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REGULAR ARTICLE

Auxiliary selection in Italian restructuring: An insight into the size of the clause

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Abstract

In Standard Italian, restructuring clauses are characterized by apparently optional transparency effects in the choice of the clausal perfect auxiliary. In the perfect periphrasis, the auxiliary associated with the modal verb can be either HAVE or the one corresponding to the lexical verb (BE or HAVE). In this paper, I argue that there is no true optionality: different auxiliaries show up because the modal verb can select complements of different sizes. Assuming that auxiliary selection is a form of person Agree, different complement sizes determine different Agree domains. In particular, the "transparent" auxiliary results from a *v*P complement, while a TP complement leads to HAVE insertion.

KEYWORDS

Agree, auxiliary selection, clitic climbing, restructuring, Standard Italian

1 | INTRODUCTION

This paper investigates auxiliary selection in Italian restructuring. To the best of my knowledge, this is the first formal analysis of this phenomenon. Although both restructuring and auxiliary selection are well-studied topics, there is no formal analysis of auxiliary selection in restructuring.

The term *restructuring* refers to those clauses where a modal, aspectual, or motion verb takes as its complement a nonfinite lexical verb (Cinque, 2004; Grano, 2015; Rizzi, 1978; Wurmbrand, 2003). The resulting surface structure is schematized in (1).

(1) $DP_{sbj}\ V_{restructuring}\ [\ V_{lexical}\ DP_{obj}\ ]$

Although the syntactic structure in (1) exhibits two verbs ($V_{restructuring}$ and $V_{lexical}$), for some clause-bounded operations it behaves as containing a single verb. In Standard Italian, these operations are *clitic climbing*, *long object movement*, and *auxiliary switch*. These processes are often used as diagnostics for restructuring because they can only apply within a CP. They are also called *transparency effects*, as they signal the lack of an "opaque" clausal boundary.

Auxiliary selection is the alternation between the perfect auxiliaries BE and HAVE (Bjorkman, 2011; Burzio, 1986; Perlmutter, 1978; Sorace, 2000).[1] In Standard Italian, auxiliary selection depends on the argument structure: transitive and unergative verbs select for HAVE, whereas unaccusative, reflexive, and impersonal predicates combine with BE, as shown in (2).[2]

(2) a. Teresa ha letto un libro.
Teresa have.PRS.3SG read.PRTC a book
"Teresa has read a book." (transitive V: HAVE)

b. Teresa è andat-a al mare.
Teresa be.PRS.3SG go.PRTC-SG.F to.the beach
"Teresa has gone to the beach." (unaccusative V: BE)

In restructuring, the lower lexical verb may determine the morpho-phonological realization of the perfect auxiliary of the restructuring verb. If the lexical verb is a HAVE-verb (transitive, unergative), the perfect auxiliary is always HAVE. If the lexical verb is a BE-verb (unaccusative, reflexive, impersonal), the perfect auxiliary can be either HAVE or BE, as shown in (3). The term *auxiliary switch* refers to "transparent" auxiliary selection, that is, when the lower lexical verb determines the choice of the perfect auxiliary BE (3-b).

(3) a. Teresa ha voluto [andare al mare].
Teresa have.PRS.3SG want.PRTC go.INF to.the beach
"Teresa wanted to go to the beach." (✗ auxiliary switch)

b. Teresa è volut-a [andare al mare].
Teresa be.PRS.3SG want.PRTC-SG.F go.INF to.the beach
"Teresa wanted to go to the beach." (✓ auxiliary switch)

The aim of this study is to explain why there is apparently optional alternation between the perfect auxiliaries HAVE and BE in clauses containing modal verbs, as (3). I propose that the distribution of the perfect auxiliaries in restructuring is the result of Agree for the person feature. I argue that there is no true optionality in the choice of the auxiliary: it is the possibility of complements of different sizes that determines different search domains for Agree. The analysis is couched in *Minimalism* (Chomsky, 1995, 2000, 2001) and *Distributed Morphology* (Halle & Marantz, 1993; Harley & Noyer, 1999). It brings together the proposal on different sizes of non-finite clauses (Wurmbrand, 2003), the analysis of auxiliary selection by Amato (2022, 2022), and

[1]With the labels "BE" and "HAVE" in capital letters I refer to any inflected form of these two auxiliaries, abstracting over the specific morphological inflection.

[2]Where not indicated differently, data are mine. My grammaticality judgments were compared to those of nine other speakers of Standard Italian. The geographical origin of the consultants is Northern Tuscany (province of Lucca).

the mechanism of Cyclic Agree (Legate, 2005). These "ingredients" are here arranged together in a novel analysis that is also supported by new empirical data.

The paper is structured as follows. In Section 2, I describe the distribution of the perfect auxiliaries BE and HAVE with modal verbs. The syntactic structure of restructuring clauses is addressed in Section 3. Section 4 contains previous analyses of auxiliary selection, including the previous account that I adopt in this paper. I introduce the main proposal about auxiliary selection in restructuring in Section 5. The analysis is illustrated in Section 6. In Section 7, I discuss some problematic cases. In Section 8, I provide supporting evidence for different complement sizes. Section 9 contains some tests for raising and control, which confirm that the same raising analysis should be adopted for clauses with and without auxiliary switch. In Section 10, I discuss aspectual and motion verbs. I summarize the main findings in Section 11.

2 | AUXILIARY SELECTION WITH RESTRUCTURING MODAL VERBS

In Standard Italian, restructuring configurations can exhibit auxiliary switch. This term refers to "transparent" auxiliary selection: the perfect auxiliary of the restructuring verb is the same one that the lexical verb would require in simple clauses, as illustrated in (4).

(4) Auxiliary switch
[...Aux_{perf} $V_{restructuring}$ [$V_{lexical}$ ...]], where Aux_{perf} of $V_{restructuring}$ = Aux_{perf} of $V_{lexical}$

Auxiliary switch is possible only with modal verbs, which cross-linguistically constitute the core of the category of restructuring predicates (Grano, 2015; Wurmbrand, 2003, 2004). In Italian, these verbs are *volere* "want", *potere* "can", and *dovere* "must". The following examples contain the verb *volere*, but the same behavior is observed with *potere* and *dovere*. As (5) shows, if a modal verb selects a HAVE-verb (i.e., a verb whose perfect auxiliary is HAVE: transitive and unergative predicates), then its auxiliary is invariably HAVE, independently of clitic pronouns (if present).

(5) Teresa ha voluto mangiare la torta.
Teresa have.PRS.3SG want.PRTC eat.INF the cake
"Teresa wanted to eat the cake."

In contrast, if the lexical verb is a BE-verb (i.e., unaccusative verbs, but also transitive predicates with reflexive or impersonal arguments), then the auxiliary of the modal verb can optionally be realized as BE (auxiliary switch). An example with an unaccusative verb is given in (6).

(6) Teresa ha voluto / è volut-a andare al mare.
Teresa have.PRS.3SG want.PRTC be.PRS.3SG want.PRTC-SG.F go.INF to.the beach
"Teresa wanted to go to the beach."

Auxiliary switch becomes almost obligatory in the presence of clitic climbing (see also Cardinaletti & Shlonsky, 2004). If the unaccusative verb selects a clitic argument that is realized in the lower position (i.e., on the unaccusative verb), then HAVE is the preferred choice

and auxiliary switch is degraded (7-a)–(7-b). Instead, clitic climbing highly favors auxiliary switch (7-c)–(7-d).[3]

(7) a. Teresa ha voluto andar=ci ieri.
Teresa have.PRS.3SG want.PRTC go.INF=there yesterday
b. ?Teresa è volut-a andar=ci ieri.
Teresa be.PRS.3SG want.PRTC-SG.F go.INF=there yesterday
c. *Teresa ci= ha voluto andare ieri.
Teresa there=have.PRS.3SG want.PRTC go.INF yesterday
d. Teresa ci= è volut-a andare ieri.
Teresa there=be.PRS.3SG want.PRTC-SG.F go.INF yesterday
"Teresa wanted to go there yesterday."

In addition to the locative clitic *ci*, only the partitive *ne* and the impersonal *si* can be found with unaccusative verbs. An example with the clitic *ne* is given in (8). When *ne* climbs, auxiliary switch is highly preferred (8-c)–(8-d).[4]

(8) a. Di modelle, hanno voluto venir=ne molte.
of models have.PRS.3PL want.PRTC come.INF=of many
b. ?Di modelle, sono volut-e venir=ne molte.
of models be.PRS.3PL want.PRTC-PL.F come.INF=of many
c. *Di modelle, ne= hanno voluto/-e venire molte.
of models of=have.PRS.3PL want.PRTC/-PL.F come.INF many
d. Di modelle, ne= sono volut-e venire molte.
of models of=be.PRS.3PL want.PRTC-PL.F come.INF many
"Of models, many of them wanted to come."

Reflexive clauses behave similarly. Although root reflexive clauses always require BE (*Teresa si è lavata* "Teresa washed herself"), in restructuring they may also combine with HAVE if the reflexive clitic stays in the lower position (9-a). In the presence of clitic climbing, auxiliary switch is obligatory (9-d). The same happens when the reflexive clitic is an indirect object, as in (10).

(9) a. Teresa ha voluto lavar=si ieri.
Teresa have.PRS.3SG want.PRTC wash.INF=REFL.3SG yesterday

[3]An anonymous reviewer has noted that the elision of the vowel of *ci* gives a better result for (7-c): *(?)Teresa c'ha voluto andare ieri*. The form *c'* is part of colloquial Italian. Cinque (2004, 178, fn.49) has suggested that in colloquial Italian auxiliary switch may fail to apply (even in the presence of clitic climbing). Hence, HAVE in this example is a consequence of failed auxiliary switch in colloquial Italian. This is due to either a performance error or a different featural specification for the functional head responsible for restructuring in the grammar of colloquial Italian (see Section 5.1 for v_{restr}, and Section 10.2 for another type of *v* found with aspectual verbs).

[4]An anonymous reviewer accepts (8-c) and mentions examples such as *ne hanno voluto intervenire molti*, *?ne sono voluti intervenire molti* "of them, many wanted to intervene." Although I do not agree with their judgment, it should be acknowledged that the interaction between clitic climbing and auxiliary switch is more complex than what is represented here. As pointed out by the same reviewer, in this specific case the speaker variation might be due to intervening factors, such as the ability or inability of inverted subjects to be interpreted volitionally (Cinque, 2004, 174, fn.38).

b. ??Teresa è volut-a lavar=si ieri.
Teresa be.PRS.3SG want.PRTC-SG.F wash.INF=REFL.3SG yesterday

c. *Teresa si= ha voluto lavare ieri.
Teresa REFL.3SG=have.PRS.3SG want.PRTC wash.INF yesterday

d. Teresa si= è volut-a lavare ieri.
Teresa REFL.3SG=be.PRS.3SG want.PRTC-SG.F wash.INF yesterday
"Teresa wanted to wash herself yesterday."

(10) a. Teresa ha voluto mangiar=si il panino.
Teresa have.PRS.3SG want.PRTC eat.INF=REFL.3SG the sandwich

b. *Teresa è volut-a mangiar=si il panino.
Teresa be.PRS.3SG want.PRTC-SG.F eat.INF=REFL.3SG the sandwich

c. *Teresa si= ha voluto mangiare il panino.
Teresa REFL.3SG=have.PRS.3SG want.PRTC eat.INF the sandwich

d. Teresa si= è volut-a mangiare il panino.
Teresa REFL.3SG=be.PRS.3SG want.PRTC-SG.F eat.INF the sandwich
"Teresa wanted to eat the sandwich for/by herself."

To sum up, the perfect auxiliary of modal verbs is usually HAVE. However, modal verbs may be optionally combined with BE if the lexical verb combines with BE (i.e., with unaccusative, reflexive, impersonal verbs). This phenomenon is called *auxiliary switch*.

3 | THE SYNTACTIC STRUCTURE OF RESTRUCTURING

3.1 | Previous analyses of restructuring

As the focus of this paper is on auxiliary selection, and as only modal verbs unquestionably allow for auxiliary switch, here I focus only on analyses of restructuring modal verbs (excluding aspectual and motion verbs). For modal restructuring verbs, a monoclausal analysis is generally widely assumed. Hence, I adopt a monoclausal approach, as proposed in Cardinaletti and Shlonsky (2004); Cinque (2004); Grano (2015); Wurmbrand (2003, 2004) (see also references therein).

In Cinque (2004), restructuring verbs are functional heads that always create monoclausal configurations. Evidence for this claim comes from the fact that different restructuring verbs, when combined together, must follow a strict order, which is supposed to track the order of the clausal functional projections. According to this analysis, restructuring is obligatory (i.e., any clause containing a modal verb is a restructuring clause). Transparency effects (clitic climbing, auxiliary switch, long object movement) are, instead, optional.

The alternative idea that modal verbs are not always functional elements has been proposed by Cardinaletti and Shlonsky (2004). Modal verbs can combine with different types of complements. When the modal verb selects a CP, it behaves as a lexical verb and no restructuring takes place, resulting in a biclausal structure with no transparency effect. If, instead, the modal verb selects a reduced complement, it creates a monoclausal configuration where auxiliary switch is obligatory (when applicable). Restructuring is optional, but transparency effects are obligatory.

