, clitic climbing is unavailable here as shown in (52b).

- (52) a. Marija *je* načrtovala napisati pismo.
 Mary is intended to write letter
 ‘Mary planned to write a letter.’
 b. *Marija *ga je* načrtovala napisati.
 Mary it is planned to write
 ‘Mary planned to write it.’

If we consider the nature of ungrammaticality of (52b), it appears to be significantly different from that arising from improper complementation, as demonstrated by the following examples below.

- (53) a. *John built.
 b. *John built that Mary has a house.

In (53) the verbal predicates either lack or contain incompatible arguments. As such they are non-interpretable. (52b), on the other hand, can be fully interpreted and means that Mary tried, but did not succeed in writing a letter; a typical restructuring meaning. It appears that (52b) is only semantically ‘odd’, and this semantic oddity arises from the verb *plan*, being interpreted in a particular configuration which contributes to its restructuring meaning. In this respect we claim that restructuring configuration *coerces* the restructuring semantics on the verbal predicates that are projected there.¹⁶

By assuming that the semantics of ‘restructuring verbs’ result from a particular syntactic configuration it is easy to explain why the list of verbs does not coincide completely across different speakers and languages but at the same time there exist well defined semantics which are universal.

However, by adopting this view we still face a difficulty in explaining *how* motion verbs, irrealis verbs and implicatives are listed in the lexicon.

¹⁶Napoli (1981) states that a verb which occurs in a restructuring configuration ‘should add conceptually basic or simple information to the action or state of the sister verb’ (p.872)—in other words: it must be a light verb, and presents similar contrasts in the meaning between restructuring and non-restructuring usage as those above. Now the question is whether a verb such as *intend* denotes conceptually simpler information *per se* or its semantics are considered conceptually simpler than *plan* because it is used in restructuring configurations and *plan* is not. We are not able to answer this question here.

This difficulty is only due to our understanding of the lexicon as a simple list of lexical items specified for their categorial information. However, if we adopt a view where syntactic processes can extend to the domain that is traditionally known as lexicon [cf. Hale and Keyser (1993), Marantz (1997)] then this difficulty disappears. In the third chapter I will show that restructuring can be taken just as another evidence that this view of the lexicon is correct.

In the remainder of this section we list verbs that *tend to* occur in restructuring configurations in Slovene and those that do not. Irrealis verbs are verbs that do not presuppose the truth of their complement, implicatives do. Propositional verbs take propositional complements which can be non-finite, but complementiser clauses are usually preferred.

A. Restructuring verbs		B. Non-restructuring verbs	
<i>I. Modal verbs</i>			
hoteti	want		
lahko (adv.)	can, be allowed to, be able to		
moči	can, be able to		
morati	must		
smeti	can, be allowed to		
utegniti	might		
znati	can, know-how, might		
želeti	wish		
<i>II. Causatives</i>			
dati	give		
<i>III. Aspectual verbs</i>			
hiteti	hurry		
končati	finish		
nadaljevati	continue		
ponoviti	re-do		
(pre)nehati	end		
začeti	begin		
<i>IV. Motion verbs</i>			
hoditi	iterative come-go	napotiti se	make self go
iti	go	odpeljati se	drive away
priiti	come	odpraviti se	make self go
		pripeljati se	drive in
		prispeti	arrive
		teči	run
		vrniti se	return

A. Restructuring verbs**B. Non-restructuring verbs***V. Irrealis verbs*

kaniti	might-intend	bati se	fear
misliti	think-intend	braniti se	refuse, reject
nameravati	intend	groziti	threaten
poskusiti	try	ljubiti	love, like
poskušati	iterative try	načrtovati	plan
tvegati	risk	nadejati se	hope
		obetati si	hope
		obljubiti	promise
		odločiti se	decide
		oklevati	hesitate
		planirati	plan
		ponuditi	offer
		predlagati	recommend, propose
		pretvarjati se	pretend
		priporočati	recommend
		priseči	swear
		privoliti	consent
		prizadevati si	endeavour
		razmišljati	think
		skleniti	decide
		sovražiti	hate
		sramovati se	shame oneself
		tehtati	contemplate
		upati	hope
		uživati	enjoy
		veseliti se	look forward to

VI. Implicatives

braniti	keep away sbd. from sth	izjaloviti se	fail
(do)pustiti	allow	izogniti se	avoid
dovoliti	allow	naučiti (se)	teach/learn
naročiti	instruct, order	odkloniti	refuse, reject
omogočiti	enable	odvaditi se	get rid of a habit
pomagati	help	ponesrečiti se	fail
pozabiti	forget	spodleteti	fail
prepovedati	forbid	tvegati	risk
preprečiti	prevent	upati si	dare
reči	say, order	vdati se	give up
svetovati	advise	vzpodbuditi	encourage
ukazati	order	zavrniti	refuse, reject
uspeti	succeed	znati	know-how
veleti	order		
zamuditi	miss, neglect		
zapovedati	forbid		

VII. Propositional verbs

čutiti	feel
domnevati	assume
dvomiti	doubt
izjaviti	state
meniti	have an opinion
misliti	believe
napovedati	announce
navajati	state
naznaniti	announce
obžalovati	regret
omeniti	mention
pojasniti	elucidate

A. Restructuring verbs**B. Non-restructuring verbs***VII. Propositional verbs Continued from the previous page*

povedati	tell
pozabiti	forget
pripovedovati	narrate
priznati	confess
razložiti	explain
reči	say
slišati	hear
tajiti	deny
trditi	claim
verjeti	believe
videti	see
zanikati	deny

2.12 Conclusion

In this chapter we surveyed transparency effects in Slovene and their semantics and showed that they split infinitival constructions into two groups: restructuring and non-restructuring. Clitic climbing, long passive with *se*, non-focus scrambling, adverbial modification, the scope of negation and anaphor binding seem to be able to operate in the domain of both verbs in restructuring but not in non-restructuring configurations. Moreover, we argued that restructuring configurations, in comparison to non-restructuring ones, have quite specific semantics. Matrix verbs, when used in restructuring configurations, are light verbs since they cannot be specified for internal arguments. Moreover, they do not denote independent semantic events but are interpreted as a part of the event structure of the entire verbal complex. All the properties seem to indicate that restructuring configurations project a more restricted structure than non-restructuring ones. Our task is now to provide a syntactic analysis of both restructuring and non-restructuring configurations that would explain and predict the properties observed. We begin by surveying some approaches offered in the literature.

Chapter 3

Approaches to restructuring

The literature offers two proposals for restructuring which we can characterise as *bi-clausal* and *mono-clausal* analyses. Bi-clausal analyses assume that all infinitival constructions start with the same underlying structure and that later some syntactic processes are applied which render some structures transparent or which *restructure*, *reduce* or *reanalyse* them. On the contrary, mono-clausal approaches claim that restructuring configurations project radically different structures to non-restructuring ones from the start and hence in most cases conclude that ‘restructuring’ is a result of particular (lexically specified) verbal complementation.

The main argument of bi-clausal approaches is that it preserves the structural relations between both constructions which seems to be desirable and perhaps even necessary in order to account for verbal constructions where the same matrix verb occurs in restructuring as well as non-restructuring configurations. On the other hand, mono-clausal approaches usually rely on the semantics of verbs and claim that since both types of constructions have considerably different semantics there is no need to assume that they project identical structures.

3.1 Bi-clausal approaches

3.1.1 Clause union through structure changing rules

The lack of clausal properties in restructuring configurations was first systematically discussed in Rizzi (1976) for Italian and Aissen and Perlmutter (1976) for Spanish.¹ Aissen and Perlmutter work in the framework of relational grammar of Perlmutter and Postal and propose that certain matrix verbs trigger the rule of *clausal union* that reanalyses the argument structure of both verbs into one. This makes the verbs cease to operate as indepen-

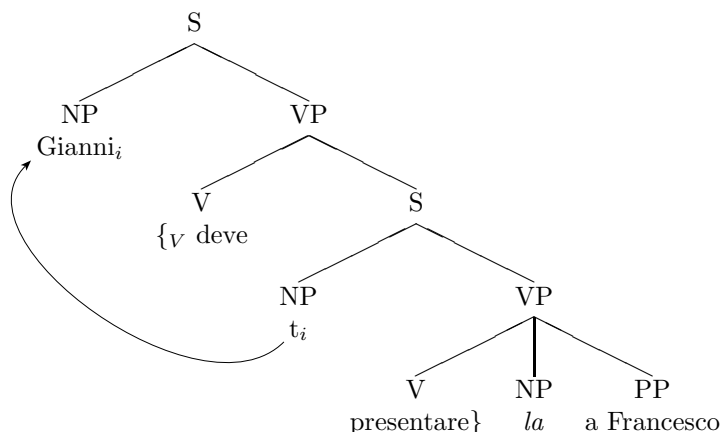
¹Both articles were subsequently republished. In most cases we will refer to newer versions.

dent domains and so they cannot be represented as two distinct clauses. Rizzi, working in a pre-government and binding framework proposes a similar *restructuring* rule for Italian. In contrast to Aissen and Perlmutter, restructuring is a syntactic rule which reanalyses the matrix verb and the embedded non-finite complement as a single verbal complex.

According to Rizzi, the initial non-restructuring configuration is as in (55).² Since the structure projects two S projections and is thus bi-clausal, clitics must stay inside the embedded clause because of the *Specified Subject Condition* which prohibited rules from operating across subject domains.³

- (54) a. Gianni_i deve [_S t_i presentare Maria a Francesco].
 John must introduce Mary to Francesco
 b. Gianni_i deve [_S t_i presentare *la* a Francesco].
 c. Gianni_i deve [_S t_i presentar*la* a Francesco].

- (55) Rizzi's non-restructuring configurations



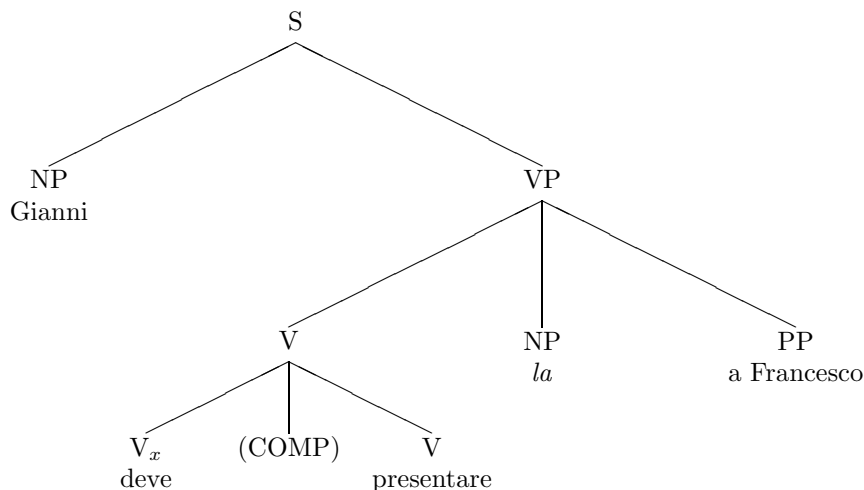
When the optional restructuring rule applies, it is assumed to re-analyse the string included in the brackets in (55) as a single verbal complex V. In this configuration, there is no intervening subject and hence nothing can prevent the clitic pronoun from moving to the matrix verb *dovere* which is now part of the verbal complex as shown below.

- (56) a. Gianni [_V deve presentare] *la* a Francesco.
 b. Gianni *la* [deve presentare] a Francesco.

²Examples (16-18) in Rizzi (1982).

³Rizzi follows the standard theory in assuming that restructuring verbs can be either control verbs, in which case the subject of the non-finite complement is a PRO, or raising verbs, in which case the subject is filled by a trace.

(57) Rizzi's restructuring configurations



If this analysis of restructuring and non-restructuring configurations is correct, Rizzi should be able to show that after the application of the restructuring rule the verbal complex [_V deve presentare] is a constituent and [_{VP} presentare a Francesco] is not. He gives evidence from pied piping combined with *wh*-movement, cleft sentence formation, right node raising and heavy NP shift. However, as Cinque (2000) shows in detail, these diagnostics cannot be considered conclusive in the light of later theoretical understanding, and indeed there remains nothing to support the constituency that should follow from Rizzi's account. For example, Rizzi claims to show that when clitics climb to the matrix verb, the embedded verb cannot be clefted anymore with its complement. However, Cinque shows that with other fronting rules such as *focus movement* and *topicalisation* no such restrictions exist. It follows then that the ungrammaticality of clefting of the embedded non-finite verb and its complement [_{VP} presentare a Francesco] in restructuring configurations is due to some other reason independent of constituency.

Finally, although Rizzi's proposal was acceptable in his contemporary theory of syntax, our current theory does not allow optional structure changing rules. These rules are too powerful and give rise to massively unconstrained theory of transformations. Any such theory would be against the *Projection principle* which states that lexical information is syntactically represented. Without the *Projection principle* the relationship between syntax and semantics could not be maintained anymore, which would be an undesirable result. In a more constrained theory of grammar, which we follow here, the only licensed syntactic operation is leftward movement or raising which is motivated by feature checking, and thus cannot be optional.

3.1.2 Clause union through head movement

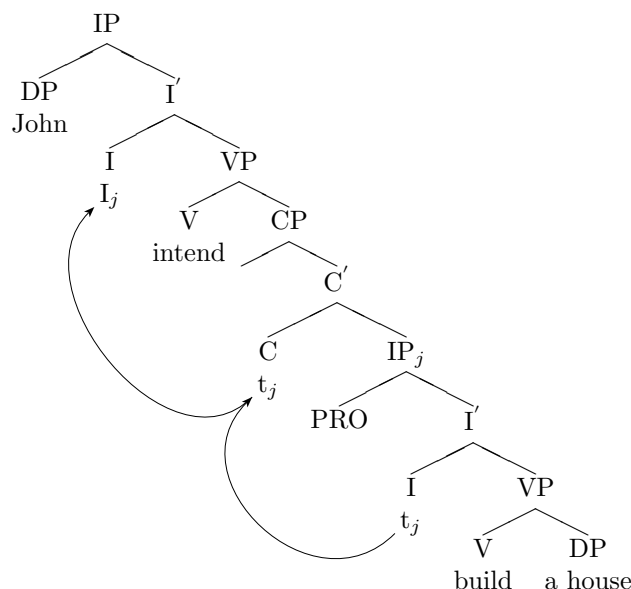
The first head movement analysis of restructuring originates in Evers (1975) who claims that in Dutch, non-finite verbs can raise and adjoin to matrix verbs, thus forming a single clausal domain from which transparency effects follow. He claims that German and Dutch have a *Guillotine principle* stated as follows.

(58) An S, that has lost its head (i.e. its V-constituent), does not survive.

