

Susi Wurmbrand

## **Restructuring cross-linguistically\***

Susi Wurmbrand

University of Connecticut

### **1. Introduction**

Since the seminal works by Rizzi 1978, 1982 and Aissen and Perlmutter 1976, 1983 many important studies of restructuring/clause union have been provided in various generative frameworks. Due to the variability of contexts that allow restructuring (both within and across languages), most studies are restricted to specific languages and the conclusions reached in those works (e.g., about the size of restructuring infinitives [RIs] or the mechanisms creating restructuring effects) are often contradictory. This paper compares restructuring in 24 (typologically diverse) languages and shows that despite the initial diversity, certain generalizations emerge that allow us to separate language-specific points of variation from the contribution of UG that restricts this variation in predictable ways. Concretely, I propose that the cross-linguistic diversity of (one type of) restructuring is derived via i) a freezing approach to scrambling and clitic movement, ii) a clausal architecture defined over three major clausal domains (Grohmann 2003) rather than a cartographic array of projections, and lastly iii) variable positioning of the target projection of scrambling and clitic movement in those domains. The main conclusion reached in this paper is that rather than a single restructuring ‘parameter’ there are specific points of variation that conspire to create different degrees of restructuring.

### **2. Distribution of restructuring**

The main distribution of restructuring is given in Table 1. Languages are classified according to three restructuring criteria, long object movement [LOM], clitic climbing [CC], scrambling [SCR], and three semantic/structural contexts, tenseless [–TNS], future [+FUT], and CP complements. These properties are described below the Table.

---

\* I thank the following people for their generous help with this research and the data: Gabriela Alboiu, Henry Chang, T.C. Chen, Sandy Chung, João Costa, Marcin Dadan, Nino Grillo, Ion Guirgea, Nick Huang, Jungmin Kang, Anja Kozankova, Julie Legate, Renato Lacerda, Lanko Marušič, Beata Moskal, Marcel Pitteroff, Zheng Shen, Chao-Kai Shih, Koji Shimamura, Sandhya Sundaresan, Neda Todorović, Jim Wood.

(1) *Table 1: Distribution of restructuring*

#	Languages	LOM	CC, SCR		
			-TNS	FUT	CP
0	Norwegian, other Mainland Scandinavian?	✓	*	*	*
	Brazilian Portuguese, English, French	*	*	*	*
1	European Portuguese, Italian, Spanish, Takibakha Bunun, ?Acehnese	✓	✓	*	*
	Romanian <sup>SE</sup>	*	✓	*	*
2	Chamorro, German, Isbukun Bunun, Kannada, Mayrinax Atayal; Japanese <sup>LDS</sup>	✓	✓	✓	*
	Czech <sup>SE</sup> , Dutch, Mandarin, Polish, Tagalog; Korean <sup>LDS</sup> , Serbo-Croatian <sup>SE, LDS</sup> , Slovenian <sup>SE, LDS</sup>	*	✓	✓	*

LOM refers to constructions such as (2a) where the embedded object is promoted to the matrix subject, due to passive of the matrix but crucially not the embedded predicate. Languages which allow only long reflexive (SE) passive as in (2b) are currently listed as non-LOM languages (marked with SE), since it is not clear whether these constructions involve LOM triggered by matrix passive or embedded SE passive, followed by clitic climbing of SE.<sup>1</sup> As I will not be able to discuss LOM in this article, I leave this issue open. CC and SCR refer to cross-clausal movement of clitics and XPs, respectively, as in (3).

- (2) a. As casas foram acabadas de construir em 1950 European Portuguese  
the houses were finished to build in 1950  
‘They finished to build the houses in 1950’ [SW] [Cinque 2002: 5, (7a)]
- b. Te melodije su se probale odsvirati Serbo-Croatian  
Those melodies.NOM are SE tried.PL play.INF  
‘They tried to play these melodies.’ [Todorović and Wurmbrand 2015]
- (3) a. Marek ją zdecydował się przeczytać Polish  
Mark it decided REFL read.INF CC  
‘Mark decided to read it.’ [Bondaruk 2004: 154, (57a)]
- b. Marek tę książkę zdecydował się przeczytać Polish  
Mark this book decided REFL to.read SCR  
‘Mark decided to read this book.’ [Bondaruk 2004: 155, (57b)]

As shown in (1), there are three types of languages regarding CC, SCR across different domains. Type 0 languages do not allow CC, SCR from any kind of infinitive. Type 1 languages allow CC, SCR from tenseless [-TNS] infinitives but not from future [FUT] infinitives. The distinction between [-TNS] and [FUT] infinitives is illustrated in (4). In [FUT]

<sup>1</sup> Due to space limitations, I cannot provide examples for all languages, but will only be able to give one representative example for each construction/claim in this article. The reader is referred to the *In progress* section on <http://wurmbrand.uconn.edu/>, where a file with all the data (including source references) is posted. The online information is also updated and extended regularly.

infinitives, the embedded event is situated temporally after the time of the matrix event, which can be made overt by different time adverbials as in (4a). [-TNS] infinitives as in (4b), on the other hand, do not allow such a temporal split since the embedded event is interpreted as occurring simultaneously with the matrix event. Lastly, Type 2 languages allow CC, SCR from both [-TNS] and [FUT] infinitives.<sup>2</sup> The difference between Type 1 and Type 2 languages is illustrated in (5).