A similar proposal regarding different sizes of the complement has also been developed by Wurmbrand (2003, 2004, 2014). Differently from Cardinaletti and Shlonsky (2004), here the variation affects the different classes of restructuring verbs, which are distributed along a cline of "functionality." For some verbs, called *functional restructuring verbs*, restructuring is always obligatory à la Cinque. Modal verbs belong to this class: they always select a small complement and are obligatorily affected by transparency effects. Other verbs (e.g., aspectual verbs), called *lexical restructuring verbs*, allow for different sizes of the complement, resulting in different degrees of restructuring: from no restructuring (CP complement), to core restructuring (*v*P/VP complement), including cases of TP complementation with some restructuring behavior (Wurmbrand, 2014, 424).

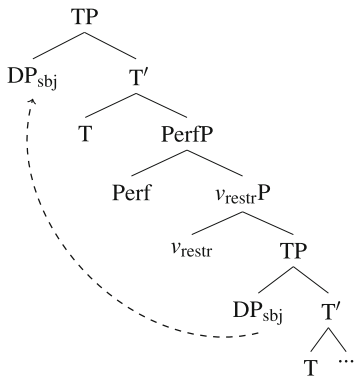
3.2 | Proposal: Restructuring is raising out of a *v*P/TP

I consider restructuring with modal verbs as a type of raising, following Wurmbrand (1999, 2003, 2004); Cinque (2004), among others. The subject of the modal verb starts out as an argument of the embedded lexical verb, it is interpreted below the modal verb, and does not receive any Theta-role from the modal verb. Evidence in favor of raising is provided in Section 9.

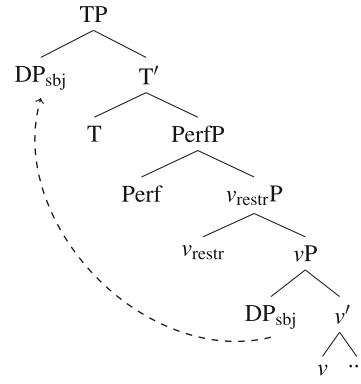
I propose that restructuring modal verbs can select different types of complements: either *v*Ps or TPs. The difference between TP and *v*P complements does not correspond to any detectable semantic differences (see also discussion in Section 5.2). In both cases, the complement is reduced and the structure is monoclausal (assuming the presence of a CP boundary as a sign of biclausality). The general idea is that in reduced structures there may be optionality regarding how much to reduce. It is exactly this optionality in reduction that gives optionality in transparency effects. Evidence for different sizes of the complement will be given in Section 8.

The two possible raising structures are represented in trees (11) and (12). As illustrated, I assume that the modal verb is a functional head, which I call v_{restr} (see Section 5.1). This head can select complements of different sizes because it is equipped with the c-selectional features [•*v*P•]/[•TP•]. The trees also contain the perfect projection PerfP, which is relevant for the present analysis.

(11) *Raising out of TP*



(12) *Raising out of vP*



The present proposal shares some similarities with both the claim of obligatory functional restructuring (Cinque, 2004; Wurmbrand, 2003, 2004) and the idea of optionality with respect to the type of complementation (Cardinaletti & Shlonsky, 2004; Wurmbrand, 2004, 2014). From

the former approach, I adopt the hypothesis that restructuring verbs are always functional heads that create monoclausal structures. However, differently from Cinque (2004), I argue that transparency effects are not optional. The presence or lack of transparency effects derives from the different syntactic structures in (11) and (12), as will be clear by the end of this paper. From the latter proposal, I adopt the idea that restructuring verbs can select complements of different sizes and that transparency effects really indicate a structural difference. However, differently from Cardinaletti and Shlonsky (2004), I suggest that restructuring verbs can never select a CP complement. Sentences with modal verbs are always restructuring clauses, even when no transparency effect takes place.

4 | PREVIOUS ANALYSES OF AUXILIARY SELECTION

4.1 | A gap in the literature

The phenomenon of auxiliary selection in restructuring has never been given a clear analysis, as far as I know. In the literature on restructuring, summarized in Section 3.1, it is only highlighted that if the configuration is monoclausal, then the perfect auxiliary of the modal verb can be realized as the one required by the lexical verb. According to Cardinaletti and Shlonsky (2004, 536), whose work represents one of the most explicit analyses of restructuring effects for Italian, "auxiliary switch is the hallmark of modals used as functional verbs and a necessary condition for clitic climbing." However, nothing else is said about the mechanism itself.

The most accurate idea developed so far was proposed by Wurmbrand (2015, 236) (based on Wurmbrand, 2004). Optionality in auxiliary selection is the reflex of ambiguity in the status of the restructuring verb: this is either a lexical verb (triggering HAVE) or a functional head (triggering BE). However, as I will show in Section 9, both the sentences with HAVE and those with BE behave identically with respect to tests for raising and control. This means that the spell-out of the auxiliary is independent of the "functionality" of the restructuring verb, against Wurmbrand (2015).

Hence, a formal analysis of auxiliary selection in restructuring has yet to be developed. In what follows, I will try to extend to restructuring some of the most recent approaches to auxiliary selection in simple clauses: D'Alessandro and Roberts (2010), and Bjorkman (2011, 2018).

The analysis by D'Alessandro and Roberts (2010) considers the type of *v* as the determining factor for auxiliary selection: the head Perf is realized differently depending on the type of *v* it selects. In Standard Italian, the generalization is as follows: the perfect auxiliary is realized as HAVE when it selects a non-defective *v* (as in transitive clauses, but not in unaccusative clauses), and otherwise as BE (D'Alessandro & Roberts, 2010, 51). If this proposal is applied to restructuring, it leads to wrong predictions. One can construct four different scenarios. First, if the modal verb is always selected by a transitive *v*, HAVE is always inserted. Second, if the *v* selecting the modal verb is always defective, BE is invariably inserted. Third, if the modal verb is not introduced by any *v* head and the only *v* is the one selecting the lexical verb (or if there is a matching condition between the higher and the lower *v*), then only BE should be possible when the modal verb selects an unaccusative verb. Fourth, if there is optional alternation between a non-defective *v* and a defective *v*, then the auxiliary BE should also be possible with transitive verbs.

According to Bjorkman (2011, 2018), the crucial factor for auxiliary selection is the presence or absence of an external argument. The head Perf agrees with the lexical verb for a [D] feature.

Perf is realized as BE if Agree is successful. This happens in unaccusative clauses. Instead, in transitive clauses the external argument intervenes, preventing Perf from agreeing with the lexical verb. This failure causes the incorporation of the [D] feature into Perf, which is consequently realized by the more specific allomorph HAVE (following the idea that HAVE is equal to BE plus something else, see Kayne, 1993). If this analysis is extended to restructuring, it runs into wrong predictions. There are two possible scenarios: the subject of the modal verb is either its external argument or an argument of the lexical verb (under a raising analysis, as the one adopted in this paper). In the former, the expected auxiliary is only HAVE, because the subject always disrupts the Agree relation between the higher head Perf and the lower lexical verb. In the latter, the auxiliary is only either HAVE or BE. In fact, if the subject is an argument of the lexical verb, it must move to the matrix subject position, where it surfaces. If it has already been raised to matrix Spec, *v*P when Perf probes, it intervenes between Perf and the lexical verb, thereby invariably leading to HAVE insertion. Alternatively, if it has not been raised yet when Perf probes, then the auxiliary of unaccusative verbs is realized as BE, but never as HAVE. The alternation for unaccusative verbs cannot be straightforwardly derived unless adopting further assumptions.

To conclude, these previous analyses cannot account for the distribution of the perfect auxiliaries in restructuring. In the next section, I discuss the alternative approach by Amato (2022a).

4.2 | Auxiliary selection by Nested Agree

According to Amato (2022, 2023), auxiliary selection is the result of agreement for the person feature. In Standard Italian, the dependency of the perfect auxiliary on the argument structure (HAVE with transitive/unergative verbs, BE with unaccusative/reflexive/impersonal verbs) is modeled via Agree between Perf and *v* for the person feature [π]. A person feature on v, differently from the [D] feature proposed by Bjorkman (2011) and from the rule suggested by D'Alessandro and Roberts (2010), allows the distinction between different types of *v* (equipped with a person probe vs. lacking a person probe) and different types of arguments (with valued vs. unvalued person features).

Amato (2022, 2023) proposes that the head Perf bears the two probes *[uInfl:perf]* and *[uπ:_]*.[5] The feature [uInfl:perf] is a valued probe with inflectional content. This probe agrees downward with the matching feature [Infl:_] on *v*, as shown in (13).[6] After Agree, the feature [Infl:_] on *v* acquires the value *perf*. This feature on *v* causes the lexical verb to be spelled out as a past participle.

(13) Perf**[~~u~~Infl:perf]**[uπ:_] ... DP_{sbj}[π:β] ... *v***[Infl:_]**[~~u~~π:α] ... DP_{obj}[π:α] ...
Infl-Agree

[5]A probe is any feature that is able to start a syntactic operation of search for a matching feature. In Amato (2022a), the prefix *u-* that identifies probes indicates the *syntactic* uninterpretability of a feature, meaning that the feature can trigger an operation but has not done it yet. It does not represent semantic interpretability. In addition, probes can be either unvalued or lexically valued. An example of an unvalued probe is the ϕ-probe ([uϕ:_]) involved in subject agreement; an example of a valued probe is the case feature of case assigners ([ucase:acc]). This proposal partially builds on Pesetsky and Torrego (2007), where interpretability and valuation are independent conditions.

[6]It seems to me that the same result may also be achieved with an unvalued probe on *v* and upward Agree. Under this alternative analysis, *v* bears the unvalued probe [uInfl:_] that agrees upwards with the valued goal feature [Infl:perf] on Perf. Regardless of the technicalities, what is important here is the presence of two Agree-relations between Perf and *v*, one of which (Infl-Agree) influences the subsequent one (π-Agree) (see footnote 7).

The second feature on Perf is the person probe [uπ:_], which determines the different morphological realizations of the perfect auxiliary (see (15)). As said above, in order to establish the dependency on the argument structure, the π-probe on Perf must agree with *v* (and not with the subject). Let me illustrate how this works. Amato (2022a) introduces a principle called *Nested Agree*, which ensures that the dependency between two heads created by a feature is exploited by other features located on those heads.[7] Under the assumption that features on the same head are extrinsically ordered (Georgi, 2014; Koizumi, 1994; Müller, 2009; Sabel, 1998), this means that the second probe must target the head that the first probe has interacted with. For the head Perf, Amato (2022a) proposes that the Infl-probe acts before the π-probe. The first Agree relation between *v* and Perf for the feature [Infl] in (13) opens a "channel" that must be reused for person Agree. Hence, Perf agrees with *v* for person, thereby skipping the subject, as shown in (14).

(14) Perf[~~u~~Infl:perf]**[~~u~~π:α]** ... $DP_{sbj}[\pi:\beta]$ ... *v*[Infl:perf]**[~~u~~π:α]** ... $DP_{obj}[\pi:\alpha]$ ...
π-Agree

After (14), Perf may bear a person feature (if *v* bears a valued person feature because of a prior Agree relation with the object).[8] In Standard Italian, the π-feature on Perf is morphologically realized as allomorph selection (and not as person inflection, as is instead the case for subject agreement on T). The lexical entries are given in (15), where α represents any person value.

(15) Vocabulary Items for Perf in Standard Italian
a. /HAVE/ ↔ Perf[π:α]
b. /BE/ ↔ Perf elsewhere

The more specific allomorph HAVE (15-a) is inserted whenever person Agree in (14) has succeeded. This is the case with transitive verbs, assuming that transitive *v* bears a person probe that agrees with the object. The same goes for unergative verbs, assuming that they are

[7] *Nested Agree* is defined as in (i). The relevant assumptions are as follows: Agree only happens downwards, and features on the same head are extrinsically ordered.

(i) Let F_1 and F_2 be two ordered probes on the head H. The search space of F_1 is the c-command domain of H.
(i) *Maximize*: if the Agree operation A_1 for the feature F_1 has targeted the goal G, then the subsequent Agree operation A_2 for the feature F_2 must also target G.
(ii) *No-backtracking*: If G is not a matching goal for F_2, the search space of F_2 is the c-command domain of G (not of H).