The raising of the V head seems quite plausible in German and Dutch where the raised and the matrix verb cannot be interrupted by other constituents, but this presents problems to the analysis of Italian and Slovene, since here, as we saw, the ‘verbal complex’ can be interrupted by adverbs which presumably adjoin to maximal projections and not heads.

To accommodate this fact various analyses agree that head movement is covert rather than overt. Kayne (1989), working in the *Barriers* framework, for example, proposes that restructuring is achieved through raising of the inflectional head I of the non-finite complement to the matrix head I. In particular, he claims that the raising of the I must be through the head C of the non-finite complement which is an intervening head and therefore a potential barrier for direct movement to the matrix I. The raising from the complement C to the matrix I is allowed because the complement CP is L-marked by the matrix V which removes the barrier-hood of that CP. He assumes that the ability to L-mark a CP complement is a property of only certain matrix verbs.

(59) Restructuring as I raising



From this system it follows that the availability of the complementiser C position is crucial for a successful restructuring configuration. Kayne sees the evidence for this in the fact that restructuring non-finite complements cannot be introduced by a complementiser, but can be introduced by an element in the Spec of CP position such as a *wh*-specifier. However, as we saw in the previous chapter *wh*-specifiers are marginal and restricted only to a few cases and thus cannot be taken as conclusive evidence. On the other hand, a substantial evidence for Kayne's analysis is given by the fact that embedded negation does seem to block restructuring configurations. He assumes that, by the virtue of being a functional projection, NegP cannot L-mark its complement and thus constitutes a barrier for movement from its complement.

The raising of I to C to I seems to be able to account for other properties of restructuring configurations as well. We have seen that restructuring configurations only allow obligatory control. According to Kayne, this is because raising of I co-indexes the matrix and the embedded I, and consequently also their subjects. Crucially, he claims there is no object control in restructuring configurations since here the subjects would not be co-indexed. We could explain the lack of independent tense specifications along the same lines, yet he argues instead that this is because non-restructuring non-finite complements contain an abstract tense element in C which blocks the raising of I in a similar way as an intervening complementiser. He assumes that clitics adjoin to I and that raising of I carries them to the matrix clause as a single complex [_I Cl Cl I]. In his argument the condition which requires that all clitics climb and prohibits some to remain in the non-finite complement follows straightforwardly, since the remaining clitics would be prohibited to attach to a trace in the I of the non-finite complement.⁴ Finally, in order to explain why some verbs allow restructuring effects and others do not he simply states that it must be a lexical property of certain verbs that allow I-to-C-to-I movement.

Besides a significant number of assumptions, the major objection to Kayne's account is that he does not explain why restructuring occurs or the motivations for the embedded I to raise to the matrix I. Co-indexing of tense and agreement cannot be used here, since as he claims, they are the consequences rather than motivations for raising. Furthermore, if the ability of I-to-C-to-I movement is lexically restricted to certain verbs, his account makes it difficult to explain why in some cases, where the appropriate matrix verb is present raising of I nonetheless fails to occur and the resultant configuration is a non-restructuring one.

⁴He argues that that clitics can either adjoin to V or I in simple clauses in Italian. In French they can only attach to V because French I is *weak* and cannot L-mark its VP complement which thus prohibits clitics from escaping its domain.

A similar covert head movement approach is pursued in Roberts (1997). However, Roberts claims that in restructuring configurations it is not only the head I of the non-finite complement that raises to the matrix I but also that restructuring involves incorporation of the lower verb into the higher one. This forms a single clausal predicate, an idea that we saw in Rizzi (1982) and Evers (1975). He considers this a desirable approach since in certain languages, such as Turkish, restructuring seems to appear as an overt incorporation of the non-finite verb with the matrix one, where the latter appears as an affix together with aspectual and modal markers. However, as we saw, restructuring verbs in Romance and Slovene do not appear as affixes and can be separated by adverbs, which means that a simple V-to-V incorporation is not available in these languages.

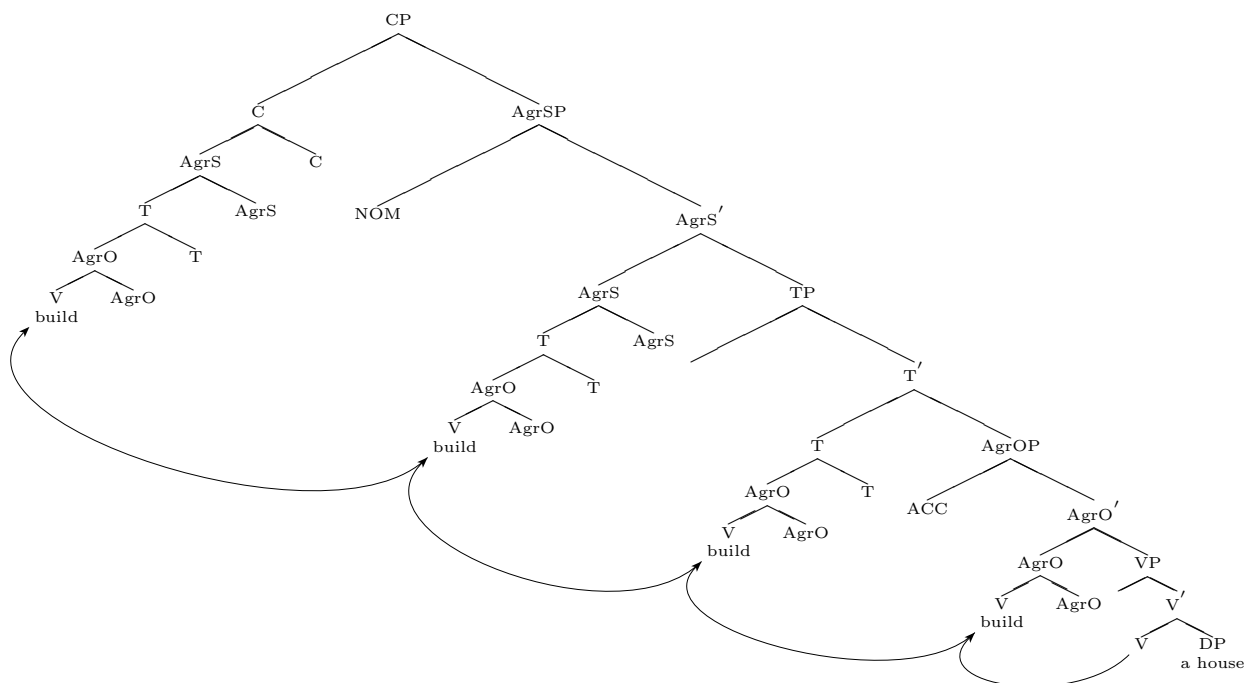
In order to account for this fact, Roberts proposes the following:

- (60) a. Head movement is copying.
 b. $*[_X W_1 W_2]$, where W_n are morphological words.
 c. A head is spelled out in the highest L-related position of its chain, subject to (60b).

He assumes the existence of functional projections as proposed for the Minimalist Program of Chomsky (1993). In restructuring configurations, the non-finite verb incorporates to Agr_O , then to T and then to Agr_S in order to check its features. The entire complex incorporates to C and to the matrix verb. Finally, the new verbal complex incorporates in identical steps until it reaches the matrix Agr_S .⁵ At each intermediate position a copy of the incorporated complex is left. (61) shows the first stage of incorporation up to the embedded complementiser C.

⁵The position which the incorporation of the complex reaches before the spell-out depends on the strength of Agr. In French, for example, weak Agr prevents the V/T complex from incorporating to Agr_S of the non-finite complement before the spell-out and hence French does not show restructuring effects.

(61) Restructuring as incorporation



After the incorporation of the matrix verb, the complex $[_{VR} [V_{inf} T] V_R]$ contains two morphological words which, according to (60b), cannot be ‘spelled-out’ and hence a copy in the highest L-related position of its chain before the incorporation must spell out instead (60c). In this case, the copy is $[V_{inf} AgrO T AgrS]$ in $AgrS$ of the non-finite complement clause.⁶ Roberts states (60b) as a general principle, yet it must be a subject to parametric variation since it applies in Italian and Slovene but not in Turkish.

Robert’s account resembles Kayne (1989), yet there are important differences. In Kayne (1989) no clausal union is achieved but only co-indexing of the I projections which results from raising the I from the non-finite complement to the matrix clause. Under this approach clitic climbing is still a long distance operation where clitics are able to escape from the non-finite complement clause by being adjoined to I. On the contrary, in Roberts (1997) all operations concerning constituents from the non-finite complement are local.

Because both verbs form a single verbal complex (which is not visible on surface due to the morphological restrictions of [60b]) it follows that they form a *single extended projection* which unites both clauses. The notion of extended projection was introduced in the Minimalist Program: it

⁶The notion of L-relatedness which forms a part of Roberts’ modified version of Relativised Minimality was introduced in Roberts (1994). There are considerable difficulties with the mechanics of this account as pointed out by Iatridou (1994).

is a domain where morpho-syntactic features of some lexical category L are projected and consists of functional projections to which L incorporates to check its features. It follows that in restructuring configurations where incorporation took place, the Agr_O , T and Agr_S of the non-finite complement and the matrix verb are in the same extended projection. Thus they are equidistant with respect to the identical projections of the matrix verb for operations such as long passive and clitic climbing.

The most important question that Roberts' account must answer is why some verbs allow the formation of extended projections with their non-finite complements while others do not. He claims that restructuring verbs are identical to auxiliaries—they are unable to assign θ -roles.⁷ If this is so, then such thematically deficient verbs must be projected in the extended projection of some θ -role assigner (a full lexical verb) and the latter must incorporate with its non-thematic heads. It follows from this system the non-thematic heads of any non-finite verb will include its own Agr and T projections, the complementiser C , the matrix V , the Agr and T of the matrix verb and the Agr and T of any auxiliary which might be projected above the matrix verb, otherwise the incorporation could not be accounted for.

There are considerable difficulties with this approach. Firstly, the thematic deficiency of restructuring verbs must be optional or we would be unable to account for the possibility of the same matrix verbs occurring in restructuring and non-restructuring configurations. Secondly, if restructuring verbs are indeed thematically deficient then it is unclear why they need to project their own extended projections such as Agr_O , T and Agr_S , since it is the presence of these that is assumed to distinguish between thematic and non-thematic verbal heads in the first place. Restructuring verbs could be treated as functional projections in the extended projection of a thematic verb as in Cinque (2000). The only argument for this analysis is a desire for a uniform syntactic analysis for both restructuring and non-restructuring configurations. Furthermore, since restructuring verbs are identical to auxiliaries, Roberts argues that auxiliaries also project their own functional structure (Agr_O , T and Agr_S) which belongs to the extended projection of the lexical verb. Although he makes use of these projections in his account of the auxiliary switch, he does not provide any other theoretical motivations for them. Finally, the entire analysis relies on the validity of (60) which is not given sufficient theoretical support. As Wurmbrand (2001) points out, it does not follow from (60) that an intervening complementiser in C prevents the raising of the V/T complex, since one could imagine that verb movement through C does take place even in the presence of the complementiser. However, the morphologically complex head created by the adjunction of the verb to the complementiser would force pronunciation of the verb in

⁷Cf. Cinque (2000) and Rosen (1990).

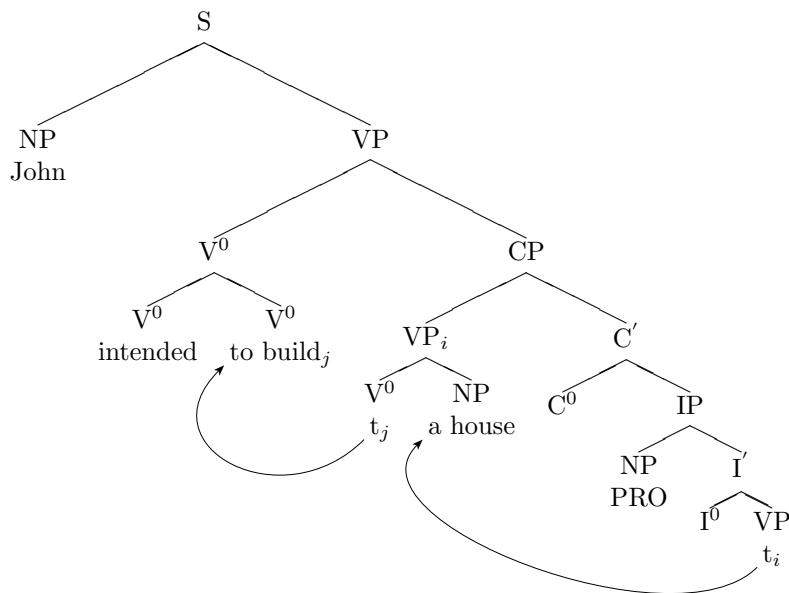
a lower position. If so, in the present system, restructuring effects should follow even if there is an overt complementiser. This clearly does not seem to be the case.

3.1.3 Clause union through XP movement

The idea of abstract or covert incorporation of the non-finite verb with the matrix verb pursued in Roberts (1997) originates in Baker (1988) who labels it *reanalysis*. This is also suggested in Grewendorf and Sabel (1994). As Roberts, Baker and Grewendorf and Sabel assume that restructuring creates a verbal complex by incorporation and that the process takes place at the level of Logical Form. It is made visible at S-Structure by co-indexing both verbs. The co-indexing or restructuring property is conditioned by the matrix verb.

Baker's and Grewendorf and Sabel's approach differs significantly from Roberts' in the way they account for verb movement. They claim that non-finite verbs move in two parts: first the non-finite VP⁸ moves to the Spec of CP of the complement clause from where the embedded verb can *re-analyse* with the matrix verb without violating the *Empty Category Principle* since the Spec of CP does not constitute a barrier. The structure is as shown below.

(62) Restructuring as XP and X movement



Grewendorf and Sabel (1994) argue that the configuration in (62) allows the NP *a house* to scramble or adjoin to some maximal projection in the

⁸Or TP in the case of Grewendorf and Sabel (1994) since they claim that German infinitival marker *zu* 'to' is projected in the head T.

matrix clause and hence they believe that (62) accounts for long scrambling. Of course, other transparency effects should also follow.

Again, the major objection to this account is that the movement of the VP to the Spec of CP is not motivated without making additional stipulations. It is possible that co-indexing might require the verbs to be incorporated at LF, but it is unclear why VP and not the head V as in Roberts (1997) would move and why the intermediate landing site is the Spec of CP. Furthermore, the account does not provide any evidence that *reanalysis*, although plausible, occurs at LF except that in some languages [cf. Baker (1988), p.204] both verbs spell-out as a complex. If reanalysis takes place *covertly* and the non-finite complement becomes transparent at LF, it is unclear how restructuring properties such as clitic climbing, long passive and scrambling are licensed *overtly*.