- (4) a. Leo decided yesterday to tame an elephant tomorrow. [FUT]  
 b. Leo tried to tame an elephant (\*tomorrow). [-TNS]
- (5) a. \**Não* *o* *decidi* *convidar* [European Portuguese]  
 not him.ACC I.decided invite  
 ‘I didn’t decide to invite him.’ [Barbosa 2009:104, in text]
- b. *Jirka* *se* *mu* *rozhodl* *pomocť* [Czech]  
*Jirka.NOM* *SE* him.DAT decided help.INF  
 ‘Jirka decided to help him.’ [Dotlačil 2004: 79, (119a)]

Comparing the distribution of LOM with CC and SCR, (1) shows that these restructuring characteristics need to be kept separate. All three types of CC/SCR languages come in two varieties: languages that allow LOM and languages that block LOM. To capture this variation, I have suggested in other works (see Wurmbrand 2013, 2014a, Wurmbrand and Shimamura 2015) that two types of restructuring need to be distinguished—*voice restructuring* and *size restructuring*. Voice restructuring is triggered by a special *voice* head, which is lexically restricted, both within and across languages, and therefore not available in all languages. As such voice restructuring is independent from restructuring leading to CC and SCR which will be the main concern of the remainder of this paper.

### 3. CP blocking effects

An important observation made in several works is that restructuring is blocked in the presence of an embedded CP (see, among others, Wurmbrand 2001, Bondaruk 2004, Dotlačil 2004, Marušič 2005). This can be illustrated by restructuring in Polish. Polish allows three types of complementation (Citko 2012): infinitives that require the complementizer *żeby*, infinitives that cannot involve *żeby*, and infinitives in which *żeby* is optional. Interestingly, the first class of infinitives, illustrated in (6a), never allows CC/SCR whereas the second class, for instance (6b), does. Crucially, in the third class of infinitives, CC/SCR is only allowed when the complementizer is absent, as shown in (6c,d).

- (6) a. Jan {*\*pieniądze* / *\*je* } *nalegał* *\*(żeby)* {*pieniądze* / *je* } *zostawić*  
 Jan {*\*money* / *\*them* } insisted *\*(so.that)* {*money* / *them* } leave.INF  
 ‘Jan insisted on leaving the money/them.’ [M. Dadan, p.c.]
- b. Jan {*książkę*} / {*ja*} *zdołał* *\*(żeby)* {*ja*} *przeczytać* {*książkę*}  
 Jan {*book*} / {*it*} managed *\*(so.that)* {*it*} read.INF {*book*}  
 ‘Jan managed to read a/the book.’ [M. Dadan, p.c.]

<sup>2</sup> Languages that allow *long-distance scrambling* [LDS] out of finite clauses are marked as LDS in table (1). In terms of locality, LDS behaves like topicalization in that it is not blocked by intervening CPs (see below).

- c. Jan postanowił (żeby) {ja} przeczytać {książkę}  
 John decided so.that {it} read.INF {book}  
 ‘John decided to read a/the book/it.’ [M. Dadan, p.c.]
- d. Jan książkę / ja postanowił (\*żeby) przeczytać  
 Jan book / it decided (\*so.that) read.INF  
 ‘Jan decided to read a/the book/it.’ [M. Dadan, p.c.]

Furthermore, (7a,b) shows that embedded *wh*-elements also block CC/SCR (the non-moved variants of these examples are grammatical). Given that both *wh*-XPs in Spec,CP and complementizers in C block both CC and SCR it seems unlikely that the prohibition is due to some intervention or minimality effect. For instance, complementizers typically do not block successive cyclic movement through Spec,CP, which is attested for topicalization in several languages, among others also in Polish as shown in (7c).

- (7) a. \*Marek je spytał, {czy / kiedy } czytać Polish  
 Mark them asked {whether/ when } read.INF  
 ‘Mark asked whether/when to read them.’ [Bondaruk 2004: 147, (38b)]
- b. \*Marek te książki zastanawiał się {czy / kiedy } czytać  
 Mark these books wondered REFL {whether/ when } read.INF  
 ‘Mark wondered whether/when to read these books.’ [ibid: 148, (40b)]
- c. Żabe, to Jan chciałby żeby tylko Maria pocałowała.  
frog.ACC TOP John want.SUBJ that.SUBJ only Mary.NOM kissed  
 ‘The frog, John would like only Mary to kiss.’ [M. Dadan, p.c.]

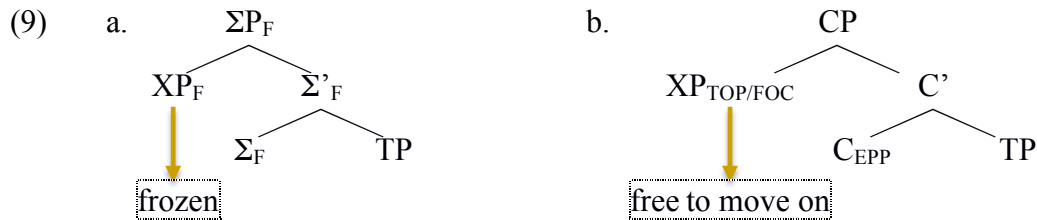
The CP-blocking effect is also striking in Slovenian (Marušič 2005, Wurmbrand 2014a). Although Slovenian allows LDS across finite CPs as in (8a), CC (as well as A-scrambling) is nevertheless blocked in the same contexts (cf. (8b)). In the next section, I lay out a new account of why CPs generally prohibit restructuring.

- (8) a. ?Janeza se je Peter odločil, da nauči manir Slovenian  
Janez.ACC REFL AUX Peter decided that teach manners  
 ‘Peter decided that he would teach John some manners.’ [L. Marušič, p.c.]
- b. Peter se ga je odločil {naučiti / \*da nauči } manir  
 Peter refl him AUX decided {teach.INF / \*that teach } manners  
 ‘Peter decided to teach him some manners.’ [L. Marušič, p.c.]