[8] Amato (2022a) follows Chomsky (2001) in assuming that transitive *v* bears a person probe, while unaccusative *v* does not have any. Her analysis relies on the assumption that Italian has object Agree. This idea could be rejected as this is never morphologically realized in Italian. Nonetheless, it has been argued that object Agree is universal, the cross-linguistic difference lying in the morphological realization of Agree, that is, in agreement (Chomsky, 1995). Moreover, the presence of person-related phenomena involving the ϕ-features of the internal arguments, such as the *PCC (person case constraint)*, may show that there is indeed object Agree in Italian (see e.g., Coon & Keine, 2020). For these reasons, I see no problem in assuming that there is an Agree relation of this type between *v* and the internal argument (and, similarly, between v_{restr} and its complement). There is no such relation if *v* is defective and does not initiate any operation with the internal argument, as in unaccusative clauses.

covertly transitive verbs with a cognate null object (Bobaljik, 1993; Hale & Keyser, 1993, among others).[9]

The elsewhere form BE (15-b) shows up whenever there is some kind of defectiveness in the structure. In unaccusative clauses, defective *v* does not bear any person probe. Differently from (14), the probe on Perf cannot find any further goal, assuming that unaccusative *v* is a phase head as other *v* heads are (Abels, 2012; Heck, 2016; Legate, 2003; Müller, 2010). Hence, Agree on Perf fails (Preminger, 2014), and the default BE must be inserted. The derivation is represented in (16).

(16) $\underset{\text{π-Agree}}{\text{Perf}[\text{u}\pi\text{:\_}]} \dots v \dots \text{DP}_{\text{obj}}[\pi\text{:}\alpha] \dots$ (unaccusative verb → BE)

Defective arguments lead to BE insertion in reflexive clauses. Amato (2022a) assumes that reflexive arguments enter the derivation with unvalued *ϕ*-features (see Section 6.1). These arguments lead to failed valuation on the person probe on *v*, and consequently, on Perf, as shown in (17).

(17) $\underset{\text{π-Agree}}{\text{Perf}[\text{u}\pi\text{:\_}]} \dots \text{DP}_{\text{sbj}}[\pi\text{:}\beta] \dots \underset{\text{π-Agree}}{v[\text{u}\pi\text{:\_}]} \dots \text{DP}_{\text{obj}}[\pi\text{:\_}] \dots$ (reflexive verb → BE)

5 | AUXILIARY SELECTION IS PERSON AGREE

5.1 | The functional head v_{restr}

In this section, I extend the theory of auxiliary selection in Amato (2022, 2023) to restructuring. As briefly explained in Section 4.2, in Standard Italian the dependency of the perfect auxiliary on the argument structure is modeled as person Agree between Perf and *v*, as illustrated in (18).

[9]In languages such as Italian, there is a division in the class of intransitive verbs between unergative and unaccusative verbs, depending on the base position of the subject (which is the external argument for unergatives). The further question is whether unergative verbs behave as verbs without any object, or with a null object (hence, as "special" transitive verbs). There are many reasons to consider unergative verbs as underlyingly transitive (see Baker & Bobaljik, 2017; Hale & Keyser, 1993, 2002; Laka, 1993; Pineda, 2014). For Italian, next to auxiliary selection, it is worth discussing *ne*-cliticization, reduced participial clauses, and formation of deverbal agent nouns. It is well known as Burzio (1986) that *ne*-extraction is possible only from the internal argument of unaccusative and transitive verbs. However, this view has been challenged by some studies that have documented *ne*-extraction with unergative verbs (Bentley, 2004, 2011; Cerrone & Sprouse, 2019; Lonzi, 1986). This shows that unergative verbs may pattern together with transitive verbs in allowing extraction from the object. The more constrained behavior of unergative verbs compared to transitive verbs in relation to this and the other tests might have to do with the null phonology and the fixed semantics of the cognate object of unergatives, rather than with its absence. Going now to reduced participial clauses, these must only contain one overt argument, which cannot be the transitive subject (Belletti, 1990). Unergative verbs are usually ungrammatical in this construction because their subject cannot show up (like transitive verbs) and their object is null: **telefonato, / *telefonato io, / *telefonato me* "having called". However, unergative verbs are fine if there is an overt PP (*telefonato a Gianni* "having called Gianni"), or an overt object (*ballato un ballo sfrenato*, "having danced a wild dance"). Finally, deverbal agent nouns highlight the presence of an agent (bringing together unergative and transitive verbs). Next to these diagnostics, other tests can be done in other languages, such as impersonal passivization in Hindi-Urdu and in German. Nonetheless, it should also be noted that there are proposals that argue against a null object of unergative verbs, such as Preminger (2012).

(18) Perf[ʉInfl:perf][ʉπ:α] ... DP_{sbj} ... *v*[Infl:perf][ʉπ:α] ...
Agree for [Infl], [π]

I suggest that auxiliary selection in restructuring also arises via the mechanism described in (18). The only difference with root clauses is that restructuring configurations contain an extra *v* head, which I call v_{restr}. This functional head, which corresponds to the modal verb, is equipped with the features in (19) (the symbol ≻ indicates that features are ordered).

(19) v_{restr}: [•*v*P•]/[•TP•] ≻ [Infl:_] ≻ [uInfl:non-fin] ≻ [uπ:_]

The first c-selectional feature [•*v*P•]/[•TP•] merges the modal verb with its complement. This can be either a TP or a *v*P (see Section 3.2).[10] Secondly, this head bears a double [Infl] feature: [Infl:_] and [uInfl:non-fin]. The feature [Infl:_] characterizes all types of *v* and, when valued, determines the inflection on the verb (e.g., as a past participle). It should be noted that the inflectional morphology on the restructuring verb (in the perfect tense, it is the modal verb to be realized as a past participle, and not the lexical verb) constitutes evidence for the presence of a *v* head associated with the modal verb. The valued Infl-probe [uInfl:non-finite] establishes that the TP/*v*P complement is nonfinite. Third, the head bears a person probe.

The main function of v_{restr} is to build a connection between the lower verbal-extended projection of the lexical verb and the higher tense-extended projection. Because of the double [Infl] feature, v_{restr} can access the lower *v* and can be accessed by higher functional heads (cf. Section 4.2). The head v_{restr} acts as an intermediate agreeing head that creates a *cyclic Agree* configuration (Legate, 2005) between the embedded *v* and matrix Perf: Infl-Agree is established between the lower *v* and v_{restr}, and between v_{restr} and Perf. By exploiting these relations, the π-feature of the DP_{obj} is copied by Perf via the lower *v* and v_{restr}.[11] This is schematized in (20), which is just an extension of (18).

(20) *Restructuring with vP complement*

Perf[ʉInfl:perf],[ʉπ:α] ... v_{restr}[Infl:perf][ʉInfl:non-fin],[ʉπ:α] ... *v*[Infl:non-fin],[ʉπ:α]
Agree for [Infl], [π] — Agree for [Infl], [π]

[10] More precisely, v_{restr} selects a modal verb, which itself selects either a *v*P or a TP complement. The c-selectional feature [•*v*P•]/[•TP•] is actually a feature on the modal verb, while v_{restr} bears instead [•V_{modal}P•]. Nonetheless, the description in (19) is an adequate schematization under the assumption that V_{modal} head-moves to v_{restr}. An alternative approach would be to consider v_{restr} and V_{modal} as the same syntactic node. In this case, the modal verb is the exponent that realizes the functional head v_{restr} and not the Spell-out of a V category.

[11] In the present theory of auxiliary selection, the perfect head ends up bearing the person feature of the object. The reader may wonder whether this analysis predicts finite agreement on the auxiliary to be controlled by the object. For example, should a sentence such as *Teresa ti ha visto* "Teresa has seen you" be realized as **Teresa ti hai visto* "Teresa have(2sg) seen you(2sg)"? I exclude this prediction for two reasons. First, in this analysis object agreement on Perf is realized as root allomorphy, not as *ϕ*-inflection (see Vocabulary Items in (15)). Second, *ϕ*-inflection on the finite auxiliary is actually contributed by the T head, to which Perf head-moves. For instance, in the example given in this footnote the complex head that constitutes the auxiliary bears these features: T[π:3, #:sg]+Perf[π:2]. Perf is substituted by the root for HAVE, T by *ϕ*-inflection (in this specific case, /a/ ↔ Perf[π], /Ø/ ↔ T[π:3]). A related question is why T does not *ϕ*-agree with Perf (which is the closest head to T), rather than with the subject. Subject agreement on T across Perf is enabled by Nested Agree, assuming that case assignment precedes *ϕ*-Agree on T. Under the feature ordering [ucase:nom]≻[u*ϕ*:_], T assigns nominative to the DP_{sbj}. Because of the previous operation of case assignment, Nested Agree imposes that the *ϕ*-probe on T targets the DP_{sbj} in Spec, *v*, instead of Perf.

The head v_{restr} may also select a TP complement. As illustrated in (21), v_{restr} probes T for [Infl] (assuming that T bears an inflectional feature, see Section 5.2). Thereafter, it must probe T also for [π] (see footnote 7). As nonfinite T is not a matching goal because it does not bear any person feature, the π-probe can go on scanning its c-command domain downwards, in accordance with the *Phase Impenetrability Condition (PIC*, Chomsky, 2000, 108). In this way, it reaches the subject in Spec, *v* and agrees with it for person.

(21) *Restructuring with TP complement*

Perf ... v_{restr}[Infl:perf][~~u~~Infl:non-fin],[~~u~~π:β] ... T[Infl:non-fin] ... DP_{sbj}[π:β] ... *v*[Infl:_]

✓[Infl] ✓[uπ]

Thus, a TP complement opens up more possibilities for Agree because it contains more structure. As shown in (21), if v_{restr} probes the T head for [Infl], an additional source of ϕ-features (i.e., the subject) is accessible for the π-probes on v_{restr} and Perf. On the contrary, the subject is skipped when v_{restr} probes *v*, as in (20). For this reason, with a TP complement person Agree on Perf is always successful, even when the lower *v* does not contain any valued person feature, leading to HAVE insertion in unaccusative and reflexive clauses.[12]

The optionality between the structures (20) and (21) causes the optionality in the realization of the perfect auxiliary of the modal verb, exemplified again in (22).

(22) a. Teresa è volut-a [$_{vP}$ andare al mare].
Teresa be.PRS.3SG want.PRTC-SG.F go.INF to.the beach
"Teresa wanted to go to the beach." (*v*P complement)

b. Teresa ha voluto [$_{TP}$ andare al mare].
Teresa have.PRS.3SG want.PRTC go.INF to.the beach
"Teresa wanted to go to the beach." (TP complement)

If the complement of the modal verb is a *v*P, as in (20), the structure is "transparent": the head Perf reaches *v*, which encodes the morphosyntactic information about the lexical verb and its arguments. Consequently, the perfect auxiliary is the same as the one that the embedded verb would select (HAVE with transitive verbs, BE in unaccusative, reflexive, and impersonal clauses). Auxiliary switch (22-a) is the emergence of the "transparent" auxiliary, visible when the lexical verb is a BE-verb. In contrast, if the complement is a TP, as in (21), no transparency effect arises because Perf cannot reach the embedded *v*, and the perfect auxiliary is invariably realized as HAVE (22-b).[13]

The proposal that the different auxiliaries in (22) are the result of different sizes of the complement of the modal verb is supported by the following facts: (i) the two versions of the clause in (22) have the same meaning and are used as free variants; (ii) they behave in different ways

[12]There are alternative ways to model the intuition that person Agree on Perf is always successful with TP complements. For instance, nonfinite T could bear a ϕ-probe, as finite T does. Under this approach, the presence of T always ensures the presence of a valued person feature because of ϕ-agreement between T and the subject. The possibility of a ϕ-probe on nonfinite T is confirmed by inflected infinitives in languages such Sardinian (Mensching, 2000) and Portuguese (Raposo, 1987). Note that in this case [Infl] on nonfinite T is not needed, as *v* head-moves to T.

[13]I consider sentences without overt transparency effects to be, nonetheless, restructured (in line with Cinque, 2004, and differently from Cardinaletti & Shlonsky, 2004). In fact, there are some restructuring hallmarks that are always present and indicate the absence of a C head in the complement, for instance, raising (see the tests for modal verbs with and without auxiliary switch in Section 9). See also Wurmbrand (2003); Grano (2015) for discussion.

according to some tests that are sensitive to the size of the complement (see Section 8); and (iii) they behave in the same way according to some tests for raising and control (see Section 9).

5.2 | The "dummy" T head

In the previous section, I have proposed that restructuring verbs can select either *v*P or TP complements. A relevant question is whether the lack or presence of a T head in the complement determines any semantic difference. I would like to suggest that this is not the case: the T head contained in restructuring complements is a "dummy" T head.

The first consideration concerns the possibility of mismatches between syntax and semantics. Although "semantic tense is transparently reflected syntactically, syntax does also lead an independent life to some extent, as the lack of tense does not seem to preclude (semantically vacuous) syntactic projections" (Wurmbrand, 2014, 425). If the correspondence between syntax and LF is not always one-to-one, a semantically vacuous T head is a possible syntactic object. Such a head is indeed assumed for some type of restructuring verbs (the lexical restructuring ones) in Wurmbrand (2012, 2014), and for hosting the infinitival marker (*zu* in German, *di*, *a* in Italian) of some restructuring infinitives in Wurmbrand (2003, 109).