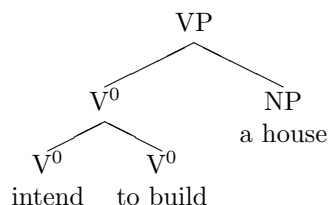
3.2 Mono-clausal approaches

Mono-clausal approaches assume that restructuring configurations are single clausal domains throughout the derivation. Under this view non-finite complements in question are not IPs or CPs, but are smaller constituents which are clause internal and are usually represented as VPs. In this analysis restructuring configurations do not differ from simple clauses containing a single verb, and hence all ‘long distance operations’ such as clitic climbing, long passive and scrambling can be accounted for in the identical manner as the local operations.

3.2.1 Restructuring as morphology

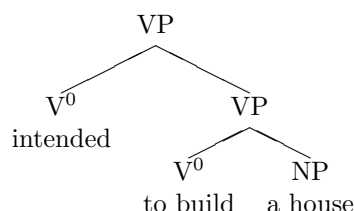
DiSciullo and Williams (1987) propose that restructuring verbs form with their non-finite complements morphological compounds of the type V V as shown in (63). They claim that such morphological compounds are indeed licensed in Italian, as evidenced by a parallel V V compounding rule ($N \rightarrow V V$) which creates forms such as *il fare scrivere delle poesie* ‘the make-write of poetry’. Unfortunately, Slovene does not license comparable nominal compounds and thus such morphological analysis for restructuring cannot be fully supported. It is important to note that they consider compounding as a purely morphological process, independent of syntactic operations.

(63) Restructuring - morphology



For the cases where a ‘restructuring verb’ occurs in a non-restructuring configuration they simply claim that they are built by syntactic predication of a VP non-finite complement to a matrix verb as in (64).

(64) Non-restructuring - syntax



It follows from this view that the same string *intended to build a house* can be analysed either morphologically or syntactically and DiSciullo and Williams call this special kind of dual analysis *co-analysis*. They claim that each analysis is independent of the other since morphological and syntactic components are independent domains. Each domain has unique structure forming processes generating different sets of objects: morphological words and syntactic phrases. Therefore, it is a matter of chance that these structures appear similar and seems to originate in the fact that processes at two independent levels combine their building components in the identical linear order.⁹

There are considerable difficulties with this proposal. First, if a restructuring verb and its non-finite complement form a complex verb then it is surprising that only the restructuring verb is marked for tense and agreement features and not the complex as a whole. Furthermore, although the verbal complex generally cannot be interrupted by constituents, non-temporal adverbs appear to be an exception. DiSciullo and Williams show that Italian licenses compounds of type [Adv V] or [V Adv], which means that adverbs in restructuring configurations could be analysed as a part of the complex verb, but again this does not seem to be the case in Slovene. Finally, because the approach assumes that restructuring and non-restructuring configurations are produced at different levels of grammar which are opaque to each other, we lose the intuition that these structures are nonetheless related and produced by the same structure-forming principles.

3.2.2 Restructuring as verb complementation

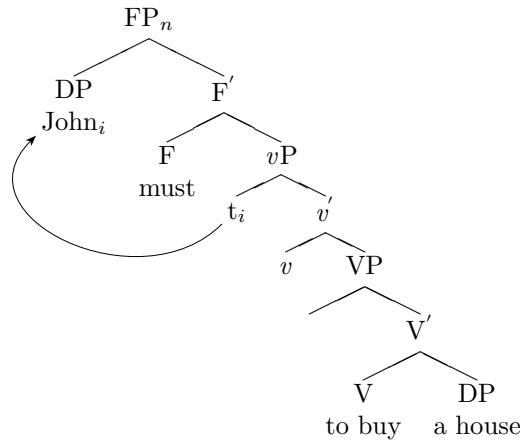
Wurmbrand (2001) presents a syntactic analysis of restructuring where various configurations differ from each other in the type of the complement that

⁹A similar multi-dimensional analysis is given in Haegeman and van Riemsdijk (1986). However, they propose that both levels are syntactic levels, one representing bi-clausal and the other mono-clausal structure.

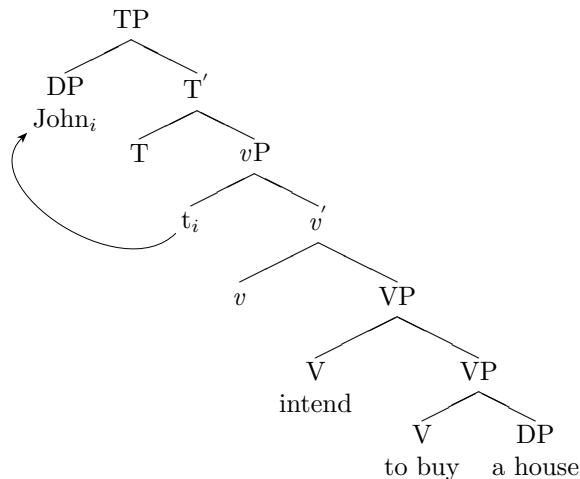
is projected with the matrix verb. Wurmbrand's main claim is that infinitival constructions in general do not represent a uniform class but fall into various subclasses which are characterised by different syntactic and semantic properties, depending on the functional architecture of the complement VP.

She makes an important claim that what the literature traditionally describes as restructuring can in fact be represented by two different structures characterised as *lexical* and *functional* restructuring configurations. Restructuring is not a unified phenomenon and its only defining characteristic is the fact that in each case the entire configuration is a simple clause. In the case of functional restructuring the non-finite verb is the main clausal verbal predicate vP and the matrix verb is some head in the clausal functional domain. In contrast, in lexical restructuring configurations the restructuring verb resides in the head of the main clausal predicate VP which combines with another small predicate VP.

(65) Functional restructuring



(66) Lexical restructuring



The main property that motivates Wurmbrand to make this distinction between functional and lexical restructuring is her observation that functional verbs are fully non-thematic and hence their thematic properties must be determined by the embedded verb. In her system functional verbs include modal, aspectual, causative and motion verbs, thus verbs that never occur in non-restructuring configurations. Consequently, she analyses these verbs as raising verbs since here the external argument of their lexical complement verb raises to the subject position of the functional projection in which these verbs reside. On the other hand, she claims, lexical restructuring verbs are able to assign external theta roles. Thus, if she is right, restructuring verbs in general lack *internal arguments* as we saw earlier, but some can project *external* ones.

The claim for the two classes of restructuring verbs can be tested by combining them with non-thematic weather predicates such as *snow*. It follows that if both verbs are non-thematic we should be able to form felicitous sentences with no arguments specified. On the other hand, if the matrix restructuring verb is thematic, it would require an external argument and such structures would not be well formed. As the following example shows, this indeed seems to be the case with the verb *intend* which requires an Agent or the causer of the snowing event.¹⁰

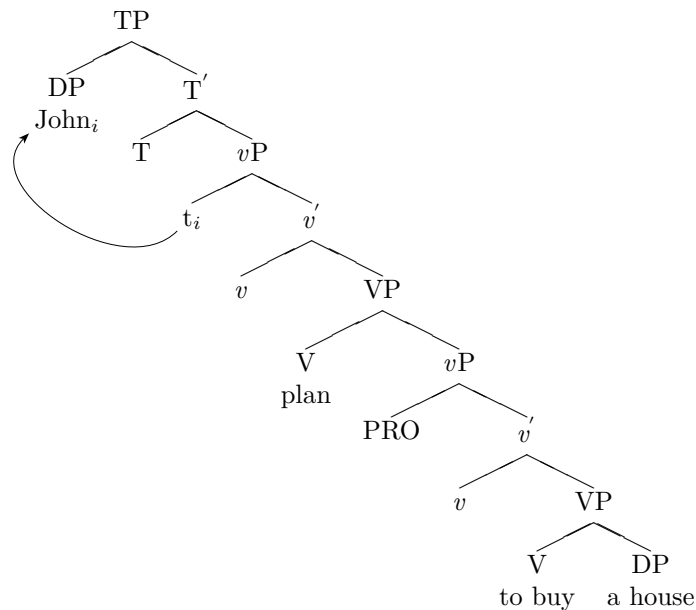
- (67) a. Moralo *je snežiti*.
 had-NEU,3P,SG is to snow
 ‘It must have snowed.’

¹⁰In addition to this test Wurmbrand (2001) also discusses some other structural asymmetries that divide the two classes of verbs and are only present in German: extraposition and the IPP effect (*Infinitivus pro participio*).

- b. *Nameravalo *je snežiti*.
 intended-NEU,3P,SG is to snow
 ‘It intended to snow.’

Let us turn to non-restructuring configurations. We saw that Wurmbrand analyses lexical restructuring non-finite complements to be VPs maximally. It follows that if a non-finite complement contains higher projections than a VP, the entire configuration is a non-restructuring one. Specifically, she proposes that non-restructuring irrealis verbs and non-restructuring implicative verbs take *vP* or TP complements, whereas factive and propositional infinitives, which never show restructuring effects, take full sentential complements or CPs. Therefore, the smallest non-restructuring configuration is as follows.

(68) Non-restructuring

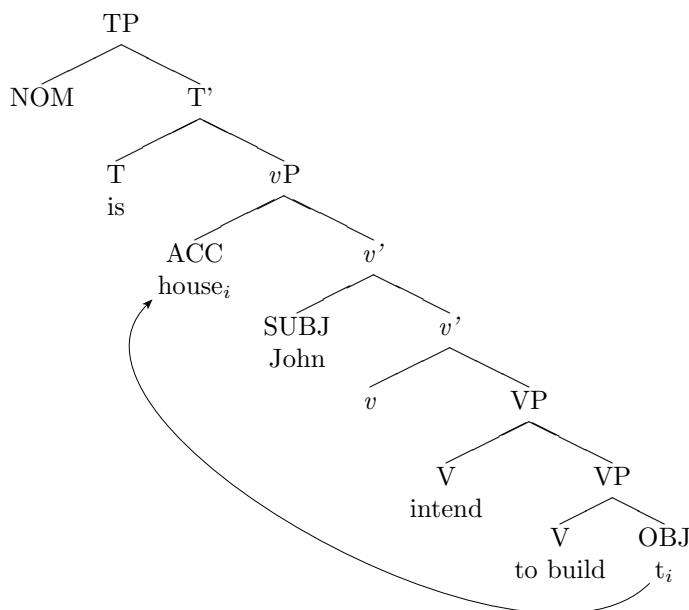


Whether a non-finite complement projects a *vP* projection or not is therefore crucial to distinguish between restructuring and non-restructuring configurations in the Wurmbrand's proposal. Of course, the name of the projection itself is irrelevant, rather more important are syntactic and semantic features that we represent with it. In this respect Wurmbrand follows the contemporary literature on the structure of verb phrase that assumes that lexical VPs are not a single projection but involve a more elaborate structure as is, for example, argued in Larson (1988) and Hale and Keyser (1993). Although various approaches differ in number and type of VP layers, there is nonetheless a consensus that there is an asymmetry between the verb's

internal and external arguments which must be structurally represented (see Kratzer (1996) and Marantz (1993)). It has been proposed that the verb's internal arguments are hosted inside the VP, whereas its external arguments are hosted in the *v*P, a VP shell dominating the VP. Furthermore, *v*P is also responsible for the structural accusative Case. Since *v*P is responsible for both we are able to account for *Burzio's generalisation* which states that a verb which lacks an external argument fails to assign accusative Case and that a verb which fails to assign accusative Case also fails to theta mark an external argument.

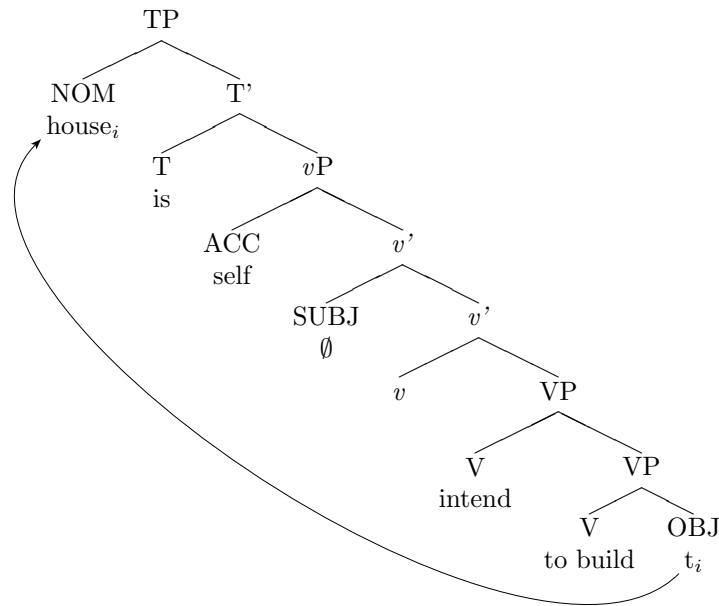
If restructuring configurations cannot contain the *v*P projection and consequently any projection that dominates it, an account of long passive follows straightforwardly. Passive is a case driven DP movement. In passive, the accusative Case is suppressed and the external argument is demoted. The verb's internal argument must be licensed for Case but the only Case that it can receive is the nominative which results in the object DP raising into the sentence subject position. If non-finite complements of restructuring configurations lack the *v*P projection, then the entire configuration contains only one accusative Case licensing site, namely the matrix *v*P. It is this site to which the internal argument of the embedded infinitive must raise to check its Case. Notice also that in this representation, restructuring verbs cannot project independent internal arguments, nor can embedded non-finite complements project an independent external argument, since these would interfere with Case licensing. The initial non-passive configuration is as shown in (69).

(69) Restructuring case assignment



From this structure it follows that if the accusative Case becomes unavailable (when it is assigned to the reflexive clitic *se* in Slovene, for example) then the only site where the internal argument of the verb ‘to build’ can be licensed for Case is the Spec of TP of the matrix verb. Such a restructuring configuration must be obligatory, since as we saw before, whenever the accusative Case is licensed in the non-finite complement the configuration is a non-restructuring one.

(70) Long passive



Wurmbrand’s analysis of restructuring and non-restructuring configurations is a compelling one. However, there are still some questions unanswered. First of all, we have seen that *vP* not only assigns accusative Case but also hosts the external argument or the subject. Therefore, if restructuring non-finite complements do not project a *vP* they should also not project external arguments, and it should follow that the agent of the non-finite complement be obligatorily identical to the agent of the matrix clause. While this is true for the majority of restructuring verbs such as *intend* we have seen that there are some verbs such as *allow* and *order*, repeated here as (71) which allow the agent of the non-finite complement to be different from the matrix agent. The availability of passive in (71b) shows that these are restructuring configurations.

- (71) a. Janez *je* dovolil/ukazal (Petru) zgraditi hišo.
 John-NOM is allowed/ordered Peter-DAT to build house
 ‘John allowed/ordered (Peter) to build a house.’

- b. Hiša *se je* (Petru) dovolila/ukazala zgraditi.
 house-NM SE is Peter-DAT allowed/ordered to build
 ‘They allowed/ordered (Peter) to build the house.’