#### 4. A freezing approach

I propose that the blocking effect of CPs in restructuring is a freezing or A-over-A effect. Following Rizzi 1997, certain feature licensing relations (sometimes called  *criterial*  relations) trap an element in the position the feature is licensed. This is shown in (9a). If XP is featurally licensed in ΣP, and the feature involved survives on both XP and Σ after licensing (e.g., F is an interpretable feature on both elements), the resulting configuration is an A-over-A configuration where both the specifier and the dominating ΣP possess the same feature (under the common assumption that all projections of a head share the features of that head). In such a configuration, XP is trapped, effectively since ΣP, being the

higher element, blocks any further contact between XP and the outside world. I suggest that CC and SCR involve exactly such a  $\Sigma$ P. In contrast to Rizzi's approach, however, I assume that topicalization as in (7c) and LDS as in (8a), do not involve a criterial feature relation in CP. Following much recent work (see [Neeleman and van de Koot 2008](#), [Fanselow and Lenertová 2011](#), among many others), information structure properties such as TOPIC and FOCUS cannot be seen as being formally responsible for movement. Rather, topicalization and LDS are triggered (if at all) by an EPP/EDGE feature of C (see [Frey 2005](#), [Fanselow and Lenertová 2011](#)), a feature invisible for the further computation. Topicalization and LDS can thus successive cyclically pass through multiple CPs, whereas CC/SCR can only move to the first target position and not further.



What is the  $\Sigma$ P in CC/SCR? According to [Sportiche 1996](#), clitics are base-generated (roughly) in their surface positions as heads of agreement-like projections, and licensed by *pro* arguments which are base-generated in the relevant  $\Theta$ -positions and move to the specifier of the clitic projections. Sportiche further proposes that SCR targets the same type of projection, the only difference is that in a SCR configuration the specifier is overt whereas the head is covert. Following this basic approach, I assume that the XPs (*pro*<sub>Clitic</sub> and SCR-XPs) are inserted in their  $\Theta$ -positions without  $\varphi$ -values, whereas the clitic/SCR head, labeled  $\Sigma$ , is inserted with  $\varphi$ -values but without any referential or  $\Theta$ -values. A mutual feature valuation dependency between XP and  $\Sigma$  is thus necessary to associate XP with  $\varphi$ -values and  $\Sigma$  with an argument value. This dependency is semantically visible, hence criterial, and freezing arises. Such a Rizzi/Sportiche-style analysis of clitic placement and SCR then allows us to approach the variation found regarding CC/SCR in restructuring from a different angle: CC/SCR is only possible when there is no  $\Sigma$ P in the infinitive; whenever a  $\Sigma$ P is required in an infinitive, CC/SCR are blocked. In the next section, I show how the three types of restructuring can be derived in this approach.

## 5. Size restructuring

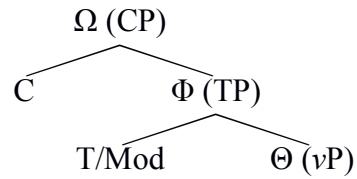
To derive transparency effects, a common approach is to employ some form of size-reduced embedded structures (see [Wurmbrand 2001](#) for an overview and references): if size restructuring applies, CC/SCR is possible; if size restructuring is, for whatever reason, prohibited, CC/SCR are impossible. So far, it has remained largely unexplained why certain languages appear to allow size restructuring and others don't (i.e., the difference between Types 1 or 2 and Type 0 languages in Table 2 in (10)), or why size restructuring appears to be possible (Type 2) or impossible (Type 1) from [FUT] infinitives in different languages. To answer these questions, I pursue a slightly different direction in this paper. I maintain that restructuring involves size reduction, but argue that i) size restructuring is possible in *all* languages, and ii) size restructuring is not arbitrary but follows a systematic template of clause-construction. Following [Grohmann 2003](#), clauses are built in three

stages as in (11): first the thematic domain  $\Theta$  ( $\sim vP$ ) is constructed, then an inflectional domain  $\Phi$  ( $\sim TP$ ) is added, and lastly an operator domain  $\Omega$  ( $\sim CP$ ) closes off a clause. I further assume that the  $\Omega$  domain is an A'-domain whereas the  $\Theta$  and  $\Phi$  domains are A-domains, and that the template  $\Omega \gg \Phi \gg \Theta$  is universally fixed. In contrast to cartographic approaches, I am not concerned with the specific orderings of certain projections—this is likely to show significant variation across languages—but rather with the larger (and cross-linguistically stable) groupings of structure within a clause.

(10) Table 2: Size restructuring

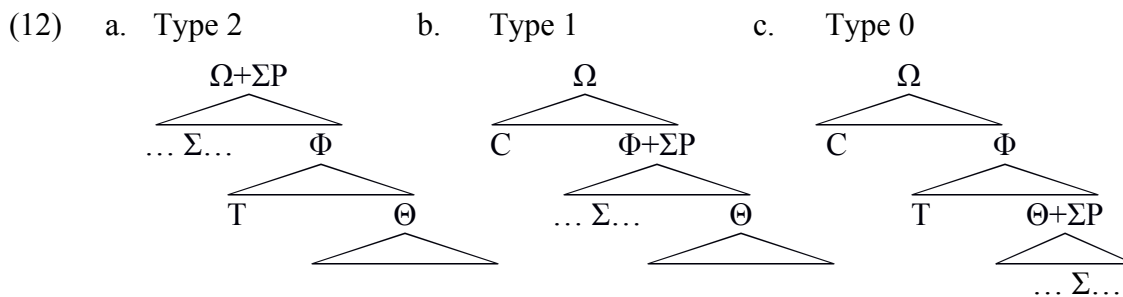
#	LOM	CC, SCR			$\Sigma P$
		-TNS	FUT	CP	
Type 0	✓/*	*	*	*	$\Theta$
Type 1	✓/*	✓	*	*	$\Phi$
Type 2	✓/*	✓	✓	*	$\Omega$

(11) Clausal domains



Size restructuring, in this view, arises if not all domains are projected. This yields two types of size restructured complements: infinitives that are just  $\Theta$ -domains, and infinitives that are  $\Phi$ -domains. I assume that size restructuring is an *all-or-nothing* property: either all projections of a domain are projected or none of them, in other words, there is no arbitrary truncation from the middle (see also Wurmbrand 2008, 2014b). This immediately accounts for the blocking effect of CP elements. Independently of the location of  $\Sigma P$  and the type of infinitive, the presence of a complementizer or moved *wh*-phrase entails the presence of the highest clausal domain (the  $\Omega$  domain), which, given the *all-or-nothing* property of size restructuring entails the presence of  $\Sigma P$ . Movement of clitics and SCR-XPs thus has to target the embedded  $\Sigma P$  and freezing arises.