Another important point is that restructuring infinitives usually lack tense. It is true that modal verbs (*want* in particular) can combine with future-oriented infinitives (*oggi voglio fare questo domani* "today I want to do this tomorrow"), but it has been argued that futurity is contributed by a modal element *woll*, rather than by tense (Grano, 2015; Wurmbrand, 2003). Moreover, anterior tense is possible: *lo potrebbe aver già visto ieri* "s/he may have already seen it/him yesterday". However, in this case there must be an embedded Perf head that contributes to tense/aspect (see Section 8.1). Hence, these tense interpretations might be introduced by projections other than T. In addition, in the absence of such tense information, the embedded tense is interpreted as referring to a moment that is simultaneous to the time at which the matrix tense refers. Given this dependency on higher heads, I propose that the restructuring T head bears an unvalued Infl-feature [Infl:_], differently from finite, non-defective T, where this feature is specified for different tense values. Because of [Infl:_], tense of the embedded T is dependent on the higher projections. In particular, in restructuring it acquires the value [non-fin] from v_{restr}. Nonfinite *v*P and TP complements are both interpreted in the same way at LF because of the same feature [Infl:non-fin]. The T head is a "dummy" head because it does not introduce any independent, semantically interpreted tense.

This T head is also deficient with respect to other morphosyntactic properties. As standardly assumed for nonfinite T, it does not bear any ϕ-probe. In addition, it does not assign case. If it could assign nominative, the raising DP would bear nominative case twice (once assigned from the lower T, and once from the higher T).

6 | THE DERIVATION OF AUXILIARY SELECTION IN RESTRUCTURING

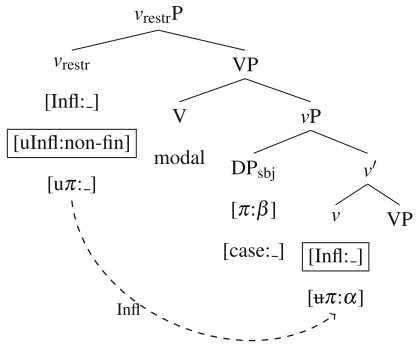
6.1 | *v*P complement: "transparent" auxiliary

In this section, I present a detailed derivation of auxiliary selection in the case of *v*P complements. Let me start with transitive verbs. As shown in Section 2, the perfect auxiliary of a modal verb that embeds a transitive verb (which is a HAVE-verb) is HAVE (see (5)).

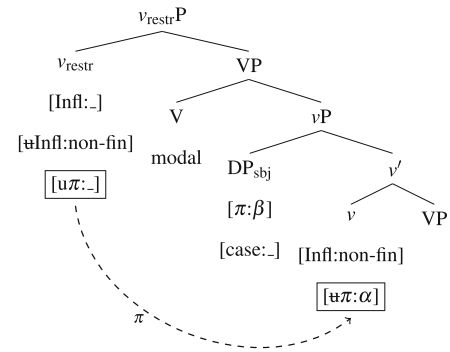
In the first step of the derivation, the *v*P is built. I assume that transitive *v* is non-defective, following Chomsky (2001). This head assigns accusative case to the direct object, bears a person probe, introduces the external argument, and assigns it the external Theta-role. In addition, it bears an [Infl] feature (Amato, 2022a). The person probe on *v* targets the internal argument and copies its person feature. After this operation, *v* bears the person feature of the object. As a general remark, the person feature on *v* results both from the argument structure itself (transitive vs. defective *v*) and from the features of the arguments (reflexive/impersonal vs. non-reflexive/non-impersonal), as will become clear in the remainder of this section.

After this step, the modal verb and v_{restr} are merged in the derivation. As shown in (23), v_{restr} probes *v* for [Infl], and [Infl] on *v* acquires the value *non-fin*. In the second step in (24), the person probe on v_{restr} also targets *v*. This happens because the Agree-channel between the two heads *v* and v_{restr} must be used for multiple features, as stated by Nested Agree (see Sections 4.2 and 5.1).

(23) *v_{restr} agrees for [Infl]*

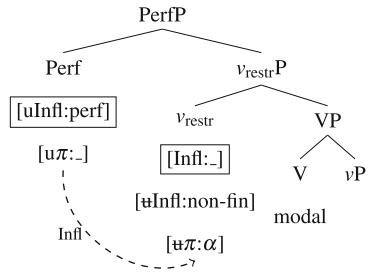


(24) *v_{restr} agrees for [π]*

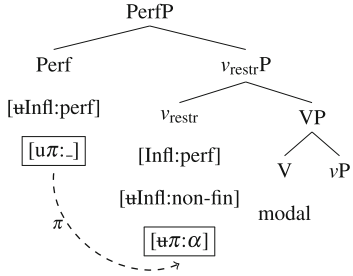


In the next step, the head Perf is merged into the structure. The derivation is similar to what is shown in trees (23) and (24). In (25), Perf probes v_{restr} for [Infl]. Thereafter, Perf also targets v_{restr} for *π*-Agree, as illustrated in (26). By agreeing with the intermediate head v_{restr}, which has agreed with *v*, Perf copies the person feature of the object. Thus, the dependency between the head that is realized by the perfect auxiliary (i.e., Perf) and the argument structure (*v*) is modeled via cyclic Agree (Legate, 2005).

(25) *Perf agrees for [Infl]*



(26) *Perf agrees for [π]*



At Spell-out, the terminal node Perf is realized according to the Vocabulary Items in (15), repeated in (27). In the present example, the more specific allomorph HAVE (27-a) must be chosen, as Perf bears a valued person feature after Agree in (26).

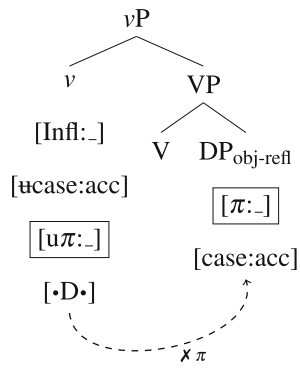
(27) a. /HAVE/ ↔ Perf[*π*:*α*]
b. /BE/ ↔ Perf elsewhere

In Section 2, I have shown that transitive verbs can also be combined with reflexive arguments (as either direct or indirect objects). In this case, transitive verbs behave as BE-verbs: the perfect auxiliary is BE (see (9-d), (10-d)). Let me illustrate how the derivation just described leads to BE insertion when an argument is reflexive.

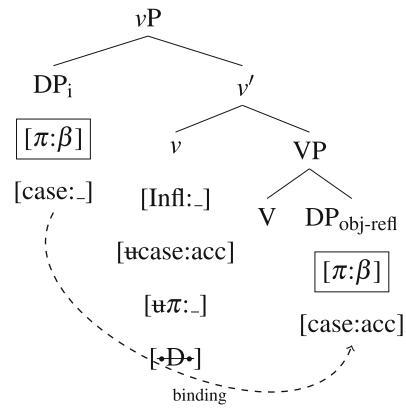
I adopt a transitive-unergative analysis of reflexive clauses, as proposed by Alencar et al. (2005); Alexiadou et al. (2015); Sportiche (2014), among others.[14] The reflexive pronoun is merged below *v*. If it is an object, it is merged in the direct object position of a transitive *v*P. If it is a benefactive argument, it is introduced by an applicative head below *v*, see Anagnostopoulou (2004); Pylkkänen (2008) among others. I also assume that the reflexive clitic pronoun enters the derivation with unvalued *ϕ*-features, which are valued by a c-commanding antecedent DP via binding (Fischer, 2004; Heinat, 2006; Reuland, 2001, 2005; Rooryck & Vanden Wyngaerd, 2011).

The analysis is similar to the case of transitive clauses. First of all, the transitive *v*P is built. Crucially, I assume that transitive *v* probes for person before introducing the external argument (this follows from a strong interpretation of the *strict cycle condition*, as in Chomsky (1973); McCawley (1984, 1988). When *v* probes for person, the reflexive pronoun in the object position bears unvalued *ϕ*-features. In fact, binding has not applied yet, because the external argument has not been introduced yet in the structure. Consequently, Agree on *v* fails to copy a *valued* feature, as shown in (28). After person-Agree, *v* introduces the external argument. This DP binds the direct object, as shown in (29). However, this happens too late to provide a valued person feature for *v*.

(28)



(29)



When v_{restr} is merged in the derivation, it probes *v* for [Infl] and [*π*]. Agree for [Infl] succeeds. However, Agree for person fails, as in the preceding step (28) *v* could not copy any valued person feature. Similarly, Agree on Perf fails as well.[15]

[14]Clauses with a reflexive direct object may also be analyzed as unaccusative clauses (see Embick, 2004; Grimshaw, 1982; Kayne, 1975; Marantz, 1984, among others). However, the unaccusative analysis cannot be easily extended to indirect reflexive clauses where the reflexive argument is a benefactive indirect object. In fact, these clearly contain distinct external and internal arguments (see example (10) in Section 2).

[15]In general, the object is not accessible anymore for the person probes on v_{restr} and Perf because of the PIC. In this specific case, the clitic object has already moved out of its base position because it must incorporate into T. However, v_{restr} is forced to skip the clitic in the intermediate landing position Spec, *v* (and Perf is forced to skip it in Spec, v_{restr}) because of Nested Agree. In fact, after [uInfl] on v_{restr} has agreed with *v*, [u*π*] on the same head again targets *v*, without backtracking to any position higher than *v*, such as Spec, *v*.

In this derivation, Perf does not bear any *valued* person feature. Given the lexical entries in (27), it must be substituted by the elsewhere form BE. Auxiliary switch, which consists of the emergence of BE as the perfect auxiliary when the lexical verb is unaccusative, reflexive, or impersonal, happens when Perf does not bear any valued person feature. This scenario takes place when *v* (and, consequently, v_{restr} and Perf because of cyclic Agree) does not contain any valued person feature either.

Finally, the same analysis also results in BE if the lexical verb is unaccusative (i.e., a BE-verb), see, for instance, (7-d) in Section 2. The main difference with the previous derivations is the status of unaccusative *v*. I assume that this head is defective: it is neither a case assigner nor a probe for the person feature (Chomsky, 2001). It only bears the [Infl] feature (Amato, 2022a). Moreover, it is a phase head as other *v* heads are (Abels, 2012; Heck, 2016; Legate, 2003; Müller, 2010).

When v_{restr} probes for [Infl], it successfully targets *v* (exactly as in (23)). Successively, v_{restr} probes *v* for person. However, unaccusative *v* does not bear any person feature. The probe on v_{restr} cannot find any further goal because of the PIC, under the assumption that unaccusative *v* is a phase. Hence, person Agree on v_{restr} fails (unlike in tree (24)). When the head Perf enters the derivation, the operations are very similar to the steps just described for v_{restr}. The only difference with trees (25)–(26) is that now v_{restr} bears an unvalued π-feature, so that the π-probe on Perf remains unvalued as well. Given the lexical entries in (27), this derivation leads to BE insertion.

To sum up, in the case of a *v*P complement, the result of person Agree on Perf matches the feature on the lower *v*. If this contains a valued π-feature (transitive *v*), Agree on v_{restr} and consequently on Perf, succeeds, leading to HAVE insertion. If the lower *v* contains an unvalued π-feature (transitive *v* with reflexive/impersonal arguments), or no π-feature (unaccusative *v*), Agree on Perf fails, and the elsewhere form BE shows up (auxiliary switch).[16]

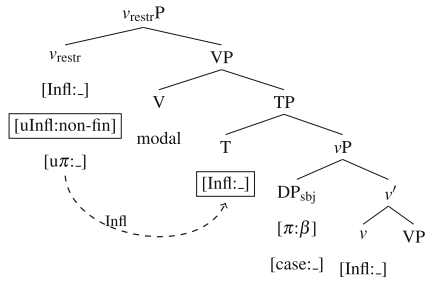
6.2 | TP complement: Always HAVE

In this section, I account for auxiliary selection in restructuring clauses with TP complements. As already discussed in Section 5.1, successful Agree on Perf definitely happens when the structure (i.e., the search domain of the probe) is enlarged. Let me now explain in detail why more structure causes HAVE insertion with unaccusative verbs, leading to clauses such as (7-a).

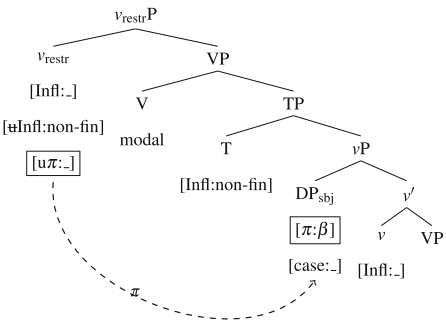
After the unaccusative *v*P is built, it is merged with a T head that only bears an unvalued inflectional feature of the type [Infl:_] (see Section 5.2). This TP is now selected by v_{restr}. In (30), the [Infl] probe on v_{restr} targets the head T, rather than *v*. Note that the Infl-feature on *v* remains unvalued. This is not a problem because *v* head moves to T (moreover, [Infl:_] may remain unvalued, as happens in the present tense).

[16]For reasons of space, I have to skip the discussion of impersonal restructuring clauses. In a nutshell, I assume that impersonal clauses are constructed with an impersonal Voice head with an unvalued person feature (in line with Alexiadou et al., 2015; Legate, 2014). The person probe on v_{restr} targets this unvalued person feature on Voice. The analysis proceeds as for reflexive clauses.