In (71) it cannot be *John* who is building the house, irrespective of whether the argument *Peter* is specified or not. Neither, if *Peter* is unspecified, is *John* allowed to be a part of a collective agent which we saw to be the case in non-obligatory control of non-restructuring configurations. It follows, therefore, that verbs such as *allow* and *order* take non-finite complements which project their own agents. In Wurmbrand’s analysis these should be projected in the embedded *vP*, but since it is shown that restructuring configurations lack this projection, it is unclear where these agents are projected.¹¹

Finally, although Wurmbrand’s account is successfully able to account for syntactic properties of restructuring and non-restructuring configurations it still leaves open the account of their peculiar semantics. Although the proposal correctly differentiates between lexical and functional restructuring, it says nothing about the semantics of the double VP predication in lexical restructuring. In the following two sections we examine approaches that propose a mono-clausal structure but which try to take into account the semantics of restructuring configurations, too.

3.2.3 Restructuring as functional structure

Cinque (2000) argues that all restructuring verbs are best analysed as functional verbs which are projected as heads of clausal functional projections. He bases his argument on Cinque (1999) where he cross-linguistically examines the relative order of functional morphemes, projected in head positions, and their corresponding adverbs or adverbial phrases, projected in the specifier positions of these heads, arriving at the following universal hierarchy of functional projections.

- (72) MoodP_{speech-act} › MoodP_{evaluative} › MoodP_{evidential} › ModP_{epistemic}
 › TP(Past) › TP(Future) › MoodP_{irrealis} › ModP_{alethic} › AspP_{habitual}
 › AspP_{repetitive(I)} › AspP_{frequentative(I)} › ModP_{volitional} › AspP_{celerative(I)}
 › TP(Anterior) › AspP_{terminative} › Asp_{continuative} › AspP_{retrospective} ›
 Asp_{proximative} › AspP_{durative} › Asp_{generic/progressive} › AspP_{prospective}
 › ModP_{obligation} › ModP_{permission/ability} › AspP_{completive} › VoiceP ›
 AspP_{celerative(II)} › AspP_{repetitive(II)} › Asp_{frequentative(II)}

In particular, Cinque claims that the semantics of verbs that take non-finite complements in restructuring configurations correspond to these func-

¹¹That the embedded agent receives dative Case represents no difficulties and is in fact a natural outcome of the analysis since this is the only Case that is available to that argument.

tional projections. Thus restructuring verbs are projected as functional heads in mono-clausal configurations. He observes that if more restructuring verbs co-occur, their relative order appears to be fixed. For example, since the universal sequence is $\text{Asp}_{\text{habitual}} \succ \text{Asp}_{\text{predispositional}} \succ \text{Mod}_{\text{volitional}}$ we should, according to Cinque, expect that in a sequence of two restructuring verbs a habitual verb such as *solere* ‘used to’ should precede a predispositional verb such as *tendere* ‘tend to’ (73a), which in turn should precede a modal volitional verb *volere* ‘want’ (73b). This does seem to be confirmed by the examples below. Of course, the same verbs can also be used in the opposite order, but in this case clitic climbing or restructuring does not obtain anymore.

- (73) a. ?Certe cose, *le* *si* suole tendere ad evitare.
 certain things them self uses to tend to avoid
 ‘Certain things that one usually tends to avoid.’
 b. *Lo* tenderebbe a voler fare sempre lui.
 it would tend to want to do always he
 ‘He would tend to want to do it always by himself.’

From this analysis of restructuring verbs, two consequences follow. First, restructuring verbs must be fully non-thematic and thus cannot project internal nor external arguments. However, this claim seems to be too strong since, as we have seen, there exist good motivations that at least a subset of restructuring verbs require external arguments. Furthermore, (71) shows that some embedded complements require external arguments too, and it is unclear how these would be projected in the Cinque’s functional configuration that only allows for one external argument. Cinque is aware of this fact and claims that (71) are ‘hidden causatives’ and should be analysed independently of (functional) restructuring.¹²

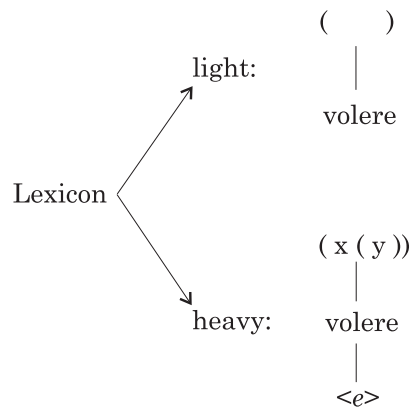
Second, Cinque must agree that since restructuring verbs are functional verbs they always occur in mono-clausal structures. The apparent cases where they nonetheless seem to take CP complements should be analysed as their lexical variants. However, we argued in the previous chapter that restructuring/non-restructuring variation is not limited to isolated cases that could be reduced to complementation in the traditional meaning of the word since each (lexical) restructuring verb can also occur in non-restructuring configurations. Furthermore, if all such non-finite configurations are mono-clausal at all times it also follows that transparency effects themselves are optional. However, we have shown that this cannot be the case.

¹²We agree with this claim. We will later show that ‘hidden causatives’ are in fact cases of lexical restructuring of Wurmbrand (2001).

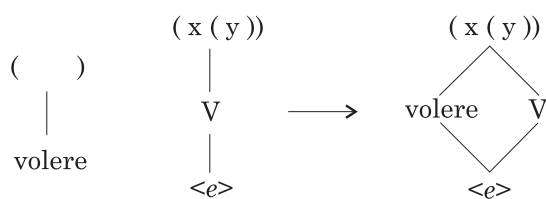
3.2.4 Restructuring as light verb constructions

Rosen (1990) semantically characterises (lexical) restructuring verbs as *light verbs* and proposes a similar structural analysis to Wurmbrand's lexical restructuring configurations (66). She claims that light verbs are similar to modal verbs and auxiliaries in the sense that they cannot license arguments and event structure. However, while modals and auxiliaries generally lack full argument structure, light verbs have an unspecified one. It follows that light verbs are unable to project into the syntax unless they obtain the argument and event structure from another verb with which they merge and form a complex predicate. The argument structure as well as complex predicate formation is shown in the figures below.

(74) Argument structure of *volere* 'want'



(75) Complex predicate formation



The complex predicate formation and the association of arguments occurs in the lexicon and as such is a lexical rather than syntactic operation. The system allows us to account for the difference between restructuring and non-restructuring occurrences of the same verb in a straightforward way: the non-restructuring variant is specified for the event and argument structure and complex verb formation does not need to apply. Furthermore, the approach is also able to account for why the meaning of the light verb roughly corresponds to its counterpart in a non-restructuring configuration and why restructuring verbs, unlike modals, impose selectional requirements on their

arguments and the arguments of their non-finite complements which must coincide.

Although Rosen's account offers conceptually good explanation regarding how the semantics of restructuring and non-restructuring configurations might be related, it does not say anything about the semantics themselves. The formation of complex verbal predicates should give rise to some particular semantics of these predicates which yet need to be specified. Furthermore, Rosen provides no account of the semantic rules that affect the building of the argument structure in the lexicon and what restrictions might apply in the operation of these rules.

3.2.5 Mono-clausal or bi-clausal?

The syntactic and semantic properties of restructuring suggest that restructuring configurations project a more restricted structure than non-restructuring ones. The preceding survey has shown that this can be achieved in two ways. We can either assume that all non-finite constructions start with the same structure which is sometimes reduced, or that restructuring configurations initially project a different (closer) structure. It appears that both approaches are more or less able to derive the properties that we have seen to distinguish different classes of infinitives. One question that we need to answer is which type of approach is better motivated for deriving the observed properties.

Let us begin by considering bi-clausal approaches. In the preceding discussion it has become apparent that since these approaches initially project full clausal structures for the embedded non-finite complement, the structure necessarily contains projections which are semantically and syntactically vacuous. We have seen, for example, that restructuring cannot apply if the embedded complement contains a complementiser or negation. It also appears that if non-finite complements contain some features before restructuring, such as an embedded semantic controller PRO, Case assigning positions or internal arguments of matrix verbs, these features get lost once restructuring has applied.

The question that these approaches are confronted with is how building of vacuous structure can be motivated if structures do not show any semantic, syntactic or phonological evidence. Such a view is completely dismissed in Chomsky's *Minimalist Program* of Chomsky (1993) who claims that syntactic structures do not conform to universal templates but are built incrementally. By dismissing vacuous projections, the syntactic theory becomes more restrictive and as such can go beyond mere description of structures to providing explanations and motivations for syntactic processes which we defined to be a goal of our study.

A further difficulty of bi-clausal approaches lies in accounting for the mechanism that derives clause-union. In adopting an explanatory approach

we cannot assume that there exists a *restructuring rule* of Rizzi (1976), but we have to provide explanations for why and how this rule applies. All remaining bi-clausal approaches presented in this chapter assume that restructuring is achieved through movement, yet none of them is able to sufficiently account for how the movement is motivated. In Chomsky (1993) it is proposed that movement is motivated by checking of features. For example, it is assumed that the internal DP argument of a verb raises to the AgrO projection to check its accusative Case feature, the verb itself raises to AgrO, T and AgrS in languages such as French to check tense and agreement features. Yet, with restructuring there seems to be no comparable restructuring feature that would motivate the movement of V, I or VP. The movement in restructuring appears even more alien to other forms of movement commonly encountered in the theory if we consider the fact that in restructuring movement is motivated across clausal domains. In Case licensing, for example, we find no examples where a DP constituent could satisfy its Case requirements by being checked in another/non-local clausal domain. Therefore, even if restructuring were some feature that is licensed by the matrix verb and motivated movement from the embedded clause, it would be an isolated case since no such movement has been ever attested.

Bi-clausal approaches are also inadequate in accounting for semantic differences between restructuring and non-restructuring configurations, which we argued are clearly defined. If V/T raising does not explain how the event and the argument structure of the matrix verb and consequently of the entire configuration is altered, it appears that we would need another (semantic) reduction rule which removes the internal arguments and interprets the matrix verb as being a part of the event structure of its complement verb. Similarly, as Wurmbrand (2001), p.57ff. points out, it is unclear how long passive is derived in bi-clausal approaches or why the embedded Case assigning positions can be skipped in preference to the matrix ones, unless one assumes an additional reduction rule that reduces the embedded Case assigning positions so that the argument is forced to raise to the matrix clause to check its Case there instead.¹³ Of course, such reduction rules would be mere stipulations or restatements of the problem since they are not motivated by any structural property.

The final and perhaps the most serious difficulty of bi-clausal approaches is to account for cases where identical verbs occur in restructuring and non-restructuring configurations. If raising of the lower V/T is motivated by some inherent lexical property of the matrix verb, assumed by most bi-clausal approaches, it is unclear why the V/T complex can only raise in some cases and consequently carry along the clitics but is prohibited to do so in others where clitics remain behind. Again this contrasts sharply with

¹³This problem is avoided in the analysis of Baker (1988) and Grewendorf and Sabel (1994).

other syntactic movement which is always thought to apply obligatorily.

It is often pointed out that bi-clausal analyses are given empirical support by the existence of languages where restructuring properties seem to be available with *finite* complement clauses. Terzi (1996), for example, shows that clitic climbing from finite complements is available in Salestino, a Southern Italian dialect, Serbo-Croatian and Romanian.

- (76) a. Karlu *lu* voli kkatta.
 Karlu it want-3P,SG buy-3P,SG
 ‘Karlu wants to buy it.’ (Salentino)
- b. ?Milan *ga* želi da vidi.
 Milan him wish-3P,SG that see-3P,SG
 ‘Milan wishes to see him.’ (Serbo-Croatian)

It appears that in Serbo-Croatian clitics can climb even over an overt complementiser *da*. This shows that complements of restructuring verbs must project tense, agreement and complementiser projections or else the embedded verb could not be properly licensed.

However, such constructions are highly constrained. For example, clitic climbing only seems to be available when the matrix and the embedded verb agree in tense, person and number. Furthermore, in Salestino and Romanian, restructuring is also not available if there is an intervening complementiser, negation or a subjunctive marker. In fact, Terzi considers this as evidence that restructuring is achieved by raising of the head T and co-indexing of the subjects. But this is not conclusive evidence. Restructuring configurations in these languages could also be mono-clausal, but here both verbs, for some reason yet to be determined, would be morphologically marked.¹⁴

In sum, it appears that there are no empirical nor theoretical reasons to assume that restructuring and non-restructuring infinitives share the same initial structure. It appears that conceptually mono-clausal approaches should be preferred. However, mono-clausal approaches presented in this chapter still face another difficulty which did not appear that immediate with bi-clausal approaches. They fail to explain sufficiently how restructuring and non-restructuring configurations are related in cases that include verbs such as *intend* which can occur in both configurations.

Two solutions are offered. They claim that the type of the argument that a verb takes is lexically specified. However, we argued that restructuring cannot be subsumed under complementation as it displays quite different properties. Another solution is offered by Cinque (2000) who argues that all ‘restructuring verbs’ are functional verbs. While this is certainly true

¹⁴The difficulty of overt complementiser in Serbo-Croatian remains for both approaches. Perhaps it should be analysed as a preposition rather than a complementiser along the same lines as *to* in English or *zu* in German.

for some, we concluded that it cannot be taken as a property of the entire class. The properties of lexical ‘restructuring verbs’ are best captured by Rosen (1990) who claims that the difference between restructuring and non-restructuring variants of verbs is not that the former lack argument structure in general but rather that they are unspecified for one.

Whereas Rosen assumes that argument and event structure are created by independent lexical rules in the lexicon, we believe on the contrary that all properties of ‘restructuring’ and ‘non-restructuring’ verbs and their configurations can be predicted and accounted for syntactically. This can be done by following a theory which proposes that lexical items are fundamentally underspecified, and their meaning, i.e. their argument and event structure, is created through structural composition. In the following chapter we give an outline of one such theory and propose an analysis of restructuring and non-restructuring in the framework of that theory.

Chapter 4

Restructuring in l-syntax

In this chapter we present our own analysis of restructuring and non-restructuring configurations. We propose that *restructuring* can be accounted for in terms of *l(lexical) syntax* developed in Hale and Keyser (1993). We start by giving a brief overview of the theory supported by some cross-linguistic evidence.

4.1 The theory of l-syntax

L-syntax was proposed by Hale and Keyser (1993) who claim that the argument and event structures of various verbal predicates automatically follow from the specific syntactic configurations that these verbs project, and thus one can completely dispense with θ -roles and θ -grids which were assumed to be a part of static lexical specifications of individual predicates in the lexicon. It follows from their assumptions that the same syntactic operations which are seen to operate at the level of s-syntax or surface syntax also operate in the lexicon or at the level of l-syntax.