The last piece we need to derive the cross-linguistic variation in (10) is a property that can be variable across languages. I propose that this property is the location of  $\Sigma P$ . Since  $\Sigma P$  has argument structure, agreement, and operator properties, it can, in principle, belong to any of the three domains, and languages differ how they bundle  $\Sigma P$  within the three clausal domains. Specifically, there are three types of languages as shown in (12).



As I will lay out in more detail below, together with the freezing property of  $\Sigma P$ , these structures yield the three types of size restructuring as stated in (12). In Type 2 languages  $\Sigma P$  is part of the  $\Omega$  domain, in Type 1 languages it is part of the  $\Phi$  domain, and in Type 0 languages it is part of the  $\Theta$  domain. Note that this approach also allows  $\Sigma P$ s to occur in more than one domain within one language. For Italian, for instance, it has been shown that there are two clitic positions within a single clause—one position in the IP (the  $\Phi$ )



domain, and one in the lexical  $\Theta$  domain. Examples such as (13) illustrate the two options in a simple clause (see [Cardinaletti and Shlonsky 2004](#) for further arguments and illustrations). Thus, Italian, a Type 1 language, allows both structures in (12b) and (12c).

- (13) a. Sta dicendo-me-lo  
is saying-me-it  
'He is saying it to me.'
- b. Me lo sta dicendo  
me it is saying  
[[Cinque 2004](#): 151, (74a,b)]

Similarly, Type 2 languages allowing A'-scrambling (i.e.,  $\Sigma$ P would belong to the  $\Omega$  domain) typically also allow a shorter A-scrambling operation or object shift. This could be seen as evidence for Type 2 languages also allowing the structures in (12b) and/or (12c).<sup>3</sup>

Returning to restructuring, let us start with a Type 0 language, in which, as shown in (12c),  $\Sigma$ P is part of the  $\Theta$  domain. Size restructuring would yield a configuration in which the matrix verb combines with a complement that is either just a  $\Theta$  domain or a  $\Phi$  domain. Either of these options, however, will not help CC/SCR in such a language as shown in (14a)—since  $\Sigma$ P is part of the lowest domain, it has to be projected, and hence movement is always clause (=predicate) bound in such languages.<sup>4</sup> In contrast, in Type 1 and Type 2 languages, stopping at the  $\Theta$  domain and not projecting the  $\Omega$  and  $\Phi$  domains as in (14b) also omits the  $\Sigma$ P, and CC/SCR is possible from such reduced complements since the closest  $\Sigma$ P is in the matrix clause. Importantly, the options of size restructuring then depend on the type of matrix predicate. If the matrix verb is a very like *try* which is compatible with a [-TNS] complement, not projecting the  $\Phi$  domain is possible as in (14b). If, on the other hand, the matrix verb is a predicate selecting a [FUT] complement, leaving off the  $\Phi$  domain is impossible since crucial semantic information would not be available. Thus, a configuration such as (14c) is excluded due to a lack of recoverability.

- (14) a. \*... [ $\Sigma$ P *pro*<sub>Clitic</sub>/SCR-XPs [ *try* [ $\Theta$ + $\Sigma$ P t<sub>CI/SCR</sub> ]]] Type 0  
 b. ... [ $\Sigma$ P *pro*<sub>Clitic</sub>/SCR-XPs [ *try* [ $\Theta$  t<sub>CI/SCR</sub> ]]] Types 1,2  
 c. \*... [ $\Sigma$ P *pro*<sub>Clitic</sub>/SCR-XPs [ *decide* [ $\Theta$  t<sub>CI/SCR</sub> ]]] \*Recoverability  
 d. ... [ $\Sigma$ P *pro*<sub>Clitic</sub>/SCR-XPs [ *decide* [ $\Phi$  t<sub>CI/SCR</sub> ]]] Type 2  
 e. \*... [ $\Sigma$ P *pro*<sub>Clitic</sub>/SCR-XPs [ *decide* [ $\Phi$ + $\Sigma$ P t<sub>CI/SCR</sub> ]]] Type 1

This brings us to the final difference—the difference between Type 1 and Type 2 languages. Although [FUT] selecting matrix verbs cannot combine with a complement lacking a  $\Phi$  domain, such predicates can combine with an  $\Omega$ -less infinitive as in (14d) (see [Wurmbrand 2014b](#)). Such partially reduced configurations may or may not allow CC/SCR—the crucial factor is where a language positions the  $\Sigma$ P. If  $\Sigma$ P is part of the  $\Omega$  domain (i.e.,  $\Sigma$ P is an A'-projection), it is not projected in size restructuring contexts which omit the  $\Omega$  domain. This yields a restructuring configuration in a Type 2 language

<sup>3</sup> At this point, it is not clear whether the option of placing  $\Sigma$ P in a higher domain automatically generally also allows the lower  $\Sigma$ P positions in the same language. Of course, such implicational relations would only go one way: higher  $\Sigma$ P options may allow  $\Sigma$ P positions in lower domains in the same language, but not vice versa. In other words, Types 0, 1, 2 are defined by the highest  $\Sigma$ P position available in a language.

<sup>4</sup> One may wonder about the infinitives allowing LOM, which I, among others, have analyzed as bare VPs without functional structure above the embedded VP. In recent works, I have reconsidered this view and concluded based on a broader empirical domain as well as certain theoretical issues that LOM restructuring also involves a *v/voice* domain (see [Wurmbrand 2013](#), [Wurmbrand and Shimamura 2015](#))).

where CC/SCR are possible out of [FUT] infinitives. If, however,  $\Sigma P$  is part of the  $\Phi$  domain as in (14e) (i.e.,  $\Sigma P$  is an A-projection),  $\Sigma P$  must be projected in [FUT] infinitives (since the tense domain is necessary), which results in a freezing configuration blocking CC/SCR, i.e., a Type 1 language. In the next section, I provide some evidence for the proposed distinction and location of  $\Sigma P$  in the two types of languages.