(30) *v_{restr} agrees for [Infl] with T*



(31) *v_{restr} agrees for [π] with DP_{sbj}*



In the next step, illustrated in (31), v_{restr} also targets T for person. In fact, Nested Agree forces the second probe on v_{restr} ([uπ:_]) to exploit the Agree dependency created by the previous probe ([uInfl:non-fin]). The T head does not bear any person feature (no agreement on nonfinite T).[17] Nested Agree prescribes that a probe can continue its search downward when the goal targeted by the previous dependency is not a matching one. Hence, the person probe on v_{restr} goes on scanning its c-command domain, in accordance with the PIC. In (31), it finds the person feature of the subject in Spec, v.[18] As the subject always bears a valued person feature, person Agree on v_{restr} and, consequently, on Perf, succeeds, leading to HAVE insertion.

To conclude, the presence of an [Infl] feature on T is sufficient to ensure that the π-probe on v_{restr} is always satisfied, even though T is not itself the goal for π-Agree. Had T not carried [Infl:_], v_{restr} would have agreed with v for [Infl] and for [π], as in the vP derivation (Section 6.1). Instead, Infl-Agree with T makes the subject accessible to v_{restr}. The TP interrupts the "transparent effect" between v, v_{restr}, and Perf, always leading to HAVE. As in (31) there is no π-Agree between v and v_{restr}, the very same derivation takes place for transitive, reflexive, and unaccusative verbs.

7 | MISMATCHES BETWEEN AUXILIARY SWITCH AND CLITIC CLIMBING

In Section 2, I have highlighted the correlation between auxiliary switch and clitic climbing, but I have not discussed this point yet. Although in this paper I cannot fully address the complex issue of clitic climbing, so far I have implicitly related it to the absence of a T head in the complement. Assuming that clitics move to T because they incorporate into the finite verb (see Belletti, 1999; Kayne, 1989; Sportiche, 1996, among others), clitic climbing can be used as a tool to "measure" the size of the clause. In particular, when it takes place, it indicates that there is no TP embedded, assuming that clitics must incorporate into the closest T head. This means that clitic climbing is obligatory in the presence of a vP complement (or rather, it should be: see this section below). Instead, in the case of a TP complement, clitic climbing does not take place because clitics incorporate into the lower T, without reaching matrix T.

According to this analysis, auxiliary switch and clitic climbing (if applicable) should always go together. Nevertheless, I have to acknowledge that this is just an approximation of the actual data.

[17]Nothing would change by assuming that nonfinite T bears a ϕ-probe, which targets the embedded subject (see footnote 12). In this case, the person probe on v_{restr} would simply target T.

[18]In (30)–(31), the unaccusative subject (underlyingly an internal argument, Burzio, 1986) is located in Spec, v because of the assumption that v is a phase. If unaccusative v is a phase, the unaccusative DP argument (with unvalued case) must move to the edge of the phase in order to remain accessible for higher case assigners.

Although these two transparency effects certainly tend to co-occur, they do not always appear together. In this section, I discuss some mismatches between auxiliary switch and clitic climbing (see also footnotes 3, 4). The existence of such data perhaps shows that not all transparency effects are exclusively governed by the size of the complement. Clitic placement might be less constrained than auxiliary selection and influenced by various factors that have yet to be fully understood.[19]

Coming now to the data, some speakers accept clitic climbing without auxiliary switch (32-a), and auxiliary switch without clitic climbing (32-b), in cases where both are applicable.

(32) a. #Maria **ci**=ha voluto [andare ieri].
Maria there=have.PRS.3SG want.PRTC go.INF yesterday
"Maria wanted to go there yesterday."
b. #Maria è volut-a [andar=**ci** ieri].
Maria be.PRS.3SG want.PRTC-SG.F go.INF=there yesterday
"Maria wanted to go there yesterday."

Sentences without auxiliary switch and with clitic climbing as (32-a) are quite marginal. According to my own judgment and to the speakers I consulted, they are ungrammatical (see also Cinque, 2004, 153, and Cardinaletti & Shlonsky, 2004, 522 for similar judgments). It should also be noted that such sentences are considerably degraded for other clitics than *ci*, see, for instance, the completely ungrammatical **Maria si=ha voluto lavare ieri* "Maria wanted to wash herself yesterday." For this reason, I propose that the partial acceptability of example (32-a) is due to the "special" status of the clitic *ci*. This element can perform different functions, such as deictic or presentational, and in existential uses it can acquire its locative meaning by co-indexation with a null locative argument (Cruschina, 2012). In such cases, it can be base-generated in the matrix clause. Hence, I propose that in (32-a) the clitic *ci* originates in the matrix clause. Its placement is independent of the size of the complement, which can be a TP (determining HAVE insertion).[20]

Sentences with auxiliary switch and without clitic climbing as (32-b) seem slightly more acceptable than the case just discussed, instead.[21] Although in my sample they are rejected, some examples can be found in the literature. Rizzi (1978, 136, fn. 26) provides the sentence *Maria ` e dovuta venir**ci** molte volte* "Maria had to come there many times," but he notes that its acceptability is degraded if the subject is not third person (for unclear reasons). Cinque (2004, 169, fn. 18) reports a sentence from a literary source. Another example is found in Burzio (1986, 367), given in (33).

(33) Maria sarebbe volut-a [andare a [prender=**li** lei stessa]].
Maria be.COND.PRS.3SG want.PRTC-SG.F go.INF to take.INF=ACC.3PL.M her self
"Maria would have wanted to go to fetch them herself."

I have to acknowledge that mismatches of this type (auxiliary switch, but no clitic climbing) remain an open question. Nonetheless, I believe that the theory developed in this paper can

[19]To highlight the complexity of clitic placement, I also would like to mention unexpected cases of clitic climbing out a CP: *su questo punto, non ti_i saprei che dire t_i* "on this point, I wouldn't know what to tell you" (Rizzi, 1978, 152).

[20]About (32-a), see also footnote 3 for the idea that auxiliary switch may fail to apply. More generally, marginal sentences such as (32) might also be the result of some performance errors.

[21]In any case, sentences such as (32-b) are also very marginal. This is confirmed by a corpus search that I have performed on February 20, 2020 on the online corpus of *Repubblica*, available at https://corpora.dipintra.it. For sentences with unaccusative verbs without clitic climbing (as (32-b)), in 5.6% of the cases the auxiliary is BE and in 94.4% it is HAVE.

account for all the core data, and that marginal cases such as (32-b) and (33) can receive independent explanations, although this has yet to be done. Let me give an example of this strategy.

Sentence (33) contains the restructuring motion verb *andare a* "go to." In Section 10, I show that motion verbs always impose BE, and I propose that this happens because the v_{mot} head associated with motion verbs does not contain any person probe. Hence, whenever there is a motion verb in a sequence of restructuring verbs, it interrupts cyclic Agree (even when v_{mot} embeds a TP). In particular, example (33) can be derived from the underlying structure in (34).[22]

(34) [M. sarebbe [voluta [andare a [prender=li lei stessa]]]]
[$_{TP}$ T-Perf[$\not{u}\pi$:_]→BE [$_{vP}$ v_{restr}[$\not{u}\pi$:_] [$_{vP}$ v_{mot}(no π) [$_{TP}$ T-v-V=clitic]]]]

More generally, I do not have a conclusive explanation for the (marginal) acceptability of sentences such as (32-b). Such clauses could be due to performance errors. Alternatively, they could be produced by speakers who can use a defective v_{restr} for selecting a TP when the lower v is defective (see Section 10.3 for a similar phenomenon).[23] A defective v_{restr} does not contain any person probe, and interrupts cyclic Agree between Perf and the complement of v_{restr}, blocking HAVE insertion (similar to (34)). Last but not least, it could also be the case that clitic climbing must be simply dissociated from auxiliary switch. Maybe clitics do not necessarily identify a TP layer, but there are extra positions in the clause, similar to what has been suggested by Cardinaletti and Shlonsky (2004). The speaker variation addressed in this section might stem from this fact. Note also that this account of clitic placement would not change the present analysis of auxiliary selection.

8 | EVIDENCE FOR DIFFERENT SIZES OF THE CLAUSE

In this section, I provide evidence for the claim that restructuring verbs can select complements of different sizes. There are some syntactic operations that are allowed in restructuring sentences without transparency effects but lead to ungrammaticality in the presence of auxiliary switch or clitic climbing. As these operations are sensitive to the size of the clause, I conclude that these data can simply be accounted for by assuming that clauses with and without auxiliary switch differ

[22]It should also be noted that the combination of the restructuring verb *andare a* "go to" and the lexical verb *prendere* "take" is quite special. Its meaning is nearly idiomatic: the restructuring verb does not contribute to the meaning of the periphrasis, which is "fetch." The construction has also other particular properties. For instance, it can be passivized (*(?)i libri saranno andati a prendere entro domani* "the books will be picked up by tomorrow" Cinque, 2003, 62, fn. 4), whereas other combinations of *andare a* with other lexical verbs cannot be passivized: **il pane sarà andato a comprare entro domani* "bread will be bought by tomorrow." Thus, the particular behavior of this sequence of verbs might be responsible for other "problematic" sentences given in Burzio (1986, 367), from Rizzi (1978, 137): *Maria li avrebbe / *sarebbe voluti andare a prendere lei stessa* "Maria would have wanted to pick them up herself." Perhaps this clause (completely ungrammatical to me) can be explained if in this case the periphrasis *andare a prendere* behaves as the transitive verb "fetch," being selected by a transitive v, and determining HAVE insertion.

[23]The data in this section, but also examples such as (7-b) and (7-c), show that clitic climbing is not completely obligatory in case of auxiliary switch, whereas auxiliary switch must take place in the presence of clitic climbing, as also pointed out by an anonymous reviewer. Perhaps this generalization could follow from the fact that auxiliary switch depends on both a vP complement and the features of v_{restr}. This means that auxiliary switch could even take place in the presence of a TP as long as Agree on Perf fails. This happens if v_{restr} lacks the relevant π-probe. Maybe some speakers have such a defective v_{restr} at their disposal (see also Section 10.3 for a similar case).

TABLE 1 Auxiliary switch and operations sensitive to the size of the clause.

	BE	HAVE
(a) Perfect complement	✗	✓
(b) Passive complement	✗	✓
(c) Ellipsis	✗	✓
(d) Cleft	✗	✓
(e) Relativization	✗	✓
(f) Clausal negation	✗	✓
(g) Presuppositional negative markers	✗	✓

in their size. When the auxiliary is HAVE, the complement is "big enough" to undergo certain operations (i.e., it contains a T head). In contrast, when the auxiliary is BE, the application of the same operations is not possible (giving ungrammaticality) because the complement is "too small." In Table 1, I summarize the results of the tests provided in this section.

8.1 | Perfect complements

Auxiliary switch is impossible when the modal verb selects a perfect complement, as in (35).

(35) Paolo avrebbe / *sarebbe voluto [essere giá andato a casa].
Paolo have.COND.3SG be.COND.3SG want.PRTC be.INF already go.PRTC at home
"Paolo would have wanted to have gone home."

Clearly, if the complement of the modal verb contains a perfect tense/mood head, it must be bigger than a *v*P: at least a PerfP. With a PerfP complement, the Infl-probe on v_{restr} does not reach *v* because the Infl-feature on Perf intervenes.[24] The π-probe on v_{restr} is valued either by the π-feature on Perf or by the subject in Spec, *v*, if Perf does not contain a valued person feature (the probe can keep on searching downwards, in accordance with the PIC). Hence, the π-probe on v_{restr} is always valued. The person probe on matrix Perf is also valued, resulting in HAVE insertion.

8.2 | Passive complements

If the restructuring verb selects a passive complement, then auxiliary switch is impossible, as (36) shows.[25] Similar data can be found in Rizzi (1982, 45) and Burzio (1986, 364-365).

[24] In (35), the perfect auxiliary in the complement is spelled out as an infinitive (*essere*) because either Perf bears an unvalued [Infl] feature in addition to [uInfl:perf], which receives the value *non-fin* from v_{restr}, or nonfinite verbal morphology is the default. Note that the feature [~~u~~Infl:perf] on Perf is never morphologically realized: what is spelled out as perfect is the head *v*+V. Passive complements (Section 8.2) also require a similar explanation for the Spell-out of the passive auxiliary as an infinitive (*essere* in (36)).

[25] An anonymous reviewer has noted that *potere* and *dovere* can be found with BE in the presence of passive complements (although HAVE is the better option): *dopo la festa, Paolo non sarebbe dovuto esser portato subito a casa*

(36) Dopo la festa, Paolo ha / *è voluto [essere portato a casa da Giulia].
after the party Paolo have.PRS.3SG be.PRS.3SG want.PRTC be.INF bring.PRTC at home by Giulia
"After the party, Paolo wanted to be taken home by Giulia."

Under the present analysis, the obligatory realization of Perf as HAVE in (36) shows that the complement of the restructuring verb must be bigger than a *v*P when the lexical verb is passivized. This is actually true if one assumes that passive clauses contain a $\text{Voice}_{\text{pass}}$ or a PassP (see, e.g., Alexiadou et al., 2015; Bruening, 2013; Collins, 2005; Legate, 2014).[26] If this Voice head bears an Infl-feature (as seems to be the case, as in passives the lexical verb is realized as a participle), then it is targeted by Infl-Agree by v_{restr}, thereby making accessible the subject for the person probe on v_{restr} and leading to HAVE insertion (similar to the TP-derivation in Section 6.2).