There are two motivations for their claim. Firstly, a number of cross-linguistic investigations have noted that thematic roles constitute a small closed set, and that roles can be listed in hierarchical order in the sense that certain arguments associated with particular thematic roles are projected syntactically ‘higher’ than others, for example AGENT $\succ$ EXPERIENCER $\succ$ GOAL/SOURCE/LOCATION $\succ$ THEME. Secondly, there exists a correlation between theta roles and the structure in which they are syntactically represented as also specified in Baker’s *Uniformity of Theta Assignment Hypothesis* (UTAH) Baker (1988), p.48.

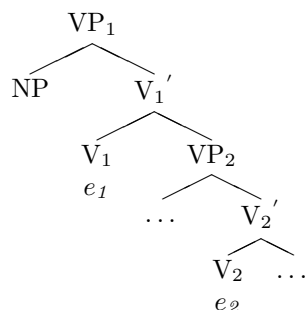
- (77) Identical thematic relationships between lexical items are represented by identical structural relationships between those items at the level of D-Structure.

Hale and Keyser argue that these facts are accounted for quite straightforwardly if one assumes that there are no thematic roles but simply *rela-*

tions determined by categories and their projections in what they call *lexical argument structure* or *lexical relational structure* (LRS).

However, in order to account for and predict relations from syntax one has to adopt a constrained version of syntactic structure. In particular, Hale and Keyser argue that l-syntax can only contain V, N, A and P lexical categories, since these represent certain basic notional categories such as events, entities, states and relations respectively. Furthermore, LRS representations can be projected as X' syntax which satisfies the second requirement, namely for the structure to be unambiguous. For example, (78) allows each head (V) to be projected as a maximal projection with unambiguous arrangements of its arguments: specifiers (NP) and complements (VP). The structure also unambiguously defines two other relations: a sister relation between NP and V', and a c-command relation between NP and VP. The relations are *asymmetric* which means that they hold only in one direction. In order to preserve unambiguity or distinctness, the system also allows only one intermediate X' projection, since multiple X' projections would lead to indistinctness of these projections. They also strongly stress that X-bar syntax is not a simple stipulation in their theory but naturally follows from the requirement that projections must be unambiguous. Presumably, another kind of syntactic representation could be used, provided that it would satisfy the unambiguity requirement.¹

(78) X-bar syntax



Given an unambiguous structure and a set of basic lexical categories such as V, N, A and P, the semantics of θ -roles and others follow from the way these types are projected; the semantics follow from unambiguous relations between these types. For example, NPs that are traditionally interpreted as *Agents* receive this interpretation precisely because they enter into a specifier relation within some VP whose head V takes another complement VP as shown in (78). The argument is as follows: Vs denote events which we symbolise as e . Since the structure in (78) contains two Vs which represent

¹The same conclusion in respect to the status of the X-bar syntax is reached in Chomsky (1993).

two events e_1 and e_2 , and since these two Vs or events are in an asymmetrical c-command relation, it follows according to Hale and Keyser, that this syntactic relation will give us the semantics of *implication*, whereby the matrix event e_1 *implicates* the embedded event e_2 which we represent as:

$$(79) \quad e_1 \rightarrow e_2$$

Thus, by composing two VPs whose head Vs denote events, we get a typical *causal relation*. It follows that any NP denoting an entity that is projected in a specifier position of the ‘causal’ verb will be interpreted as the *causer* of the $e_1 \rightarrow e_2$ relation or its *Agent*. It follows that the θ -role *Agent* is nothing but a syntactic relation which can be expressed as:

$$(80) \quad d \langle e_1 \rightarrow e_2 \rangle.$$

where d is the notational type for the category N.

The ‘lower’ VP₂ of (78) can also take a complement. This can be either a PP, AP, NP or another VP which exhausts our list of basic categories. We have already argued that Ps denote *interrelations* r , As denote *states* s and Ns denote *entities* d . It follows that a predication of these complements to VP₂ will give rise to the following implications:

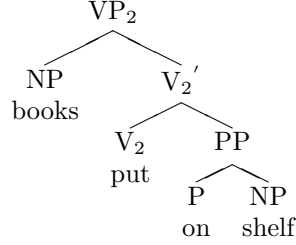
- $$(81) \quad \begin{array}{ll} \text{a.} & e_2 \rightarrow r \\ \text{b.} & e_2 \rightarrow s \\ \text{c.} & e_2 \rightarrow d \\ \text{d.} & e_2 \rightarrow e_3 \end{array}$$

Therefore, an event e_2 can implicate an interrelation, a state, an entity or another event. Hale and Keyser argue that in each case the implication results in the semantics of *change* and they label the VP₂ predicate a *predicate of change*. Since the complement denotes the result of the action of e_2 , Butt and Ramchand (2001) also label it a *resultant phrase* or RP.

Importantly, each VP predication projects a *subject* in the Spec of VP position. As the subject of VP₁, the subject of VP₂ will be an entity of type d . Yet in this case the structural relations will interpret the subject as an undergoer of change, or in traditional terminology of θ -roles it will be an *affected Patient* or a *Theme*.

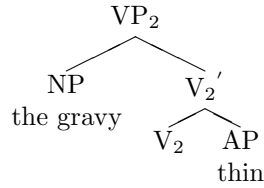
Let us consider a case where the complement phrase is a PP. Since PPs take NP complements themselves, the denotation of the VP₂ predicate will be a situation where some entity d , a subject of the VP₂, comes into an interrelation with the entity denoted by the NP complement of P or $d \langle e_2 \rightarrow r \rangle$. This implication is syntactically represented by the V' node. The interrelation results in a change. The subject of VP₂ is necessary, since otherwise the head P would not be able to establish the interrelation r which must involve two entities. In English, a typical verb that overtly spells out the denotation of the head V₂ is *put*.

(82) PP complements



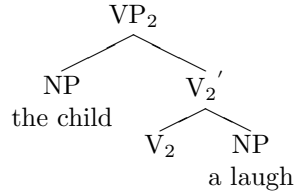
If the complement of V_2 is an AP, then the predicate implicates a change resulting in a state. Again, a subject of VP_2 is required since it is a semantic requirement of APs to be attributed to something, i.e. entities. Thus, the semantic representation of the predicate will be $d\langle e_2 \rightarrow s \rangle$.

(83) AP complements



The complement of V_2 can also be an NP in which case the event e_2 will implicate an entity $d\langle e_2 \rightarrow d \rangle$. In Hale and Keyser's terms this corresponds to the notion that the implicating event is completed, or perfected, by virtue of 'creation', 'production', or 'realisation' of the relevant entity. In contrast to the previous two cases the complement NP is not required to be in relation with another subject NP.

(84) NP complements

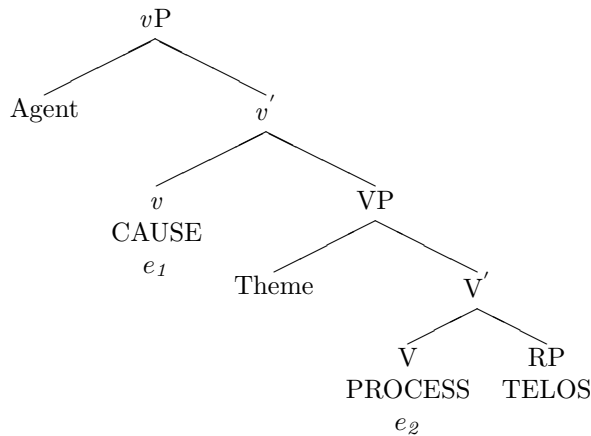


If we combine the predicates V_1 and V_2 we arrive at the structure in (85). In the literature the two VP shells V_1 and V_2 are usually labelled v and V respectively. Note that since v and V are only shells belonging to some complex predicate, the event positions denoted by these heads cannot

be separate but form a *sub-evental structure* within some macro event E denoted by that complex predicate.

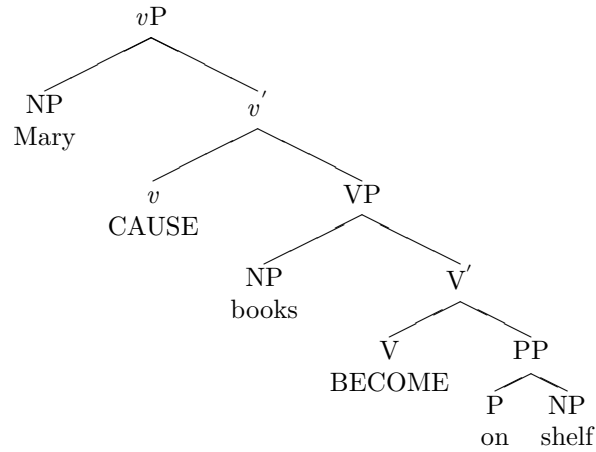
In (85) we also follow Butt and Ramchand (2001) and label the lowest complement RP or *resultant phrase* which can be either a PP, AP, NP or a VP. This is because it gives the semantics of *telos* when related to the event e_2 denoting a state.

(85) Verbal phrase in l-syntax

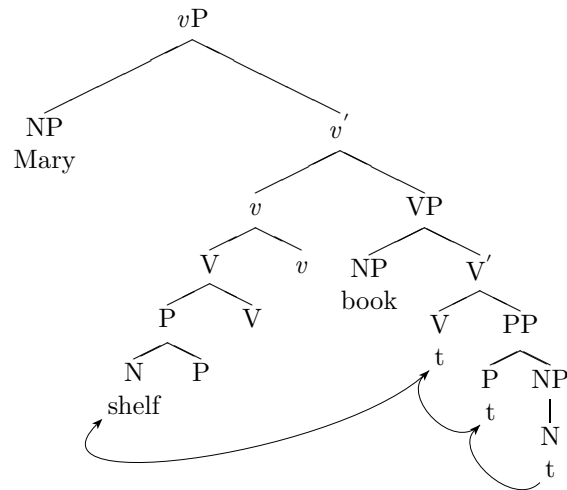


Hale and Keyser argue that such lexical relational structure (RLS) allows us to quite easily account for derivational morphology as well as to derive the argument structure of verbs without presupposing θ -grids. For example, they show how de-nominal verbs such as *shelve* as in *Mary shelved a book* are related to cases such as *Mary put a book on the shelf*. In particular, they argue that the sentence with the verb *put* resembles the initial representation and corresponds to the LRS in (85), repeated here as (86a). It is believed that in the final representation V incorporates to v and the complex is spelled out as *put*. De-nominal verbs, on the other hand, are formed by a successive incorporation of the N *shelf* to P, then the entire complex incorporates to V and finally to v , as shown in (86b). Importantly, (86b) is derived from (86a) syntactically and conforms to syntactic principles such as the *Empty Category Principle* (ECP), which states that empty categories or traces must be properly governed.

(86) a. The initial LRS

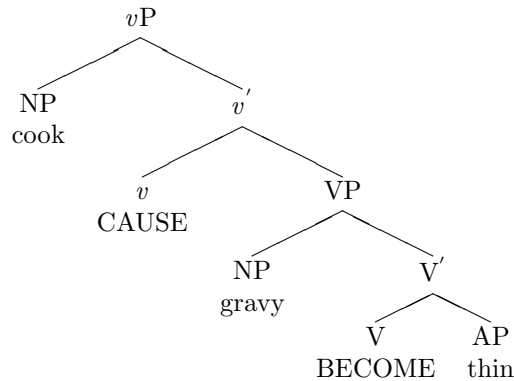


b. Creation of de-nominal verbs



De-adjectival verbs such as *The cook thinned the gravy* are derived in a parallel fashion, except that here in the LRS the complement of VP_2 is an AP and not a PP as shown in (83).

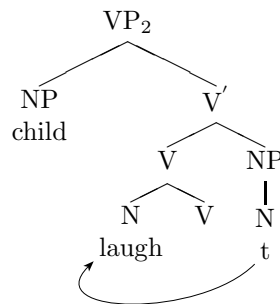
(87) The initial LRS for de-adjectival verbs



The system also allows us to predict the argument structures of various categories of verbs. For example, Hale and Keyser claim that unergative verbs such as *laugh* can be thought to be derived from nouns, as in (84) where the head N incorporates with the V. The evidence comes from the existence of parallel constructions such as:

- (88) a. We had a good laugh.
b. The child laughed.

(89) Unergative verbs



Importantly, in these constructions only the lower VP₂ shell is projected with the result that the derived sentence will only have a single (Theme) argument.

In the preceding discussion we simply assumed that a verb's external argument is projected at l-syntactic level as shown in (85) and (89). However, Hale and Keyser argue that this cannot be the case, since l-syntax is not only constrained by the principle of *Unambiguous Projection* but also by the principle of *Unambiguous Interpretation* which requires linguistic structures be 'fully interpreted'. It follows that the presence of a subject cannot be justified unless it is *forced* by relational structure. We saw that the Theme

subjects of de-adjectival (83) and de-nominal (82) verbs are forced by their AP and PP complements, since these must be predicated to something. In contrast, no such relational requirement is set on the Agent subjects of ergative or Theme subjects of unergative constructions in (84). The projection of these subjects is required only at the level of s-syntax when a functional projection, usually the Spec of TP, is built where ‘external’ subjects are licensed. Hale and Keyser claim that if a syntactic element appeared at a stage of derivation at which it is not forced by the relational structure, it would remain uninterpreted and therefore would not satisfy the principle of *Unambiguous interpretation*. The same would happen if AP and PP complements were missing an entity d implicating the $d \rangle e_2 \rightarrow s/r$ relation. In this respect they are able to account for the frequently observed asymmetry between the verb’s internal and external arguments.

One question that does arise from the preceding discussion is whether l-syntax is distinct from s-syntax in the sense that it is restricted to a separate domain of grammar such as the Lexicon. One might argue that this is so, because there appears something lexical about the verbs such as *shelve*. However, according to Hale and Keyser such a view cannot be maintained. First of all, we have seen that l-syntax and s-syntax have identical structural representations and they are subject to the same principles of grammar that determine well-formed syntactic structures. Furthermore, it appears that the derivation of lexical items, a process that could be conceived to be restricted to the lexicon, must be visible to s-syntax. Otherwise, there would be no syntactic distinction between simple transitive verbs such as *have a laugh*, which have the l-syntactic and s-syntactic structure of unergative verbs in (89), but where no incorporation of N to V occurred, and ergative verbs such as *thinned* which have the structure in (87).

- (90) a. The cook thinned the gravy.
b. The cook had a laugh.

However, these two classes of verbs have quite different syntactic properties.² For example, ergative constructions (90a) can be turned into inchoative constructions (91a), whereas unergatives (90b) cannot (91b).

- (91) a. The gravy thinned.
b. *The laugh had.