## 6. Some evidence

### 6.1 Embedded negation

One difference between Type 1 and Type 2 languages concerns the distribution of embedded sentential negation. [Cardinaletti and Shlonsky 2004 \[C&S 2004\]](#) show that in Italian, a Type 1 language, embedded sentential negation is impossible in restructuring contexts. According to [C&S 2004](#), there are two ways to guarantee a restructuring configuration in Italian: CC or matrix auxiliary switch. I start with CC and return to auxiliary switch below. To ensure that negation is sentential and not constituent negation, [C&S 2004](#) use negative quantifiers such as *mai* ‘ever’, *nessuno* ‘any’ which are only licensed in the context of sentential negation. As shown in (15a), stacked modal constructions allow CC. When no CC applies as in (15b), or CC only goes half way up as in (15c), embedded sentential negation is possible. However, combining CC all the way up and embedded sentential negation as in (15d) results in ungrammaticality. Thus, CC across an infinitival complement with sentential negation is blocked, which [C&S 2004](#) take to show that negation creates a non-restructuring configuration [NRI] as in (15e).

- (15) a. Lo vorrei poter leggere  
       [it] I.would.want can read  
       ‘I would like to be able to read it.’ [C&S 2004: 529, (23a)]
- b. Vorrei non dover mai far-lo  
    I.would.want [not] must ever do-[it]  
    ‘I would want not to have to ever do it.’ [C&S 2004: 527, (15a)]
- c. Vorrei non dover-lo mai far  
    I.would.want [not] must-[it] ever do  
    ‘I would want not to have to ever do it.’ [C&S 2004: 527, (15b)]
- d. \*Lo vorrei non dover mai fare  
    [it] I.would.want [not] must ever do [C&S 2004: 527, (15c)]
- e. { \*CL } [NRI NEG { ✓CL } [RI { ✓CL } ]]

To account for the blocking effect of negation in Italian, [C&S 2004](#) state that “the presence of clausal negation implies the projection of a full CP, which is incompatible with the phenomenology of restructuring” [p. 527]. While this assumption may work for Italian, the presence of a CP seems to be merely stipulated. Furthermore, this account faces a problem when we look beyond Italian. In Polish, a Type 2 language, for example, embedded sentential negation is possible, as shown in (16). Here, too, negative quantifiers can be used to ensure sentential negation (see (16b,c)). (Note that the position of the matrix dative argument is very flexible in these examples; it can basically occur anywhere in

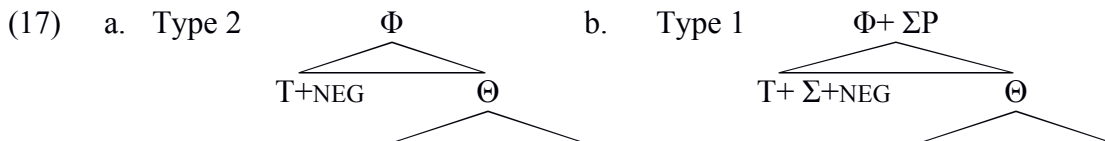


*Restructuring cross-linguistically*

the matrix clause.) For C&S's 2004 approach the question thus is why negation does not imply a CP in Polish or, as I hypothesize, in Type 2 languages in general.

- (16) a. Ktoś                    tej sukienki            nakazał    nie    ubierać    Markowi                    Polish  
 someone.NOM    this dress.GEN    ordered    not    put.on    Mark.DAT  
 'Someone ordered Mark not to put on this dress.'                    [Sabel 2001: 168, (54)]
- b. Ojciec    żadnej sukienki            kazał    nie    ubierać    Markowi  
 Father    no.GEN dress.GEN    told    not    wear.INF    Mark.DAT  
 'The father told Mark to not put on any dress.'                    [M. Dadan, p.c.]
- c. Ojciec                    niczego            kazał    jej            nie    jeść  
 Father.NOM    n-thing    ordered    her            not    to.eat  
 'Father ordered her not to eat anything.'                    [M. Dadan, p.c.]
- d. Ojciec                    jej            kazał    nie    ubierać    Markowi  
 Father.NOM    it.GEN    ordered    not    put.on    Mark.DAT  
 'Father told Mark not to put it on.'                    [M. Dadan, p.c.]

The domain approach to size restructuring proposed here predicts the difference between Type 1 and Type 2 languages under the common assumption that sentential negation is a property of the  $\Phi$  domain (see, among others, the negation-tense connection proposed in Zanuttini 1991, 1996, Kayne 1992, Haegeman 1995). This is illustrated in (17). If sentential negation is part of the  $\Phi$  domain, the *all-or-nothing* property of size restructuring entails that infinitives with negation include the entire  $\Phi$  domain, which in turn entails that in a Type 1 language,  $\Sigma P$  is projected whenever negation is projected. Thus, in a configuration such as (17b), CC/SCR cannot escape the embedded clause due to the obligatory presence of  $\Sigma P$  and the resulting freezing effect. In contrast, in a Type 2 language as in (17a),  $\Sigma P$  can be missing in infinitives with sentential negation, since  $\Sigma P$  can be omitted as part size restructuring affecting the  $\Omega$  domain.



Auxiliary switch refers to constructions where the choice of auxiliary (*have* vs. *be*) is not determined by the matrix verb but by a lower verb. In cases such as (18a), there are two options for the matrix auxiliary—it could be the auxiliary *have* which is selected by the verb *want*, or it could be the auxiliary *be* which is selected by the lower verb *go*. This choice disappears, however, when the embedded clause contains sentential negation as in (18b,c). Thus infinitives with sentential negation block restructuring.