8.3 | Ellipsis

The perfect auxiliary BE is also excluded before an ellipsis site, as already noted by Radford (1977); Cinque (2004). An example is given in (37). The ellipsis site is indicated with the sign Δ.

(37) Gianni poteva andare a casa, ma non ha / *è voluto [Δ].
Gianni can.PST.3SG go.INF to home but not have.PRS.3SG be.PRS.3SG want.PRTC
"Gianni could go home, but didn't want to."
(Cinque, 2004, 136)

In example (37), the elided material is the constituent *andare a casa* "go home," which normally causes optional auxiliary switch. Auxiliary switch is blocked even when the first term of the elliptic correlation has undergone auxiliary switch itself, as shown in (38).

(38) Gianni sarebbe potuto andare a casa, ma non ha / *è voluto [Δ].
Gianni be.COND.3SG can.PRTC go.INF to home but not have.PRS.3SG be.PRS.3SG want.PRTC
"Gianni could have gone home, but didn't want to."

A good explanation for this pattern lies in the constraints on ellipsis. It has been proposed that in many Romance languages (Italian, French, Spanish, but not Portuguese, which instead allows for VP-ellipsis) only TP constituents can be deleted but not smaller ones (Dagnac, 2010). Hence, I suggest that the ungrammaticality of BE (37) and (38) is due to the impossibility of deleting a

(ma in ospedale) "after the party, Paolo should not have been taken home immediately (but to the hospital)." Unfortunately, I do not have any good explanation for this fact. I refer the reader to the discussion in Section 7.

[26] According to Cinque (1999, 2003), modal verbs cannot be passivized but can embed a passive complement because modal functional heads, and the majority of aspectual functional heads, are higher than the passive Voice head. In contrast, as some aspectual heads are lower than it, some aspectual verbs can be passivized (such as *finire* "finish"). Nonetheless, this explanation cannot be adopted in this paper, as I assume that sequences of functional projections can be repeated, differently from the cartographic approach.

*v*P under ellipsis. That the elided constituent in (37)–(38) is a TP can be seen from the stranding auxiliary HAVE, according to the present analysis.[27]

Similarly, clitic climbing out of the ellipsis site is impossible (Cinque, 2004, 136). If clitic climbing happens only when the complement is a *v*P (but see discussion in Section 7), its impossibility signals that the elided constituent must be a TP, whose T head hosts the clitic pronoun.

8.4 | Clefts

The same point can be made with cleft structures. Whatever type of operation they involve (deletion, movement), this can apply to the constituent that causes HAVE insertion but not to the one that leads to BE insertion. An example of cleft is given in (39) its baseline is the sentence *Paolo sarebbe / avrebbe voluto tornare a casa* "Paolo would have wanted to come back home."

(39) È [tornare a casa]$_i$ che Paolo avrebbe / *sarebbe
be.PRS.3SG come.back.INF to home that Teresa have.COND.3SG be.COND.3SG
voluto t_i.
want.PRTC
"It's to come back home that Paolo would have wanted."

In (39), the complement of the restructuring verb can be moved to the left periphery only when it triggers HAVE insertion. This happens when it is a TP. Hence, the ungrammaticality of BE in (39) can be explained if only TPs can undergo clefting, but not *v*Ps.

That the problem in (39) and in similar sentences with clitic climbing is the size of the constituent in the clefted position has been also argued by Wurmbrand (1998, 89). In much the same way as the present analysis, she suggests a "no-VP constraint": only constituents that are referential (in the sense of being clausal) can appear in clefted positions. As she noted, this is supported by the impossibility of participles (necessarily VPs or *v*Ps) in clefted positions, as shown in (40).

(40) *È [parlato di questo]$_i$ che (gli)=avrá t_i.
be.PRS.3SG speak.PRTC of this that DAT.3SG.M=have.FUT.3SG
"It's spoken about this that he (to him) will have."
(Cinque, 2004, 135)

8.5 | Relativization

Another operation that behaves in the same way is relativization. In example (41), the complement of the restructuring verb contains a relative pronoun. This moves to Spec, CP,

[27]It is widely assumed that ellipsis obeys an identity requirement: the deleted material and its antecedent must be identical (Chung, 2013; Lasnik, 1995), although it is debated whether identity is semantic (Merchant, 2001) or syntactic (Merchant, 2013). The sentence in (38) constitutes a problem for the syntactic matching condition. In fact, under the present analysis it corresponds to the following syntactic structure: … BE v_{restr} [$_{\mathbf{vP}}$ …] … HAVE v_{restr} [$_{\mathbf{TP}}$ Δ]. In the antecedent, the auxiliary BE indicates that the complement of the modal verb is a *v*P. Given the identity requirement on ellipsis, the complement of the stranded auxiliary should also be a *v*P. In contrast, the auxiliary HAVE associated with the elided constituent signals the presence of a TP. If the grammatical version of (38) (with HAVE) involves a mismatch in the complement size of the two modal verbs (in other words, if the analysis proposed in this paper is on the right track), then the identity requirement between the members of ellipsis should be semantic. A difference in syntactic size is possible if it does not imply a semantic difference (as is the case for the dummy T head, see Section 5.2).

thereby pied-piping the infinitive along with it and stranding the auxiliary, which can only be HAVE.

(41) ?il Direttore, [andare dal quale]$_i$ ieri non ho / *sono proprio
the director, go.INF to.the whom yesterday not have.PRS.1SG be.PRS.1SG really
voluto t_i
can.PRTC
"the Director, to go to whom yesterday I really didn't want."

It has been argued that pied-piping of infinitives shows the presence of a CP layer, and consequently lack of restructuring (Wurmbrand, 2004, and reference therein). An explanation for the ungrammaticality of BE in (41) is that pied-piping under relativization affects TPs or CPs but not *v*Ps. Auxiliary switch is then excluded, as the complement would be too small.[28]

8.6 | Clausal negation

A further piece of evidence for different sizes comes from clausal negation. The auxiliary cannot be BE in the presence of a clausal negation in the complement, as shown in (42).[29]

(42) Avrei / *sarei voluto [non andare da nessuna parte].
have.COND.1SG be.COND.1SG want.PRTC not go.INF to any place
"I would have wanted not to go anywhere."
(Cardinaletti & Shlonsky, 2004, 527)

According to Cardinaletti and Shlonsky (2004), the presence of clausal negation indicates a CP complement, and lack of restructuring. In (42), the sentence with HAVE consists of a biclausal structure, whereas the one with BE is a restructured monoclausal sentence. As the latter does not contain an embedded CP boundary, it cannot host negation, as its ungrammaticality confirms.

Partially adopting this proposal, I would like to suggest that clausal negation, which is possible when auxiliary switch does not take place, indicates a TP constituent. In fact, it has been argued that clausal negation involves a TP projection but not necessarily a CP boundary (Zanuttini, 2001). Clausal negation and auxiliary switch cannot be found within the same clause, as shown in (42), because the former requires a TP and the latter a *v*P. When the auxiliary is realized as HAVE, the complement of the modal is a TP, which is big enough to host clausal negation.

[28]The non-fully grammatical status of (41), indicated by the question mark, might be due to independent reasons. In particular, pied-piping of an infinitive with the wh-element on the right edge is a marked structure. Even though it is possible in Italian, it belongs to a formal register, and is cross-linguistically rather odd (Cinque, 1982; Heck, 2008).
[29]An anonymous reviewer has noted that BE is almost fine with clausal negation if the modal verb is *dovere*: *saremmo dovuti non andare più a cercarlo* "we should have never gone looking for him again." I agree with this judgment. Cinque (1999) has argued that sentential negation can occupy more than one position in the presence of scope-bearing elements, such as modal verbs. In Cinque (2004, 163), this is used to justify the possibility of clitic climbing even in the presence of negation. A similar explanation may apply in the present case, assuming that this negation is below TP, and the complement of *dovere* is a NegP (with no Infl-feature, so that v_{restr} agrees with *v*).

8.7 | Presuppositional negative markers

A final test concerns negative adverbs such as *mica* "at all."[30] This marker negates a proposition assumed in the discourse ("presuppositional negative marker," see Zanuttini, 1997, and reference therein). *Mica* must co-occur with the preverbal negation *non*, and can be located in different positions. Typically, it appears in a position lower than the finite verb, but it can also occur in a position preceding the finite verb, and in this case it does not require *non*. In restructuring, *mica* can appear in the lower portion of the clause (43-a), and in that case HAVE is the preferred option in the matrix, or in the matrix clause (either postverbally (43-b) or preverbally (43-c)), and in this case BE shows up. Its semantic contribution is always the same.

(43) a. Non ha / ??è voluto mica venire.
not have.PRS.3SG be.PRS.3SG want.PRTC mica come.INF

b. Non ??ha / è mica voluto venire.
not have.PRS.3SG be.PRS.3SG mica want.PRTC come.INF

c. Mica ??ha / è voluto venire.
mica have.PRS.3SG be.PRS.3SG want.PRTC come.INF
"He didn't want to come at all."

Zanuttini (1997, 74), Zanuttini (2001, 532) place *mica* and equivalent markers such as French *pas* in the specifier of a Neg head that selects a TP layer (TP2; Zanuttini, 1997 identifies four different positions for negation, which may also be responsible for speaker variation in (43)). When *mica* is in the complement of the modal verb, this must be a TP (even bigger: a NegP that contains a TP). Consequently, HAVE is expected, as confirmed by (43-a). If, instead, v_{restr} selects a *v*P, there are two consequences. On one hand, this results in BE insertion (see Section 6.1). On the other hand, there is no position where *mica* could be introduced. Hence, this adverb can be merged in the matrix clause only after this is built up to the TP layer, surfacing in either the base position (43-b) or the landing position after movement (43-c).

9 | RAISING OR CONTROL?

In Section 3.2, I have suggested that restructuring involves raising out of a TP or a *v*P complement. A possible alternative analysis would be to consider restructuring clauses with transparency effects as raising, and clauses without transparency effects as control (Cardinaletti & Shlonsky, 2004; Wurmbrand, 2003). Control consists of biclausal constructions with two co-referential subjects, one of which is phonologically null (*PRO*). The surface subject is an argument of the restructuring verb, which controls PRO in the embedded subject position. Transparency effects are excluded because they are clause-bounded, and control is biclausal. This alternative analysis is illustrated in (44) (cf. Wurmbrand, 2015 for this approach to auxiliary selection in restructuring).

(44) a. ✗ auxiliary switch: [DP_i HAVE V_{modal} [$_{CP}$ PRO_i $V_{lexical}$]] (control)
b. ✓ auxiliary switch: [DP_i BE V_{modal} [$_{vP}$ t_i $V_{lexical}$]] (raising)

[30] I thank an anonymous reviewer for having suggested to me the data in (43) as a further test for the size of the clause. Here I focus on *mica*, but similar data are found for the adverbials *più* "anymore," and *mai* "ever," as the reviewer indicated.

TABLE 2 Auxiliary switch and raising/control diagnostics.

	BE	HAVE	Raising (seem)
(a) Animacy restrictions	✗	✗	✗
(b) Weather verbs	✓	✓	✓
(c) Passive matrix	✗	–	✗
(d) Same meaning with active/passive	–	✓	✓
(e) High/low scope	✓	✓	✓
(f) Quantifier scope	✓	✓	✓
(g) Case retained	✓	✓	✓

If (44) is on the right track, the clause with auxiliary switch and the clause without it should behave differently with respect to the diagnostics for raising and control.

In this section, I provide evidence against the control analysis in (44). In Table 2, I summarize the results of the tests for raising and control, comparing them with the profile of the prototypical raising verb *sembrare* "seem." These tests suggest that there is no difference in terms of control and raising depending on the perfect auxiliary of the modal verb. In other words, the difference in the auxiliaries does not correspond to the syntactic difference in (44), and the raising analysis can be uniformly adopted. This result also provides evidence in favor of the present analysis of auxiliary selection: the different allomorphs for the perfect auxiliary result from Agree for person, and not from different thematic relations between the verb and the arguments.

9.1 | Animacy restrictions

In raising, there are no animacy restrictions for the subject as the verb does not assign it any Theta-role. In contrast, only animate DPs can typically control. In (45), where the subject is inanimate, there is no difference in grammaticality depending on the type of auxiliary in the matrix.

(45) Il burro [ha] / [è] dovuto [andare a male], prima che
the butter have.PRS.3SG be.PRS.3SG must.PRCT go.INF to bad before that
mi=decidessi a buttar=lo.
REFL.1SG=decide.CONJ.PST.1SG to throw.INF=ACC.3SG.M
"The butter had to go bad, before I decided myself to throw it away."