If the l-syntactic derivation of these verbs were invisible to s-syntax, then at least we should expect that they would have identical s-syntactic properties, but this is not the case. As seen in (91) the NP *laugh* cannot become a subject, whereas the NP *gravy* can. The difference in behaviour

²Hale and Keyser argue that since the NP *cook* is projected ‘externally’ in both cases it is always interpreted as Agent.

of these verbs is due to the different structural position of the relevant NP at l-syntax, a complement in the first case and a specifier in the second. It follows that the argument structure of l-syntax must be visible to s-syntax which in turn suggests that the boundaries between the two are not distinct.

Finally, Hale and Keyser realise that there is a way in which LRS derivations can be thought of belonging to the ‘lexical domain’. This is purely because they involve strictly local movement from one lexical head to another inside a projection which we marked as *vP*. This projection does not include any functional categories and in this sense *vP* is a ‘lexical’ clausal domain which might even be characterised as a derivational *phase* in terms of Chomsky (2001). Since the *vP* projection contains all the argument positions of a verb which denotes a macro event *E*, it follows that *vP* is a projection which syntactically marks that event. Of course, we saw that each macro event can be further decomposed into smaller sub-events such as causation e_1 , process e_2 and result e_3 . Overall, following Travis (2000), the distinction between l-syntax and s-syntax reduces to a distinction between sub-eventual and supra-eventual structure.

4.2 Overt evidence for l-syntactic relations

Perhaps the strongest support for the validity of the l-syntactic theory and its non-distinctness from the ‘real’ syntax comes from the observation that semantic and structural relations, which we claimed to exist at LRS or within a *vP*, can be also observed overtly in many languages. Travis (2000) shows, for example, that Malagasy and Tagalog, two Western Malayo-Polynesian languages, project a causative morpheme that corresponds to the l-syntactic head *v*. Furthermore, Malagasy also contains telic affixes which ensure the telicity of the event described by the verb and thus correspond to the RP.

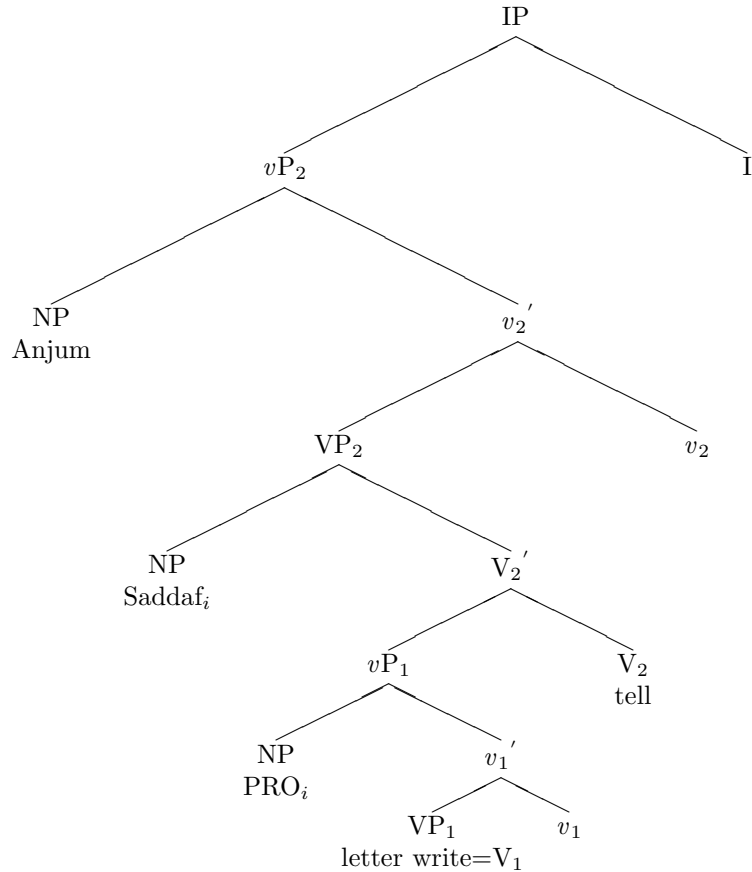
Instead of morphemes, some languages project *light verbs* as heads within the *vP*. As we saw, this strategy is available in English since *The cook thinned the gravy* is parallel to *The cook made the gravy thin* which resembles the underlying structure in (87). Another light verb that overtly shows the l-syntactic structure in English is *get* as in *The pigs got mud on the wall* or *Mud got on the wall*, showing transitive/inchoative alternation.

Butt and Ramchand (2001) argue that the ‘light verb’ strategy is widely used in Hindi/Urdu. They observe that light verbs in these languages generally fall into one of the three categories. Some light verbs (V_2) combining with their complements (V_1) show a typical bi-clausal behaviour.³ Butt and Ramchand label these constructions *Type 3* and represent them as a complementation of two *vPs*. In this respect each verb projects its own argument structure and denotes independent macro event *E* which can be further decomposed into sub-events e_1 , e_2 and e_3 . The evidence for this

³Hindi/Urdu are head final languages.

structure comes from the fact that the V_1 complement of a light verb V_2 is nominalised and appears with a case-marking morphology (accusative Case) which means that vP_1 must be an argument of the higher verb V_2 . In fact, since vP_1 is marked for Case it appears quite unclear whether it should be analysed as a verbal or a nominal category. The following example shows a *Type 3* construction.

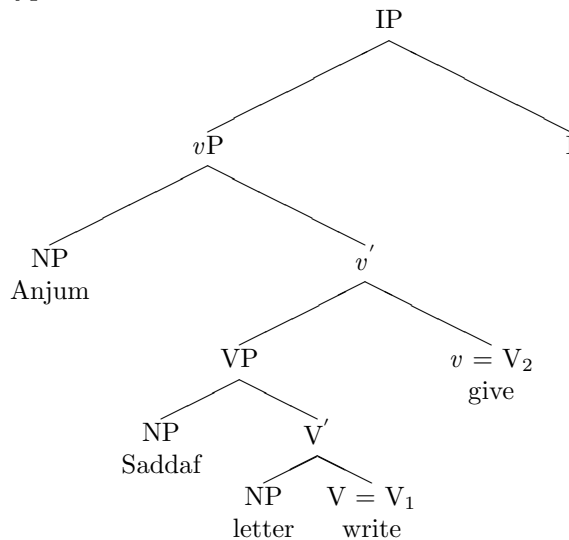
- (92) a. Anjum=*nee* Saddam=*ko* [PRO *xat*
 Anjum-FEM,=ERG Saddam-FEM,=DAT letter-MASC,NOM
 lik^h-*nee*]=*koo* kah-aa.
 write-INF,=ACC say-PERF,MASC,SG
 ‘Anjum told Saddam to write a letter.’
 b. Type 3



Hindi/Urdu also has some light verbs (V_2) which clearly form monoclausal structures with their complement verbs (V_1). It appears that here the arguments related to V_1 include everything except the Agent. On the other hand, the argument related to V_2 is always the Agent or causer of the

V₁ event. Furthermore, V₂ seems to specify a particular mode of causation. This leads Butt and Ramchand to conclude that V₂ must be analysed as an overt instantiation of the head *v* in a mono-clausal structure as shown below. They label these constructions *Type 2*.

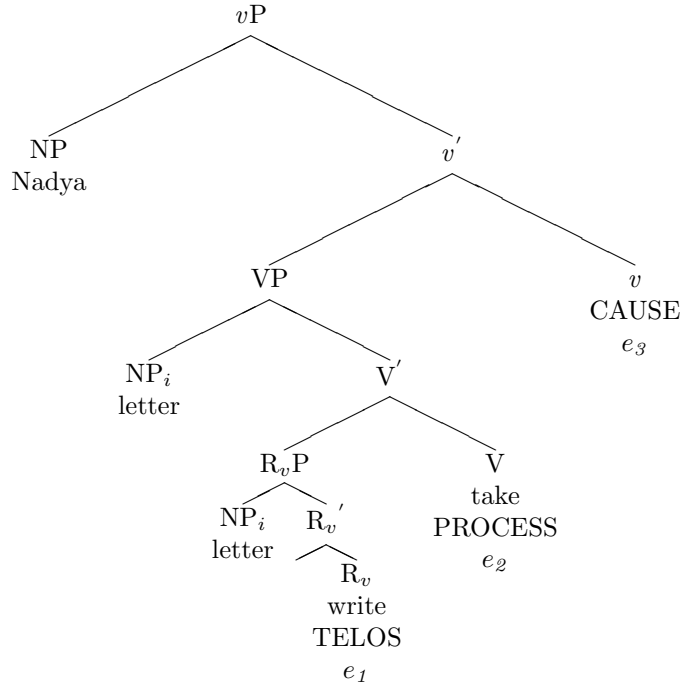
- (93) a. Anjum=nee Saddam=koo xat
 Anjum-FEM,=ERG Saddam-FEM,=DAT letter-MASC,NOM
 lik^h-nee dii-yaa.
 to write-OBL give-PERF,MASC,SG
 ‘Anjum let Saddam write a letter.’
 b. Type 2



Hindi/Urdu also displays a second mono-clausal relation between a light verb (V₂) and its complement (V₁). In these constructions, V₂ represents the causing and the process part of the event, while V₁ represents the final state achieved or *telos* which gives us the semantics of *accomplishments*. Since in this configuration the resultant phrase is a VP, they show the fourth possible implication relation that follows from the Hale and Keyser’s system, namely that the predicate of change *e*₂ can implicate another event/resultant state *e*₃. Note also, that in order for the correct semantic implications to follow, the structure requires identification of the subject of change *letter* with the subject of result.

- (94) a. Naadyaa=nee xat lik^h lii=yaa.
 Nadya-FEM,=ERG letter-MAC,NOM write take-PERF,MASC,SG
 ‘Nadya wrote a letter (completely).’

b. Type 1



Overall, Hindi/Urdu provides good evidence that light verbs are overt realisations of verbal heads that give us the semantics of causation, process or a resultant state in the complex verbal structure proposed by Hale and Keyser. Furthermore, since light verbs are projected as a part of the LRS of another verb this accounts straightforwardly for their impoverished thematic nature. In this respect the system of l-syntax is also able to explain structurally how the argument structures of a light and a full verb might merge in the proposal by Rosen (1990).

4.3 Restructuring and non-restructuring in l-syntax

We are now ready to present our own analysis of restructuring and non-restructuring in Slovene. We start by considering non-restructuring configurations.

4.3.1 Non-restructuring configurations

We concluded from the nominalisation properties of different non-finite constructions that non-restructuring configurations denote two macro events which nominalise independently of each other. If this is so, matrix predicates and their non-finite complements must be represented as independent

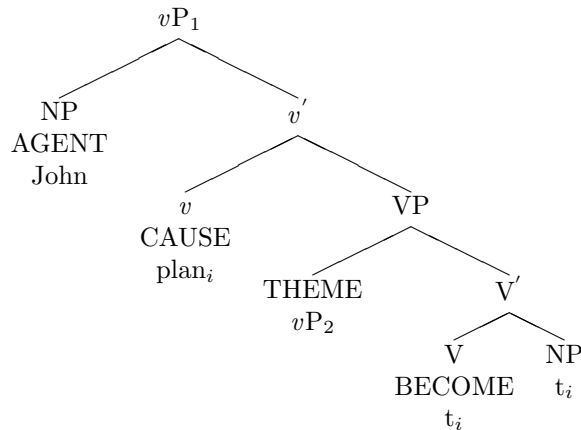
4.3. RESTRUCTURING AND NON-RESTRUCTURING IN L-SYNTAX 69

*v*Ps at least, since as we saw, it is this projection that syntactically constitutes the semantics of a macro event.

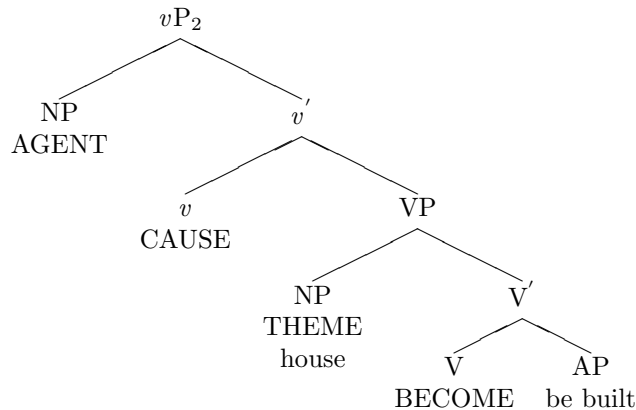
Other facts from Slovene also support this claim. We saw that each predicate in non-restructuring configurations can be independently modified by temporal adverbs which can only modify macro events. Furthermore, we saw that non-restructuring matrix verbs can be specified for independent internal arguments, which under the current proposal must be projected within a *v*P. The evidence from scrambling shows that constituents cannot be scrambled across non-restructuring non-finite complements which means that they represent locality domains. *v*P is proposed to be such locality domain in Chomsky (2001).

That non-restructuring configurations involve a predication of two *v*Ps is also argued for by Wurmbrand (2001), though on the basis of Case assignment which does not necessarily obtain under our l-syntactic proposal. Finally, the same structure is also given for *Type 3* constructions of Hindi/Urdu by Butt and Ramchand (2001)). We repeat the full l-syntactic structure below.

- (95) a. *v*P₁ predicate denoting *E*₁



- b. *v*P₂ predicate denoting *E*₂



Since vP_2 or e_2 is projected as a specifier or a subject of VP_1 it should receive an interpretation of a Theme of vP_1 , which does seem to follow. For example, vP_2 [_{VP} to build a house] can be nominalised giving us the sentence John planned [_{NP} the house-building] in which [_{NP} the house-building] is a Theme of the planning event. In the l-syntactic derivation we also assume that in vP_1 the verb *plan* originates as a nominal category N which incorporates to V and finally the entire complex incorporates to v giving us a de-nominal verb *plan*.

The l-syntactic framework provides quite a different characterisation of *infinitival subjects* (PROs) and *infinitival* tense than a traditional syntactic theory. In the literature it is often assumed that non-finite complements such as vP_2 project a tense projection TP which should be specified for a (quasi-) future tense, since it has been observed that the event described by the complement verb temporally follows the event described by the matrix verb. If non-finite constructions were specified for such future tense, it would mean that the tense would be *dependent* on the tense of the matrix predicate. However, when we examine Slovene ‘overtly tensed’ complement clauses which otherwise always project with a complementiser, we observe that unlike in English, the tense in a complementiser clause is *never* dependent on the matrix tense. For example, in (96) the tense of the embedded clause is simply the tense in which John uttered the original proposition. In English, on the contrary, past tense must be used.

- (96) Janez *je* rekel, da *je* utrujen.
 John is said that is tired
 ‘John said that he was tired.’

We would therefore need to conclude, somehow un-intuitively, that in Slovene the tense of non-finite complements is dependent on the matrix tense, whereas the tense of propositional complements is not. The problem can be avoided quite easily by assuming that non-finite complements of non-restructuring configurations do not project a TP projection but that the *after* relation simply follows from the relational structure in which the macro event E_1 structurally precedes another macro event E_2 . Because both events are macro events and include their complete argument and sub-evental structures, the semantics that follow from relating E_1 and E_2 are that of temporal ordering.