- (18) a. Avrei                    /    Sarei                    voluto<sub>have</sub>    andare<sub>be</sub>    a Roma                    Italian  
 I.would.have / would.be    wanted    go            to Rome  
 'I would have wanted to go to Rome.' [SW]                    [C&S 2004: 536f, (36a,b)]
- b. Avrei                    voluto    [Φ    non    andare    da nessuna parte    ]  
 I.would.have    wanted    [Φ    not    go            to any where            ]  
 'I would have wanted not to go anywhere.'                    [C&S 2004: 527, (16a)]

- c. \*Sarei            voluta    [<sub>\*Φ</sub> non andare da nessuna parte ]  
     I.would.be    wanted    [<sub>\*Φ</sub> not go to any where ]  
     ‘I would have wanted not to go anywhere.’            [C&S 2004: 527, (16b)]
- d. [<sub>Φ</sub>      AUX.be    MOD      [<sub>Θ</sub> V.go<sub>be</sub>            ]]
- e. \*[<sub>Φ</sub>      AUX.be    MOD      [<sub>Φ</sub> NEG T V.go<sub>be</sub> ]]
- \*2 Φ domains

The details of the analysis of auxiliary switch are not essential for this paper. I simply assume that the auxiliary is determined by the type of verb in its local Θ domain. Following Wurmbrand 2004, the optionality in (18a) is the result of restructuring verbs such as *volere* ‘want’ being ambiguous between a lexical verb in the Θ domain (thus triggering *have*) or a functional head of the Φ domain as in (18d). In this case, the infinitive *andare* is the (only) main verb of the entire clause and triggers the auxiliary *be*. Embedded sentential negation in (18c,e) is then impossible since NEG is part of the Φ domain but a functional restructuring verb cannot embed another Φ domain but must combine with a Θ domain.

Lastly consider examples combining CC and auxiliary switch. The noteworthy property of (19a) is that both a very high and a very low position, but not an intermediate position are available for clitics in auxiliary switch contexts. Since auxiliary switch requires restructuring (the embedded verb *andare* needs to count as the closest main V for the auxiliary), the possibility of a non-climbed clitic shows that CC cannot be obligatory in restructuring. This follows, as mentioned in section 5 and (13), if Italian allows two locations for ΣP as depicted in (19b,c) (I leave open why (19b) is more marked).

- (19) a. {Ci} sarei voluto<sub>1</sub> poter<sub>2</sub>- {\*ci} andare<sub>3</sub>- {?ci} con Maria  
     {there} I.would.be wanted<sub>1</sub> can<sub>2</sub> {\*there} go<sub>3</sub> {?there} with Maria  
     ‘I would have wanted to be able to go there with Maria.’ [C&S: 523, (7a,b,c)]
- b. [<sub>Φ</sub>            AUX.be    MOD<sub>1</sub>    MOD<sub>2</sub>    [<sub>Θ+ΣP</sub> V<sub>3</sub>.go-CL            ]]
- c. [<sub>Φ+ΣP</sub>    CL      AUX.be    MOD<sub>1</sub>    MOD<sub>2</sub>    [<sub>Θ</sub>    V<sub>3</sub>.go            ]]
- d. [<sub>Φ</sub>            \*AUX.be    MOD<sub>1</sub>            [<sub>Θ+ΣP</sub> V<sub>2</sub>.can-CL ...      [V<sub>3</sub>.go]            ]]
- e. [<sub>Φ</sub>            \*AUX.be    [<sub>Θ</sub> V<sub>1</sub>.want    [<sub>Φ</sub> V<sub>2</sub>.can-CL ...      [V<sub>3</sub>.go]            ]]]]
- f.            (15c):            [<sub>Θ</sub> V<sub>1</sub>.want    [<sub>Φ</sub> NEG V<sub>2</sub>.must-CL ...            ]]

The second important property in (19a) is that in contrast to cases without auxiliary switch as in (15c), CC part-way up is excluded. This is also correctly predicted under the current account. Recall that in Italian, ΣP can be part of the Φ or Θ domains. In order to host a clitic, the intermediate modal (#2) would either have to be a main verb as in (19d) or occur (as a main verb or functional head) in a Φ domain selected by a higher verb (*want* in (19e)). While the structural configurations in (19d-f) are in principle possible (the reader is referred to C&S 2004 for examples), they can only yield a matrix auxiliary *have* but not *be*. In (19d), the main verb closest to the auxiliary is *V.can*, which selects *have*; similarly, in (19e), the closest verb is *V.want*, and again the auxiliary could only be *have*. Lastly, the configuration in (19e,f) yields the structure in (15c) with intermediate CC. As shown, the main verb *want* combines with a Φ domain complement, as evidenced by the possibility of embedded negation. The advantage of the approach presented here is that no definitions for RIs vs. NRIs have to be given—the transparency properties (or the lack thereof) simply follow from the clausal computation.

## 6.2 Parasitic gaps

Recall that the  $\Omega$  domain is assumed to be an A'-domain whereas the  $\Theta$  and  $\Phi$  domains are A-domains. This correctly predicts that parasitic gaps can be licensed by CC/SCR in the Type 2 languages Dutch and German (Bennis and Hoekstra 1984), but not in the Type 1 languages Italian and Spanish (Chomsky 1982, Sportiche 1996).