As in both cases an inanimate subject is possible, it is implausible that the clause with HAVE involves control and the clause with BE raising. Note, however, that this test alone cannot exclude a control analysis. In fact, even though control verbs tend to impose selectional restrictions to their arguments, there are also some control verbs that allow for inanimate arguments (e.g., *richiedere* "require": *questo attrezzo richiede di essere pulito ogni giorno* "this tool requires to be cleaned every day"). Nonetheless, these data are compatible with the raising analysis and, crucially, show that both the variants with and without auxiliary switch behave identically.

9.2 | Weather verbs

Weather verbs cannot occur in control constructions because their subject, being quasi-argumental, cannot be controlled (e.g., **spera di piovere* "it hopes to rain"). Consequently, if a restructuring sentence with a weather verb is grammatical, it cannot be an instance of control. In (46), an embedded weather verb is possible both in the presence and in the absence of auxiliary switch. Hence, there is no difference in the status of the two variants as far as control is concerned.

(46) Ha / È dovuto [piovere molto], prima di smettere.
have.PRS.3SG be.PRS.3SG must.PRCT rain.INF a lot before of stop.INF
"It had to rain a lot, before it stopped."

9.3 | Passivization

As example (47) shows, modal verbs cannot be passivized (unlike some aspectual verbs of the lower type, such as *finire*, see Cinque, 1999, 2003).

(47) *Questo libro ha/è stato voluto [leggere da Giovanni].
this book have.PRS.3SG/be.PRS.3SG be.PRTC want.PRTC read.INF by Giovanni
"This book has been wanted to read by Giovanni."
(adapted from Burzio, 1986, 374)

Wurmbrand (1999, 2004) has argued that modal verbs cannot be passivized because they are not lexical verbs: they do not introduce any argument and do not establish any thematic relations with the arguments of the lexical verb. Similarly, passivization of raising verbs is impossible because they do not introduce any external argument that can be demoted, or that is existentially bound. Thus, example (47) strongly suggests a raising analysis for restructuring modal verbs.

9.4 | Interpretation of active/passive complements

It is well known that the meaning of active and passive pairs of sentences is almost equivalent. As illustrated in example (48), this property is preserved under raising because raising verbs do not initiate any thematic relation with any argument.

(48) a. Teresa sembra [aver invitato Paolo alla festa].
Teresa seem.PRS.3SG have.INF invite.PRTC Paolo to.the party
"Teresa seems to have invited Paolo to the party." (active)

b. Paolo sembra [esser stato invitato da Teresa alla festa].
Paolo seem.PRS.3SG be.INF be.PRTC invite.PRTC by Teresa to.the party
"Paolo seems to have been invited by Teresa to the party." (passive)
→ meaning of (48a), (48b): "Paolo seems to be invited."

This is not the case for control verbs, where the clause with the passive complement and the one with the active complement have different meanings, as illustrated in (49).

(49) a. Teresa desidera [aver invitato Paolo alla festa].
Teresa desire.PRS.3SG have.INF invite.PRTC Paolo to.the party
"Teresa desires to have invited Paolo to the party." (active)
→ meaning of (49a): "Teresa wishes to have invited Paolo."

b. Paolo desidera [esser stato invitato da Teresa alla festa].
Paolo desire.PRS.3SG be.INF be.PRTC invite.PRTC by Teresa to.the party
"Paolo desires to have been invited by Teresa to the party." (passive)
→ meaning of (49b): "Paolo wishes to have been invited."

Modal verbs behave as raising verbs.[31] With both active and passive complements, the clauses in (50) have the same meaning, exactly as in (48). Thus, modal verbs do not assign any Theta-role to any argument, even when the perfect auxiliary is HAVE (here BE is excluded, see Section 8.2).

(50) a. Teresa ha dovuto [invitare Giulia alla festa].
Teresa have.PRS.3SG must.PRTC invite.INF Giulia to.the party
"Teresa had to invite Giulia to the party." (active)

b. Giulia ha dovuto [esser invitat-a da T. alla festa].
Giulia have.PRS.3SG must.PRTC be.PRTC-SG.F invite.PRTC-SG.F by T. to.the party
"Giulia had to be invited by Teresa to the party." (passive)
→ meaning of (50a), (50b): "Giulia has to be invited."

9.5 | Subject scope interactions

Raising allows for an interpretation in which the subject takes low scope with respect to the matrix verb (May, 1985; Wurmbrand, 1999). If only the higher scope is available, the structure involves control. As example (51) shows, modal verbs allow for both scope readings: high (a), and low (b).

(51) Qualcuno di New York potrebbe vincere la lotteria.
someone of New York can.COND.PRS.3SG win.INF the lottery
"Someone from New York could win the lottery."
✓ (a) There is someone from New York and it is likely that s/he will win the lottery.
✓ (b) It is likely that somebody from New York will win the lottery.

This property is maintained independently of auxiliary switch. In sentences without auxiliary switch, both readings are available, as shown in (52-a). Hence, restructuring sentences with HAVE should be considered raising constructions as (51). The same goes for auxiliary switch, in (52-b).

(52) a. Qualcuno di Roma avrebbe potuto [andare al mare].
someone of Rome have.COND.PRS.3SG can.PRTC go.INF to.the beach
"Someone from Rome could have gone to the beach."
✓ (a) There is someone from Rome and it is likely that s/he could have gone to the beach.
✓ (b) It is likely that somebody from Rome could have gone to the beach.

[31] This applies to *dovere* "must" and *potere* "can." The verb *volere* "want" behaves as a control verb in relation to this test. For the particular behavior of this verb, I refer the reader to Wurmbrand (2003); Grano (2015).

b. Qualcuno di Roma sarebbe potuto [andare al mare].
someone of Rome be.COND.PRS.3SG can.PRTC go.INF to.the beach
"Someone from Rome could have gone to the beach."
✓ (a) There is someone from Rome and it is likely that s/he could have gone to the beach.
✓ (b) It is likely that somebody from Rome could have gone to the beach.

9.6 | Quantifier scope interactions

In raising (but not in control), the quantifier that is lower in the surface order can take scope over the higher quantifier (Wurmbrand, 1999). I apply this test to restructuring clauses with an unaccusative subject (which is the internal argument of the embedded verb) and a prepositional phrase (whose base position is higher than the base position of the subject). If these can be interpreted both in the surface order (subject ≫ PP) and in the base order (PP ≫ subject), the sentence involves raising. Example (53) shows that both readings are available with restructuring verbs such as *dovere*.

(53) Almeno un professore deve andare da ogni studente.
at least a professor must.PRS.3SG go.INF to every student
"At least one professor must go to every student."
✓ (a) a ≫ every: there is at least one professor who must go to every student.
✓ (b) every ≫ a: every student must be visited by at least one professor.

Crucially, both readings are maintained in the perfect tense, both in the clause without auxiliary switch (54-a) and in the sentence with auxiliary switch (54-b). This shows that modal verbs are raising verbs, independently of the morpho-phonological realization of the perfect auxiliary.

(54) a. Almeno un professore ha dovuto [andare da ogni studente].
at least a professor have.PRS.3SG must.PRTC go.INF to every student
"At least one professor had to go to every student."
✓ (a) a ≫ every: there is at least one professor who had to go to every student.
✓ (b) every ≫ a: every student had to be visited by at least one professor.

b. Almeno un professore è dovuto [andare da ogni studente].
at least a professor be.PRS.3SG must.PRTC go.INF to every student
"At least one professor had to go to every student."
✓ (a) a ≫ every: there is at least one professor who had to go to every student.
✓ (b) every ≫ a: every student had to be visited by at least one professor.

9.7 | Preservation of case

In control, the subject is assigned case by the control verb. In raising, the subject shows the case assigned by the lexical verb. In example (55), a modal verb embeds a quirky predicate that assigns dative case. The subject of the modal verb maintains dative case, which is assigned by the lexical

verb in the complement.[32] Importantly, quirky case is retained with both auxiliaries: the modal verb does not initiate a thematic relation with the argument in either case.

(55) Per fare il gelataio, a Paolo [ha] / [è]
to do.INF the ice cream maker to Paolo.DAT.3SG.M have.PRS.3SG be.PRS.3SG
dovuto [piacere per forza il gelato].
must.PRTC like.INF by force the ice cream
"In order to be an ice cream maker, Paolo had really to like ice cream."

10 | ASPECTUAL AND MOTION VERBS

10.1 | Auxiliary selection with aspectual and motion verbs

Besides modal verbs, aspectual verbs and motion verbs also belong to the category of restructuring verbs. I will now focus on auxiliary selection, leaving aside the other characteristics of these verbs.

Among the aspectual verbs are the following predicates: *continuare a* "keep on," *smettere di* "refrain from," *cominciare a* "begin," *iniziare a* "begin," *prendere a* "begin," *restare a* "remain," *rimanere a* "remain," *stare a* "stay," *stare per* "be about to," *solere* "normally do," *finire di* "finish." In general, the perfect auxiliary of aspectual verbs is always HAVE, independently of the valency of the embedded lexical verb. An example with the verb *cominciare a* "begin" is given in (56).

(56) Paolo [ha] / [*è] cominciato [ad andare a teatro].
Paolo have.PRS.3SG be.PRS.3SG start.PRTC to go.INF to theater
"Paolo started going to the theater."

Interestingly, some aspectual verbs can (and sometimes must) switch their auxiliary under some particular conditions. Auxiliary switch with aspectual verbs takes place in the presence of clitic climbing if the embedded verb is unaccusative, reflexive, or impersonal. As far as I know, the possibility of auxiliary switch for aspectual verbs constitutes a new empirical observation. Example (57) contains an unaccusative predicate. Auxiliary switch, normally excluded (57-a)–(57-b), is obligatory with clitic climbing (57-c)–(57-d).

(57) a. Di ragazze, [hanno] cominciato [a venir=ne molte].
of girls have.PRS.3PL start.PRTC to come.INF=of many
b. *Di ragazze, [sono] cominciat-e [a venir=ne molte].
of girls be.PRS.3PL start.PRTC-PL.F to come.INF=of many

[32]The question whether of *a Paolo* in (55) is really a subject is controversial. In Italian, the experiencer PP of the verb *piacere* passes (most of) the tests for subjecthood. Some are listed here: (a) The dative argument has access to the same positions as nominative subjects do: it can occupy Spec, T, also stranding a quantifier (*alle ragazze piace a tutte la pizza* "all girls like pizza"). (b) It can control PRO (*A Paolo$_i$ è piaciuta la pizza [PRO$_i$ senza averla mai cucinata]* "Paolo liked pizza without ever having baked it"). (c) It can be the antecedent of subject-oriented reflexives (*A Paolo$_i$ piacciono le proprie$_i$ scarpe* "Paolo likes his own shoes"). Conversely, other tests are either not applicable (promoted argument in passivization) or give dubious or contrary results (ECM, nominative case assignment).

c. *Di ragazze, ne=[hanno] cominciato [a venire molte].
of girls of=have.PRS.3PL start.PRTC to come.INF many
d. Di ragazze, ne=[sono] cominciat-e [a venire molte].
of girls of=be.PRS.3PL start.PRTC-PL.F to come.INF many
"Of girls, many of them started to come."

The same pattern is also observed with reflexive arguments, as shown in (58). Auxiliary switch is impossible when the reflexive clitic pronoun remains in the lower position (58-a)–(58-b), but becomes obligatory when it climbs (58-c)–(58-d).

(58) a. Teresa [ha] cominciato [a lavar=si].
Teresa have.PRS.3SG start.PRTC to wash.INF=REFL.3SG
b. *Teresa [è] cominciat-a [a lavar=si].
Teresa be.PRS.3SG start.PRTC-SG.F to wash.INF=REFL.3SG
c. *Teresa si=[ha] cominciato [a lavare].
Teresa REFL.3SG=have.PRS.3SG start.PRTC to wash.INF
d. Teresa si=[è] cominciat-a [a lavare].
Teresa REFL.3SG=be.PRS.3SG start.PRTC-SG.F to wash.INF
"Teresa has started washing herself."

Importantly, not all aspectual verbs invariably allow for auxiliary switch. The perfect auxiliary BE can show up only with verbs of the BEGIN-type, such as the predicate *cominciare a* "begin," as illustrated above. Other aspectual verbs refrain from auxiliary switch even in the presence of clitic climbing. For instance, the auxiliary BE is never possible with verbs of the TRY-type, such as *provare a* "try" (59-a), and of the FINISH-type, such as *finire di* "finish" (59-b).

(59) a. Paolo ci=[ha]/[*è] provato [ad andare tre mesi fa].
Teresa there=be.PRS.3SG/have.PRS.3SG try.PRTC to go.INF three months ago
"Paolo tried to go there three months ago."
b. Paolo ci=[ha]/[*è] smesso [di andare tre mesi fa].
Paolo there=be.PRS.3SG/have.PRS.3SG stop.PRTC to go.INF three months ago
"Paolo stopped going there three months ago."

Moving now to restructuring motion verbs, some of these are the predicates *andare a* "go to, will," *arrivare a* "arrive at, even do," *venire a* "come to, end up," *tornare a* "come back to, do again." With these verbs, the perfect auxiliary is invariably realized as BE. This also happens when a transitive verb is embedded, both with clitic climbing (60-a) and without it (60-b).