If non-finite complements of non-restructuring configurations do not project a TP, it also follows that they cannot assign nominative Case, which is standardly assumed to be assigned in its specifier position.⁴ This does seem to be correct, since as we observed the subject argument of a non-restructuring complement clause must appear with a dative Case instead. The relevant examples are repeated below.

⁴In Chomsky (1993) subjects are licensed for nominative Case in Agr_SP.

- (97) a. *Janez *je* predlagal Peter zgraditi hišo.
 John-NOM is recommend Peter-NOM to build house
 ‘John recommended Peter to build a house.’
 b. Janez *je* predlagal Petru zgraditi hišo.
 John-NOM is recommended Peter-DAT to build house

It follows that it would be quite un-intuitive to assume that there exists a syntactic empty category PRO which is licensed for null Case in the same position.

- (98) Janez *je* načrtoval zgraditi hišo.
 John-NOM is planned PRO? to build house-ACC
 ‘John planned to build a house.’

However, we do not claim that there is no underlying subject argument in non-finite complements of non-restructuring configurations. These quite clearly project subject arguments for which we presented much evidence in the discussion of control in Chapter 2. Indeed, if we return to our I-syntactic representation in (95), the presence of implicit subject arguments can be easily accounted for. In (95) we see that vP_2 projects an empty Agent position. Because we assume that vP_2 is a lexical-relational structure, or rather that its semantics are created through its structural relations, ‘empty’ does not mean ‘not present’ but rather *unspecified*. If the Agent of a non-finite complement is unspecified, it behaves like a variable or a pronoun which needs to resolve its reference from the context. We believe that PRO is precisely that. This accounts for the fact that non-restructuring configurations allow non-obligatory control where the subject argument of non-finite complements can be any contextually conceivable set of agents. For example, in (98) the Agent or the causer of the house building process can be John, John included in a set of agents, or a set of agents excluding John.⁵

We argued that non-restructuring configurations must be analysed as a predication of vPs *at least* as shown by their event and argument structure and the nominalisation evidence. Of course, this does not exclude non-finite complements of non-restructuring configurations from projecting other (functional) projections. Indeed, we consider this to be necessary in order to account for clustering of clitics inside non-finite complements, the presence of the embedded negation and the Case assigning abilities in the construction of passive.

⁵We should be able to show that when the embedded Agent is specified only obligatory control is available. However, this is difficult to do since in non-restructuring configurations such as (97) it could always be the case that the argument *Peter* is a beneficiary argument of the matrix verb which establishes reference with the unspecified Agent of the embedded complement.

In overall, our proposed analysis of non-restructuring configurations is identical to that of Wurmbrand (2001) and Butt and Ramchand (2001). It appears that in adopting an l-syntactic approach we are able to correctly predict all the semantic and syntactic properties of these configurations. In particular, we are also able to dispense with vague notions of infinitival subjects and infinitival tense and offer an analysis where these properties can be structurally derived from a particular configuration.

4.3.2 Restructuring configurations

Wurmbrand (2001) argues that restructuring is not a unified syntactic phenomenon in the sense that it can be represented with a single structural configuration. She shows that at least two types of structures exist: *lexical* and *functional* restructuring. Their common property is that they both project in a mono-clausal structure and thus allow for the transparency effects that we discussed in Chapter 2.

Her motivation for distinguishing the two restructuring configurations is based on a long-standing observation in the discussion of non-finite constructions, namely that some verbs taking non-finite complements are thematically empty, and therefore require *raising* of the subject of their non-finite complement to the matrix subject position, in order to satisfy the condition that clauses must project subjects. It is assumed that the class of verbs that form these constructions includes modal verbs, motion and aspectual verbs and verbs such as *seem* and *appear*. The class is usually known as *functional verbs*.

On the other hand, we saw that verbs such as *intend* are not fully thematically empty but rather thematically unspecified and require at least an Agent or the causer of the event described by the embedded predicate. We propose that in this respect this class of verbs is best characterised as *light verbs*.

We thus agree with Wurmbrand that restructuring configurations must be distinguished according to these two types at least, since a choice of a functional or a light verb will give rise to quite specific semantics, as we will show in the analysis below. In this respect we disagree with Cinque (2000) who proposes that *all* restructuring verbs should only be taken as functional verbs. On the contrary to Wurmbrand, our analysis includes a slightly different division of classes based on the semantic properties that are expressed through the l-syntax.

Restructuring verbs as heads of modal functional projections

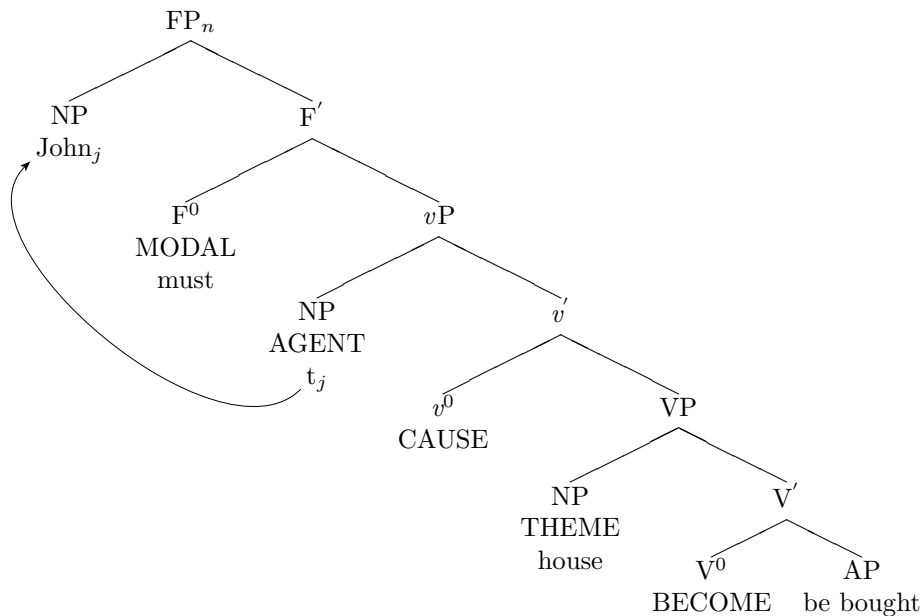
Most syntactic analyses of modal verbs assume that they project in a mono-clausal, and in criteria, a restructuring configuration. We analyse modal verbs as sentential operators that are hosted in a functional projection (FP)

dominating and taking scope over the complex *vP* structure. Their semantics therefore express notions such as possibility, necessity and ability of the entire macro event *E* denoted by the *vP* projection. The structure that we propose for modal verbs is identical to the functional restructuring of Wurmbrand (2001), but note that Wurmbrand's functional restructuring class also includes *aspectual* and *motion verbs* which we analyse differently.

Wurmbrand also argues that the modal functional projection can be further broken down into smaller projections from which the semantic differences between epistemic (*Mary could have bought a house*), deontic (*Mary must buy a house*) or dynamic (*Mary can buy a house*) usages of modal verbs structurally follow. It is not possible to go into a detailed discussion of these projections here. Since they invariably belong to the functional domain of the clause, they project in a mono-clausal or restructuring configuration.

- (99) Janez mora kupiti hišo.
 John must to buy house
 'John must buy a house.'

- (100) Modal verbs



Restructuring verbs as *v* heads

Causative, 'speech act' implicatives, aspectual and motion verbs all have one semantic property in common: they denote a *causative force* that initiates some process which can be either atelic (101a) or telic (101b).⁶ Thus *give*, a

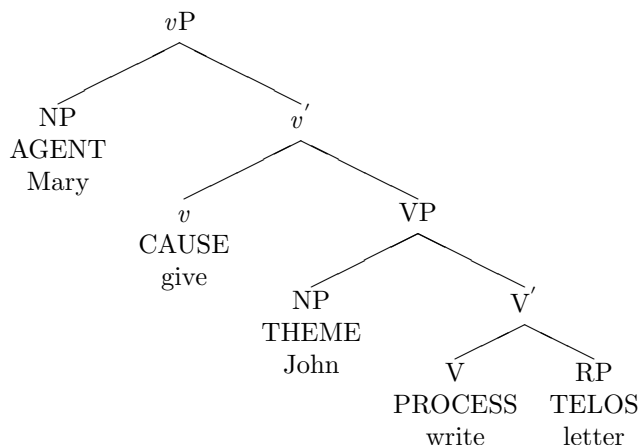
⁶Note that telicity is marked in Slovene with verbal particles. We assume that the telic prefix initially resides in a projection within an RP that incorporates to the head V.

typical causative verb in (101), *cannot* mean ‘motion of an object in a path’ when used in restructuring configurations. The semantics of any such verb seem to be coerced to express causation.

It follows that these classes of verbs must be analysed as overt realisations of the causative head *v* in a mono-clausal l-syntactic construction of Hale and Keyser (1993) and are thus identical to *Type 2* constructions of Butt and Ramchand (2001) in Hindi/Urdu or *lexical restructuring* configurations of Wurmbrand (2001). Note that in the later case such structure is proposed for a different set of verbs, *implicatives* and *irrealis* verbs. Finally, it is this set of constructions that Cinque (2000) considers ‘hidden causatives’ that cannot be accounted for under his proposal.

- (101) a. Marija *je* dala Janezu pisati pismo.
 Mary-NOM is give-PART,FEM,SG John-DAT to write letter
 ‘Mary let John begin the process of writing a letter.’
 b. Marija *je* dala Janezu *napisati*
 Mary-NOM is give-PART,FEM,SG John-DAT to write-TELIC
 pismo.
 letter.
 ‘Mary let John begin the process of writing and finishing a letter.’

- (102) Causative and ‘speech act’ verbs



We propose that the same configuration is also projected by ‘speech act’ implicatives such as *pustiti* (let), *omogočiti* (enable), *ukazati* (order) and *veleti* (command). They all initiate some process denoted by the non-finite verb. The only difference is the manner of initiation. Negative variants of these verbs also exist and include *preprečiti* (prevent) and *preklicati* (cancel). Their denotations are ‘not cause’, thus suggesting that logical operators such as *not* should be added to the lexical relational structure. Let us assume

that, as in semantic composition, they are operators and are a part of the head *V* rather than projecting their own projections.

Notice that in (102) the Theme is different from the Agent. It is also conceivable for both arguments to be the same. We believe that this is the case when motion verbs such as *priti* (come), *iti* (go), *hoditi* (iterative come and go) and *poslati* (send) are projected in the head *v*. Again their ‘restructuring’ semantics do not specify that some motion is involved. For example, (103a) can only mean that John started the house building process in its strict restructuring use (103b).

- (103) a. Janez *je* šel graditi hišo.
 John is went to build house
 ‘John began to build the house.’
 b. Janez *jo je* šel graditi.
 John it is went to build
 ‘John began to build it.’

We analyse aspectual verbs such as *začeti* (begin) and *končati* (end) as belonging to this category too, although we do not exclude the possibility for them to be analysed under the proposal made in the following section.⁷

Restructuring as raising of the abstract *v* head to modal/functional domain

The third type of restructuring configurations combines the characteristics of the other two. Verbs that occur in this configuration represent the class of *irrealis* verbs. Irrealis verbs presuppose that the process or the completion of the process denoted by their non-finite complement is left unrealised. Thus, *John intends to build a house* denotes that the house is not built and that there exists an equal possibility that *John* will be successful or unsuccessful in building the house. The irrealis property interacts with past tense, since in the past the sentence comes to mean that the process and its completion were unsuccessful. If *John intended to build a house* there exists no house since either the initiation of the process or its completion failed. For this reason, the irrealis property is usually analysed as belonging

⁷It has been noticed in German [cf. Wurmbrand (2001)] that aspectual verbs which contain separable prefixes such as *anfangen* (begin) cannot occur in restructuring configurations. This is certainly surprising, since in many languages they do. If aspectual verbs in restructuring configurations are *v* heads, then an explanation follows. German separate prefixes mark *telos* and as such should be projected inside an RP and head raise and incorporate with the verb. But in restructuring configurations this is impossible either because the lower head *V* is occupied by another verb which would prevent head raising, or because the lower *V* projects its own telic marker. Thus, our structure correctly predicts that restructuring verbs cannot be marked for *telos* themselves but this can be only done for the entire verbal complex.

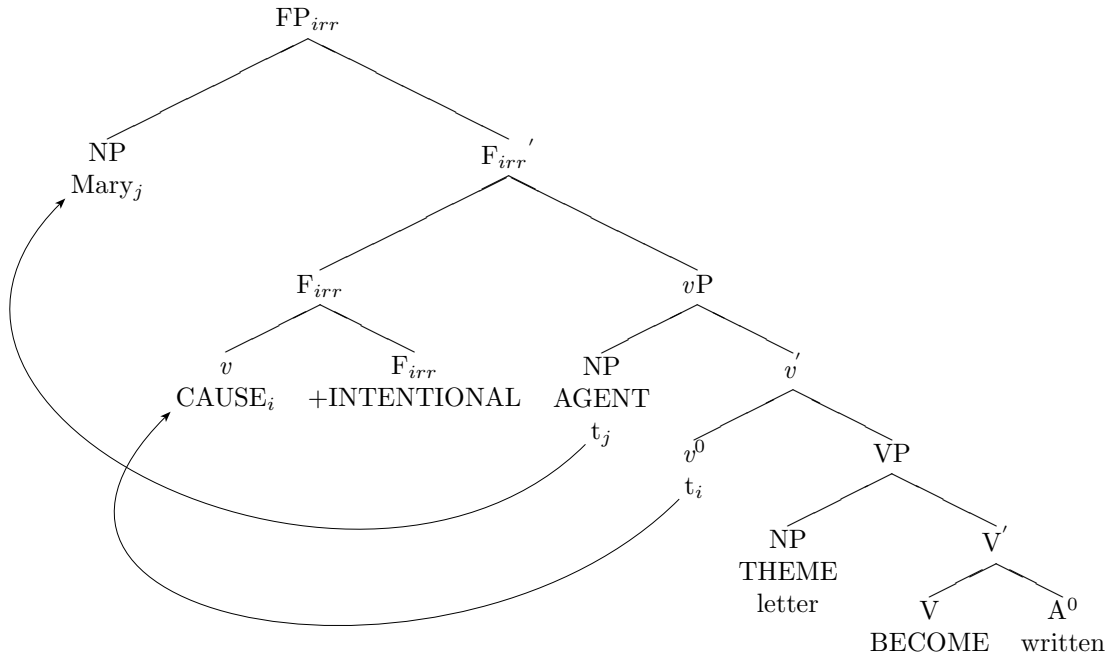
to the functional/modal domain of the clausal architecture. Cinque (2000) and Wurmbrand (2001), for example, propose that it should be analysed as mood or aspectual property respectively, which is projected in one of the Mod/Asp heads. This intuition seems to be correct since the semantics of irrealis verbs correspond to certain adverbs. For example, we can substitute *intend* with *almost* without changing the meaning of the sentence.