- (20) a. dass ihn der Arzt [ohne pg anzuschauen] untersucht hat German  
 that him the.NOM doctor [without pg at.to.look] examined has  
 'that the doctor examined him without looking (at him)'
- b. dat ik deze boeken [zonder pg in te kijken] aan Jan doorverkoop Dutch  
 that I these books [without pg in to look] to Jan on.sell  
 'that I sold these books without looking into (them)' [Sportiche 1996: 263, (69)]
- c. dat ik ze [zonder pg in te kijken] aan Jan doorverkoop  
 that I them [without pg in to look] to Jan on.sell  
 'that I sold these books without looking into (them)' [B. Moskal, p.c.]
- d. \*Glieli dobbiamo far mettere t nello scaffale Italian  
 them.him we.must make put on.the shelf  
 invece di lasciare pg sul tavolo  
 instead of leaving pg on.the table  
 'we must make him put them on the shelf instead of leaving (them) on the table'  
 [Chomsky 1982: 65, (89b); Sportiche 1996: 256, (60b)]
- e. \*Juan lo quitó sin leer Spanish  
 Juan it.CL removed without reading  
 'Juan put it away without reading.' [J. Villa-García, p.c.]
- f. \*Juan lo quiso quitar sin leer  
 Juan it.CL wanted remove without reading  
 'Juan wanted to put it away without reading.' [J. Villa-García, p.c.]

## 6.4 Adverb climbing

Although climbing of argumental clitics is impossible (or more difficult; J. Costa, p.c.) from [FUT] infinitives in European Portuguese, adverbial clitics may climb out of [FUT] complements as shown in (21). This could indicate that at least in this language, there are two  $\Sigma$ P positions: an A-position in the  $\Phi$  domain which argument clitics must target in [FUT] contexts and which causes the by now familiar freezing effect, and an additional A'-position in the  $\Omega$  domain which can be omitted in restructuring contexts without an  $\Omega$  domain and which thus allows adjunct clitics to escape a [FUT] infinitive.

- (21) a. \*Não o decidi convidar European Portuguese  
 not him.ACC I.decided invite  
 'I didn't decide to invite him.' [Barbosa 2009:104, in text]
- b. Eu só lá decidi ir nesse dia  
 I only there I.decided go this day  
 'I only decided to go there that day.' [SW] [Costa 2004: 47, (15a)]

## 7. Size restructuring is universal?

Brazilian Portuguese is a Type 0 language which, as shown in (22a), does not allow CC from any kind of infinitive. According to the analysis presented in this paper, the reason for the lack of CC is that in Type 0 languages,  $\Sigma$ P can only be realized in the  $\Theta$  domain. Since  $\Sigma$ P freezes XPs in its specifier, CC cannot escape from an embedded clause, which minimally is a  $\Theta$  domain (cf. (22b)).

- (22) a. João      { \*me }      tentou      { ✓ me }      ver      Brazilian Portuguese  
         João      { \*me }      tried      { ✓ me }      see.INF  
         ‘João tried to see me.’      [Cyrino 2010: 9, (38)]
- b. { \*CL }    *try*    [ $\Theta$ + $\Sigma$ P    { ✓ CL } ]

Although this structure in itself does not allow CC/SCR in Type 0 languages, the current approach crucially does not entail that there is no restructuring in Type 0 languages. Rather, restructuring may occur, but due to the obligatorily low position of  $\Sigma$ P, it has no consequence for CC/SCR. This predicts that we do expect to still find effects of restructuring in Type 0 languages. I believe this is indeed the case. As shown in (23a,b), a [FUT] infinitive selected by a verb like *decide* allows NPIs such as *nunca* ‘never’ only when negation occurs in the embedded clause. Since [FUT] infinitives must involve a  $\Phi$  domain, the closest location for negation would be the embedded  $\Phi$  domain (recall from section 6.1. that negation is part of the  $\Phi$  domain). On the other hand, NPIs in [–TNS] infinitives such as (23c,d), can be licensed by negation in the matrix clause.

- (23) a. \*A Lina (não) decidiu sair      nunca (mais)      Brazilian Portuguese  
         the Lina (not) decided leave.INF never (more)  
         ‘Lina decided/didn’t decide never to leave.’      [Modesto 2013: 14, (16a,b)]
- b. A Lina decidiu não sair      nunca (mais)  
         the Lina decided not leave.INF never (more)  
         ‘Lina decided never to leave.’      [Modesto 2013: 14, (16c)]
- c. A Lina não tenta ajudar      nunca à sua mãe  
         the Lina not tries help.INF never to her mother  
         ‘Lina never tries to help her mother.’      [Modesto 2013: 14, (17a)]
- d. A Lina não começa a estudar      nunca  
         the Lina not start PREP study.INF never  
         ‘Lina never starts to study.’      [Modesto 2013: 14, (17b)]
- e. [ $\Phi$     NEG    *try*/\**decide*    [ $\Theta$     NPI ]]

The distribution of embedded NPIs follows straightforwardly from a size restructuring account. While *decide* cannot combine with a bare  $\Theta$  domain (cf. (14c)), verbs selecting a [–TNS] infinitive such as *try* or *start* can. As shown in (23e), in this case the closest  $\Phi$ /NEG domain for an embedded NPI is in the matrix clause and thus matrix NEG can license embedded NPIs in [–TNS] but not [FUT] contexts. Similar phenomena have been reported for other languages, most notably also languages without infinitives like Serbo-Croatian (see Progovac 1994), and in Todorović and Wurmbrand 2015 we argue that

even (morphologically) finite complements can involve some form of size restructuring. An interesting task for the future is thus to determine, in particular for languages that lack the usual restructuring indicators CC/SCR, what properties could be investigated to probe the universality hypothesis of size restructuring.<sup>5</sup>

## 8. Conclusions

In this paper, I have shown that restructuring is a diverse phenomenon which cannot be handled by a simple restructuring ‘parameter’. Instead I have proposed that there are two types of restructuring—voice restructuring, which is language-specific, and size restructuring, which is hypothesized to be available universally. The main ingredients of the account proposed are: i) a freezing property of movement to the target position for CC/SCR, ii) a clausal architecture defined over three major domains rather than a cartographic array of projections, and iii) variable location of the target position of CC/SCR. This account correctly covers and motivates the variation attested regarding size restructuring so far.