- (104) a. Marija *je* nameravala napisati pismo.
 Mary is intended to write letter
 ‘Mary intended to write a letter.’
 b. Marija *je* skoraj napisala pismo.
 Mary is almost written letter
 ‘Mary almost wrote a letter.’

However, the semantics of restructuring irrealis verbs seem to be more complex since not all irrealis verbs can occur in restructuring configurations. For example, *intend* can, and *plan* cannot. We believe that the distinction is precisely because some irrealis verbs can be projected as *v* heads in a verbal complex *vP* and others cannot. By being projected in the head *v* the meaning of the irrealis verb will be coerced to a causative meaning.

Therefore, it appears that irrealis verbs, when used in restructuring configurations, have two semantic properties CAUSE and +INTENTIONAL, +MODALITY, or rather that they are *complex words*. In the discussion of Hale and Keyser’s theory we have seen that de-nominal verbs such as *shelve* correspond to [CAUSE BECOME RELATION(on) shelf]. Furthermore, we have seen that Hale and Keyser make a strong empirical claim that these complex morphological words are derived exclusively through syntactic processes. Thus, we are lead to believe that irrealis verbs in Slovene, when used in restructuring configurations, are derived in a similar way as English denominal verbs. In particular, we would like to propose that the derivation of an irrealis verb such *intend* includes incorporation of the head *v* to the functional head with the irrealis property. The entire complex is spelled-out as *intend*.

(105) Irrealis verbs



The explanatory strength of our analysis

In this section we briefly consider how the proposed structures are able to motivate and account for the syntactic and semantic properties of restructuring configurations.

The proposal we make is a mono-clausal one, which we argued to be a conceptually better analysis in Chapter 3. In this respect, syntactic properties such as clitic climbing, scrambling, long passive and anaphor binding are quite easy to account for, since in all cases they can be analysed as local and do not need to cross clausal domains. Our structures predict that both a ‘restructuring verb’ and its complement will be projected under the same (functional) projections, which are responsible for licensing the above operations, or within the same functional complex or clause.

In a way, our structures are almost identical to those proposed by Wurmbbrand (2001). They preserve the intuition that restructuring is not a unified phenomenon and that at least two categories of restructuring verbs exist: *functional* and *light verbs*. The intuition was widely present in both mono-clausal and bi-clausal analyses, and different approaches have successfully argued that restructuring verbs are either one or the other. We go even a step further and propose that a restructuring verb can in fact be both, as exemplified by *irrealis* verbs in which a light causative verb raises to the clausal functional projection. In this respect we are able to preserve the intuition of Cinque (2000), but at the same time provide an analysis of purely

causative constructions which Cinque's account cannot provide.

In analysing restructuring verbs either as functional verbs, or light verbs which are projected in the same functional complex with another verb, we are also able to account for why they cannot denote macro events but are either *operators* of these events (functional verbs) or their sub-parts (light verbs). We presented evidence for this conclusion from the scope of adverbs/negation and nominalisation properties.

Although our structures are similar to that of Wurmbrand, there are important differences in how the constructions with light verbs are motivated. Wurmbrand assumes that *lexical restructuring* is a matter of verbal complementation where restructuring verbs have a special selectional requirement to combine with a 'very small predicate'. Presumably then, the ability to combine with a small predicate is listed in the static lexicon. We argued, however, that this is the most important shortcoming of the majority of mono-clausal approaches as it forces us to rely too much on the lexicon for properties that can be structurally accounted for. For example, verbs that normally do not occur in restructuring configurations *can* receive the particular (causative) semantics just by virtue of being projected there. In this respect, our view of syntactic projections and their semantics is the opposite of Wurmbrand. It does not seem that lexical semantics are mapped or projected to syntax, but rather that a particular syntactic projection or structural composition gives rise to particular semantics.

In our view the Lexicon is thus not a static list of items coupled with categorial information, but includes some structure building (syntactic) processes that create particular semantics. The processes must be maximally constrained, otherwise this would lead to indistinctiveness of semantic representations which consequently could not be interpreted. We chose the system proposed in Hale and Keyser (1993) to satisfy this criterion. We believe that the system achieves the *explanatory adequacy* which we set out as one of the goals of this thesis. It follows that, if our l-syntactic restructuring configurations are correct, we should be able to show that they predict only those semantics that are exclusive to real restructuring examples.

This is confirmed. The l-syntactic approach can, for example, structurally account for varying semantics of identical verbs in their restructuring and non-restructuring use observed by Napoli (1981). We saw that other, purely syntactic or purely semantic approaches cannot account for this fact. On the contrary, we contend that verbs are only specified for *root* semantic meanings which express the concepts of physical world such as making decisions or issuing an order. However, the root meaning itself is not enough for the final semantics of the verb. These are also determined through the verb's relation to its arguments and event representation. The difference between restructuring and non-restructuring variants of the same verbs thus reduces to what kind of argument and event structure they are projected within. The explanation for why not all verbs occur in restructuring configurations

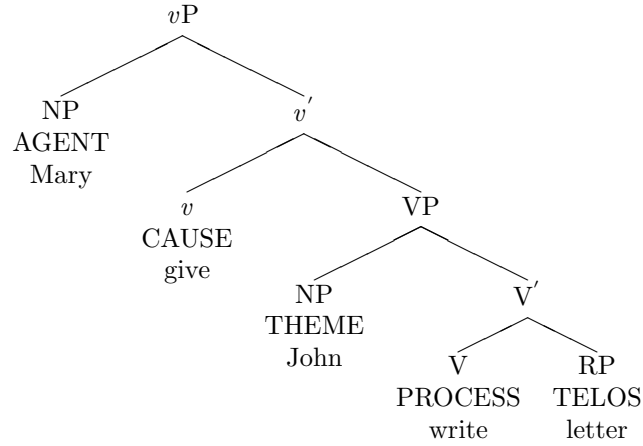
follows from the fact that certain roots are simply not conventionally used in certain configurations.⁸ However, they easily could be, since any resulting examples are fully interpretable by the speakers. The idea of argument and event structure building resembles Rosen (1990), yet there, no structural justification of the process is given.

Our restructuring configurations for light verbs predict the correct argument and event structures for restructuring sentences. For example, since we argue that restructuring light verbs are projected as causative heads *v*, they should express some causative force, a fact confirmed by our observations. Furthermore, the structure also accounts for their impoverished thematic nature. We have seen that although functional restructuring verbs cannot be specified for arguments altogether, which corresponds to their functional status, light verbs must be specified for one argument only: the Agent or the causer of the process denoted by their non-finite complement. This again follows from the structures in (102) and (105), which we repeat below, since if these verbs are projected as *v* heads, the only argument position associated with them is the subject in their specifier position or the thematic Agent. If the argument structure of restructuring verbs were specified through some other (lexical) principle, this would not necessarily have been the case. Furthermore, the projections also account for the fact that restructuring verbs cannot contain any independent *internal arguments*. (102) and (105) show that this is impossible since there are no other available argument positions left. It follows that unaccusative verbs, when projected in such configurations, will lose their unaccusative properties since their argument structures would be changed. Finally, our configurations also explain why anaphors in restructuring configurations can bind two subjects, one which occurs with Dative case. (102) shows that there are two structural subject positions belonging to the domain in which anaphors license their antecedents.⁹

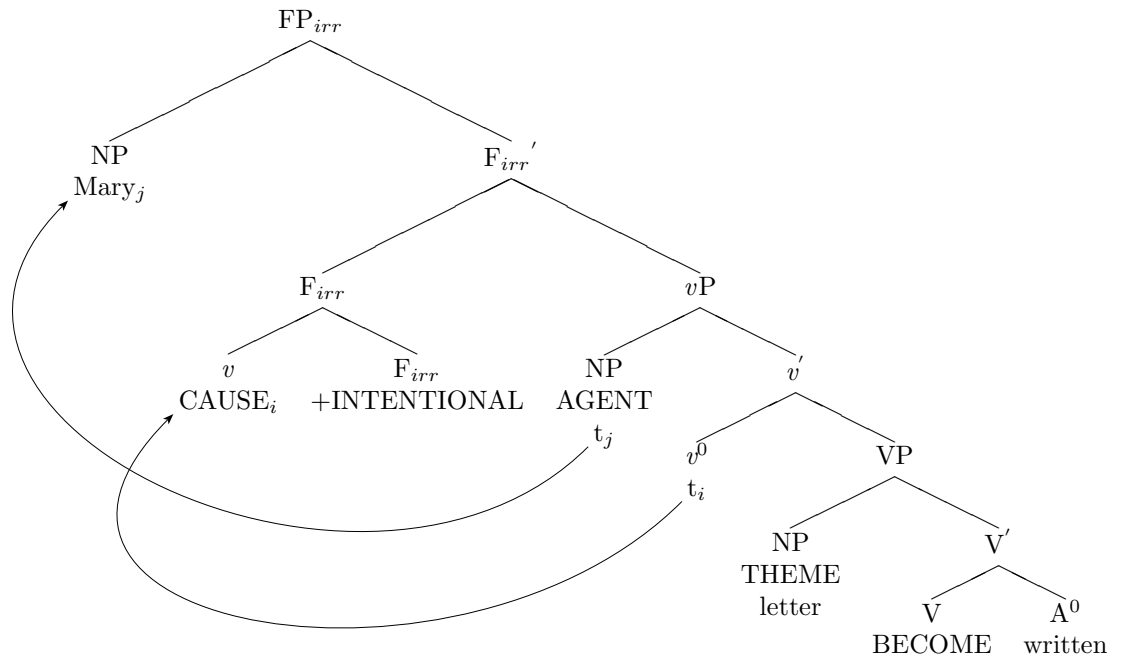
⁸See Borer (2000) for similar arguments.

⁹The fact that one argument is projected with nominative and the other is projected with accusative Case has to do with the licensing requirement that each complete functional complex can only contain one projection for nominative, one for accusative and one for dative Case. Since nominative Case is assigned to the structurally dominant Agent subject, the Theme subject can only be assigned dative Case in order for the construction to be well formed. In this case the Case properties confirm the mono-clausality of restructuring configurations.

(102) Causative and ‘speech act’ verbs



(105) Irrealis verbs



The configurations also predict the argument structure of the *entire complex* which reflects the actual semantics observed. Both non-finite complements of (102) and (105) cannot be independently specified for the thematic Agent or the causer argument since this is specified by the ‘higher’ causative verb. Furthermore, note that we argued that (102) is a representation of the sentence in (106a), and (105) is a representation of (106b).

- (106) a. Mary gave/made John to write a letter.
 b. Mary intended to write a letter.

Although (106a) and (106b) appear very similar in their surface arrangement of the argument *letter*, the semantics of this argument are quite different. We believe that this difference in interpretation follows from different structural positions of the argument in the lexical relational structures (102) and (105).

In particular, (102) predicts the Theme argument to be *John* and not *letter*. *Letter* is projected as a part of the result phrase RP. In this respect it is assigned the interpretation of Goal to which the activity is directed. The entire configuration results in an interpretation in which the Agent *Mary* caused the Patient *John* to become in some relation with the Goal *letter*, which we believe rightly reflects the semantics of the sentence in (106a). On the other hand, (105) predicts that *letter* must be the Theme affected by the Agent *Mary* which corresponds to the interpretation of (106b). Overall, the structural configurations for restructuring correctly predict the semantics of their individual arguments.

A further benefit of our structures is also the fact that we can completely dispense with the notion of control as an independent property which is assigned by semantic interpretation rules [cf. Wurmbrand (2001)]. We propose, on the contrary, that control relations in restructuring as well as non-restructuring configurations are predictable from the lexical-relational structure. For example, (102) predicts that *John* and not *Mary* must be interpreted as the subject of the letter writing process since *John* is projected in the subject position of the verb *write* and no intervening empty subject positions exist.¹⁰ Along the same lines, (105) predicts that *Mary* must be the exclusive Agent of letter writing. If control were to be established by some independent semantic principles, these facts would not need to follow.

In sum, we believe that besides capturing many intuitions of the previous analyses, our proposal is correctly able to account for the syntax and semantics of restructuring configurations. Furthermore, it follows from our analysis that restructuring is another linguistic feature that can only be explained properly in terms of interfacing syntax with semantics.

¹⁰In our proposal these would establish reference with some existing argument or would retrieve the argument from the context.

Chapter 5

Conclusion

The thesis presented offers a new explanatory approach to restructuring and non-restructuring in Slovene based on interfacing syntax with semantics.

We began by surveying the data of various non-finite constructions in Slovene and concluded that there exist two groups which behave differently in terms of clitic climbing, non-focus scrambling, long passive with *se*, anaphor binding, control and adverbial modification. The matrix verbs of these configurations have different semantic properties in terms of internal arguments and event specification. We concluded that the semantics of the two variants of one verb that occurs in both restructuring and non-restructuring configurations should be accounted for by structural principles.

In the third chapter we provided a survey of the existing analyses of restructuring which can be characterised as bi-clausal and mono-clausal, and concluded that the latter reflect better the properties of these configurations. Furthermore, we argued that none of the approaches contains sufficient mechanisms that would explain the particular restructuring syntax *and* semantics.

In the fourth chapter we presented an outline of the theory known as the *l(exical) syntax* which accounts for the interaction of these levels of grammar. We provided an analysis of restructuring and non-restructuring in terms of that theory and concluded that the new analysis gives a valid *explanatory* account of their syntactic and semantic properties. Our proposal also incorporates the intuitions of many previous approaches, but which were only considered in isolation before.

The proposal not only provides a better understanding of syntax and semantics of non-finite constructions but also joins recent attempts to explain the interaction between the syntactic and lexical levels. The idea that syntactic processes are present at the level of lexical entries or the lexicon was independently argued for by Marantz (1997) and Borer (2000). We provide new evidence for these approaches which claim that syntactic structure gives rise to a template which determines the semantic interpretation. In

this respect we are able to reduce the number of properties that were traditionally attributed to lexical listing and account for many of them through formal (syntactic) mechanisms.

The discussion also raised some questions which could not be answered. In particular we should examine the properties of modal constructions and give an account of how *root*, *deontic* or *epistemic* semantic interpretation is assigned. Another question that is related to restructuring configurations with light verbs is how telicity is constructed with telic particles which we assumed to project within an RP. We have shown that there is no syntactic process such as *clitic climbing* but only local clustering of clitics, yet the processes involved and the sites to which the clitics cluster have not been sufficiently explored. Finally, our proposal should be tested on other languages that show restructuring effects. The success of these tests would confirm the universal validity of our proposal.

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