## References

- Aissen, Judith, and David Perlmutter. 1976. Clause reduction in Spanish. In *Proceedings of the Second Annual Meeting of the BLS*, ed. by H. Thompson et al., 1-30.
- Aissen, Judith, and David Perlmutter. 1983. Clause reduction in Spanish. In *Studies in Relational Grammar*, ed. by D. Perlmutter, 360-403. University of Chicago Press.
- Barbosa, Pilar. 2009. A Case for an Agree-based Theory of Control. In *11th Seoul International Conference on Generative Grammar Proceedings*.
- Bennis, Hans, and Teun Hoekstra. 1984. Gaps and Parasitic Gaps. *TLR* 4:29-87.
- Bondaruk, Anna. 2004. *PRO and control in English, Irish and Polish: A Minimalist analysis*. Lublin, Poland: Wydawnictwo KUL.
- Cardinaletti, Anna, and Ur Shlonsky. 2004. Clitic positions and restructuring in Italian. *Linguistic Inquiry* 35.4:519-557.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of Government and Binding*. MIT Press.
- Cinque, Guglielmo. 2002. The interaction of passive, causative, and 'restructuring' in Romance. In *The syntax of Italian dialects*, ed. by C. M. Tortora, 50-66. OUP.
- Cinque, Guglielmo. 2004. "Restructuring" and functional structure. In *Structures and beyond: Cartography of syntactic structures*, ed. by A. Belletti, 132-191. OUP.
- Citko, Barbara. 2012. Control and obviation: A view from Polish. Talk given at the *5th Conference on Syntax, Phonology and Language Analysis*, Vienna, Austria.
- Costa, João. 2004. Subjects in Spec,vP: Locality and Agree. In *Romance Op. 47*, ed. by A. Castro, M. Ferreira, V. Hacquard and A. Pablo Salanova, 1-15. MITWPL.
- Cyrino, Sonia. 2010. On complex predicates in Brazilian Portuguese. *Iberia* 2.2:1-21.
- Dotlačil, Jakub. 2004. The syntax of infinitives in Czech. M.A. Thesis. U of Tromsø.
- Fanselow, Gisbert, and Denisa Lenertová. 2011. Left peripheral focus: mismatches between syntax and information structure. *NLLT* 29:169–209.

---

<sup>5</sup> Other than NPIs, anaphoric binding and quantifier raising are possible candidates. In English, for instance, size restructuring has been noted to have an effect on QR (Hornstein 1995, Wurmbrand, in prog).

Susi Wurmbrand

- Frey, Werner. 2005. Zur Syntax der linken Peripherie im Deutschen. In *Deutsche Syntax: Empirie und Theorie*, ed. by F. J. d'Avis, 147-171. Göteborg.
- Grohmann, Kleanthes K. 2003. *Prolific domains: On the anti-locality of movement dependencies*. John Benjamins.
- Haegeman, Liliane. 1995. *The syntax of negation*. Cambridge University Press.
- Hornstein, Norbert. 1995. *Logical form: From GB to Minimalism*. Blackwell.
- Kayne, Richard. 1992. Italian negative imperatives and clitic climbing. In *Hommages à Nicolas Ruwet*, ed. by L. Tasmowsky and A. Zribi-Hertz, 300-312. Gent.
- Marušič, Franc. 2005. On non-simultaneous phases. Doctoral dissertation, Stony Brook.
- Modesto, Marcello. 2013. Inflected infinitives and restructuring in Brazilian Portuguese. Ms., Universidade de São Paulo.
- Neeleman, Ad, and Hans van de Koot. 2008. The nature of discourse templates. *Journal of Comparative Germanic Linguistics* 11.2:137-189.
- Progovac, Ljiljana. 1994. *Negative and positive polarity: A binding approach*. CUP.
- Rizzi, Luigi. 1978. A restructuring rule in Italian syntax. In *Recent transformational studies in European languages*, ed. by Samuel Jay Keyser, 113-158. MIT Press.
- Rizzi, Luigi. 1982. *Issues in Italian syntax*. Foris Publications.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax*, ed. by L. Haegeman, 281-337. Kluwer.
- Sabel, Joachim. 2001. Das deutsche Verbum infinitum. *Deutsche Sprache* 29.2:148-175.
- Sportiche, Dominique. 1996. Clitic constructions. In *Phrase structure and the lexicon*, ed. by J. Rooryck and L. Zaring, 213-276. Kluwer.
- Todorović, Neda, and Susi Wurmbrand. 2015. (In)Finite possibilities of 'da': Restructuring the tense and aspect domains. *Workshop on aspect in embedded clauses*, ZAS, Berlin.
- Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure*. de Gruyter.
- Wurmbrand, Susi. 2004. Two types of restructuring-Lexical vs. functional. *Lingua* 114.8:991-1014.
- Wurmbrand, Susi. 2008. *WollP*: Where syntax and semantics meet. In *Proceedings of NELS 37*, ed. by E. Elfner and M. Walkow, 267-280. GLSA.
- Wurmbrand, Susi. 2013. Complex predicate formation via voice incorporation. Ms., University of Connecticut. Storrs.
- Wurmbrand, Susi. 2014a. Restructuring across the world. In *Complex Visibles Out There*. ed. by L. Veselovská and M. Janebová, 275-294. Olomouc: Palacký University.
- Wurmbrand, Susi. 2014b. Tense and aspect in English infinitives. *Linguistic Inquiry* 45.3:403-447.
- Wurmbrand, Susi, and Koji Shimamura. 2015. The features of the voice domain: actives, passives, and restructuring. Ms., University of Connecticut. Storrs.
- Zanuttini, Raffaella. 1991. Syntactic properties of sentential negation: A comparative study of Romance languages. Doctoral dissertation, University of Pennsylvania.
- Zanuttini, Raffaella. 1996. On the relevance of tense for sentential negation. In *Parameters and functional heads*, ed. by A. Belletti and L. Rizzi, 181-207. OUP.

Susi Wurmbrand  
susi@alum.mit.edu