(60) a. Paolo lo=[è]/[*ha] andato [a mangiare].
Paolo ACC.3SG.F=be.PRS.3SG/have.PRS.3SG go.PRTC to eat.INF
b. Paolo [è] / [*ha] andato [a mangiar=lo].
Paolo be.PRS.3SG / have.PRS.3SG go.PRTC to eat.INF=ACC.3SG.M
"Paolo went to eat it."

Reflexive arguments (61) do not provoke any change in the auxiliary. This is expected as the auxiliary is already BE.

(61) a. Teresa è andat-a [a lavar=si].
Teresa be.PRS.3SG go.PRTC-SG.F to wash.INF=REFL.3SG
Teresa went to eat the cake.'
b. Teresa si= è andat-a [a lavare].
Teresa REFL.3SG=be.PRS.3SG go.PRTC-SG.F to wash.INF
"Teresa went to wash herself."

To sum up, aspectual verbs normally combine with HAVE, and motion verbs with BE. Moreover, some aspectual verbs behave as modal verbs in allowing for auxiliary switch. However, this happens only in the presence of clitic climbing.

10.2 | The *v* head of aspectual and motion verbs

In this section, I propose that some of the differences between aspectual, motion, and modal verbs, such as the availability of auxiliary switch, can be derived by means of different *v* heads.

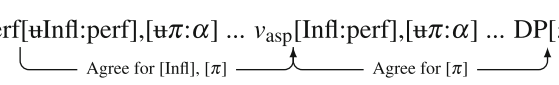
In Section 5.1, I have introduced the functional head responsible for restructuring, v_{restr}. Modal verbs are prototypical restructuring verbs because they are selected by a "special" *v* that bears a double [Infl] feature, a person probe, and can select complements of different sizes, crucially smaller than CPs. Auxiliary selection is determined by the presence of a person probe [uπ:_] on v_{restr}. I suggest that aspectual and motion verbs are characterized by a *v* that lacks the double [Infl] feature. In addition, their *v* closely resembles the *v* that corresponds to their lexical use: aspectual verbs combine with a *v* similar to transitive *v* and motion verbs with a *v* similar to defective *v*. The difference responsible for auxiliary selection is the presence or absence of a person probe on *v*. In particular, aspectual *v* bears a person probe as transitive *v* does, whereas motion *v* bears no probe just as unaccusative *v* does not. The inventory of the restructuring *v* heads is given in (62).

(62) a. v_{restr}: [•*v*P•]/[•TP•] ≻ [Infl:_] ≻ [uInfl:non-fin] ≻ [uπ:_]
b. v_{asp}: [•*v*P•]/[•TP•] ≻ [Infl:_] ≻ [uπ:_]
c. v_{mot}: [•*v*P•]/[•TP•] ≻ [Infl:_]

Aspectual and motion *v* heads (62-b)–(62-c) share the TP/*v*P c-selectional requirement with v_{restr} (62-a). This is a property that distinguishes them from transitive or unaccusative lexical verbs, which instead select for DP or CP complements. However, the heads v_{asp} and v_{mot} are "more lexical" than v_{restr} because they do not bear a valued [Infl] probe.

The possibility of selecting reduced complements might correlate with clitic climbing, which is allowed by these verbs. Auxiliary switch is, instead, possible only with a *v* head that bears a π-probe and a double [Infl] feature, that is, only with modal verbs. The lack of the double [Infl] feature on v_{asp} and v_{mot} preempts cyclic Agree between Perf, v_{restr}, and *v* (see Section 5.1). Consequently, auxiliary selection for aspectual and motion verbs depends only on the presence or absence of a person probe on their *v* and not on the features of the lower *v*. These verbs impose "their own" auxiliary in the sense that the determining factor is just their *v* head. The derivation for an aspectual verb with a *v*P complement containing an unaccusative verb is illustrated in (63).

(63) *Aspectual verbs: v_{asp} always finds a π-value ⇒ Perf is always substituted by HAVE*



In (63), the person probe of v_{asp} is always able to find a person feature because its search domain is not restricted by Nested Agree (cf. Section 4.2). Assuming that every v is a phase, there will always be a DP in the specifier of the embedded v (i.e., the subject), which is the goal for π-Agree. As a consequence of successful valuation via Agree, the perfect auxiliary is always realized as HAVE (cf. Vocabulary Items in (15)), regardless of what is embedded (TP or vP, transitive or defective v).

The derivation for a motion verb with a transitive verb in a TP complement is given in (64).

(64) *Motion verbs: v_{mot} never bears a π-value ⇒ Perf is always substituted by BE*

Perf[~~u~~Infl:perf],[~~u~~π:_] ... v_{mot}[Infl:perf] ... T[Infl:_] ... DP[π:α] ... v[~~u~~π:β]
Agree for [Infl], [π]

The head v_{mot} does not contain any person probe. As illustrated in (64), the Infl-probe on Perf targets v_{mot}. Thereafter, the π-probe on the same head again targets v_{mot}. As this is not a relevant goal for π-Agree, the unsatisfied π-probe proceeds its search downwards. However, it cannot go beyond v_{mot} because of the PIC. Consequently, π-Agree on Perf fails, and the auxiliary is always realized as BE, even when the motion verb embeds a TP.

10.3 | Auxiliary switch with aspectual verbs

In Section 10.1, I have highlighted that some aspectual verbs allow for auxiliary switch in the presence of clitic climbing. In (65), I repeat examples (57-b) and (57-d).

(65) a. *Di ragazze, sono cominciat-e [a venir=ne molte].
of girls be.PRS.3PL start.PRTC-PL.F to come.INF=of many
b. Di ragazze, ne=sono cominciat-e [a venire molte].
of girls of=be.PRS.3PL start.PRTC-PL.F to come.INF many
"Of girls, many of them started to come."

I suggest that auxiliary switch is an effect of Merge of the aspectual verb with v_{restr}, rather than with v_{asp}. When an aspectual verb is selected by v_{restr}, the derivation in (63) becomes like (66).

(66) *Aspectual verbs with v_{restr}: same behavior as modal verbs*

Perf[~~u~~Infl:perf],[~~u~~π:_] .. v_{restr}[Infl:perf][~~u~~Infl:non-fin],[~~u~~π:_] .. DP[π:α] .. v[Infl:non-fin]
Agree for [Infl], [π] Agree for [Infl], [π]

The derivation in (66) is the same as for modal verbs (illustrated in Section 6). Because of the probe [uInfl:non-fin] on v_{restr}, the heads v and v_{restr} agree for [Infl]. Thereafter, v_{restr} probes for person. Owing to Nested Agree, v_{restr} must target v for [π]. The DP_{sbj} in Spec, vP is now ignored by the person probe on v_{restr} because the earlier Infl-dependency between v_{restr} and v restricts the domain of the subsequent π-Agree operation. In example (66), containing a vP complement with an unaccusative verb, valuation of the π-probe on v_{restr} is not possible because the lower unaccusative v does not bear any person feature (and because there are no other accessible goals in the structure due to the PIC). This operation leads to an unvalued person feature on v_{restr}. Person Agree on Perf is carried out in the same way: Perf agrees with v_{restr}, which bears an unvalued person feature. An unvalued π-feature on Perf results in BE insertion (i.e., in auxiliary switch).

At first sight, the present analysis might not seem on the right track, given that auxiliary switch is tied to clitic climbing (cf. (65-a) vs. (65-b)). However, there are some reasons to think that this is indeed an adequate approach to this problem. First of all, not all aspectual verbs allow for the feeding effect of clitic climbing on auxiliary switch. For example, the perfect auxiliary of *provare a* "try" can never be BE, even in the presence of clitic climbing. I have provided the relevant examples in (59) in Section 10.1. If auxiliary switch was due to the placement of the clitic pronoun, then it should be invariably possible with all aspectual verbs. In contrast, under the present approach it is expected that not all aspectual verbs may be equally combined with v_{restr}. In particular, some aspectual verbs cluster more closely with modal verbs and hence can be selected by v_{restr}, whereas other verbs are more lexically oriented and do not allow for this change of selection. The change from v_{asp} to v_{restr} is more likely for those verbs that behave similarly to modal verbs.

An argument for this approach comes from the fact that those aspectual verbs that allow for auxiliary switch (e.g., *cominciare a* "begin") resemble modal verbs more closely than those aspectual verbs that do not exhibit auxiliary switch (e.g., *provare a* "try"). This can be shown with the tests for raising and control described in Section 9.[33] For instance, the test about the interpretation of active/passive complements (cf. section 9.4) shows that *cominciare a* "begin" behaves as a raising verb (67), while *provare a* "try" behaves as a control verb (68).

(67) a. Teresa comincia ad invitare Paolo ad ogni festa.
Teresa start.PRS.3SG to invite.INF Paolo to every party
"Teresa starts to invite Paolo to every party."

b. Paolo comincia ad esser invitato da Teresa ad ogni festa.
Paolo start.PRS.3SG to be.INF invite.PRTC by Teresa to every party
"Paolo starts to be invited by Teresa to every party."
→ meaning of (67a) and (67b): "Paolo is invited."

(68) a. Teresa prova ad invitare Paolo ad ogni festa.
Teresa try.PRS.3SG to invite.INF Paolo to every party
"Teresa tries to invite Paolo to every party."
→ meaning of (68a): "Teresa tries to invite Paolo."

b. Paolo prova ad esser invitato da Teresa ad ogni festa.
Paolo try.PRS.3SG to be.INF invite.PRTC by Teresa to every party
"Paolo tries to be invited by Teresa to every party."
→ meaning of (68b): "Paolo tries to be invited."

A second piece of evidence for the present approach is the possibility of auxiliary switch when the subject is inanimate, even without any clitic being in the structure, as shown in (69-b) (to be compared with (65-a) and (56)).

(69) a. Le foglie hanno cominciato [a cadere da tre giorni].
the leaves have.PRS.3PL start.PRTC to fall.INF from three days

b. Le foglie sono cominciat-e [a cadere da tre giorni].
the leaves be.PRS.3PL start.PRTC-PL.F to fall.INF from three days
"The leaves have started to fall three days ago."

[33]The result of these tests is that aspectual and motion verbs show partial evidence both for raising (e.g., they can embed weather verbs) and for control (e.g., some of them can be passivized).

Although inanimate arguments are possible even with some control verbs, the absence of animacy restrictions is a hallmark of raising (see Section 9.1). Hence, when the subject of the aspectual verb is inanimate, the aspectual verb is more likely to be used as an athematic raising verb (as modal verbs are). This fact makes it easier for the aspectual verb to be optionally selected by v_{restr}, rather than by v_{asp}, leading to optional auxiliary switch (69-b).

I conclude that those aspectual verbs that resemble modal verbs more closely, such as *cominciare a* "start," can be categorized as modal verbs (i.e., it is possible to Merge them with v_{restr} rather than with v_{asp}).[34] When this is the case, auxiliary switch happens (if applicable).

11 | CONCLUSION

Restructuring clauses are characterized by apparently optional transparency effects in the choice of the perfect auxiliary associated with the restructuring verb. The auxiliary can be either HAVE or the one corresponding to the lexical verb (this option is detectable only when the auxiliary of the lexical verb is BE). I have accounted for these data by assuming that auxiliary selection is a consequence of Agree for the person feature, following Amato (2022, 2023). My proposal is twofold: (i) restructuring configurations are created by a special type of v_{restr}, which establishes cyclic Agree by means of a double [Infl] feature, and (ii) the lower portion of the clause can be of different sizes (evidence in favor of different complement sizes is provided in Section 8).

The transparency effects in auxiliary selection arise because of these two factors. When v_{restr} selects for a small complement (vP), the clausal auxiliary faithfully corresponds to the one that would be selected by the lower v. This happens because v_{restr} copies the person feature from the lower v, and this is successively copied by Perf. Nevertheless, this effect is optional as it depends on the size of the complement. If the complement is as large as a TP, then the lower v is no longer the decisive factor for auxiliary selection. Instead, the presence of a T head allows the person probe on v_{restr} to reach the embedded subject, thereby neutralizing the difference between the different types of v and leading to HAVE insertion with any type of lexical verb.

Auxiliary switch can be observed whenever there is some kind of defectiveness in the structure, either in the functional head v (unaccusative verbs) or in the DPs (reflexive and impersonal clauses). In the case of defective v, Agree on Perf fails because of the absence of a matching goal in the c-command domain of the probe. In the case of defective arguments, Agree with ϕ-defective items leads to a failure in valuation. In both cases, the elsewhere form BE emerges.

[34]This is just a preliminary conclusion, and future research is definitely needed. Many factors must be better understood, such as the interaction with animacy and clitics, which influence auxiliary selection to a different extent. With inanimate subjects, the choice of v_{restr} for aspectual verbs seems to be optional, allowing for optional auxiliary switch (69). With clitic climbing, the choice of v_{restr} seems to be obligatory, as auxiliary switch must take place (65). A related problem is how to exclude auxiliary switch when there are no clitics in the structure, as in (56). The behavior of the different aspectual verbs with respect to auxiliary switch is also an open question. An anonymous reviewer suggests relating the particular behavior of *cominciare a* to the fact that this verb allows for both auxiliaries outside restructuring (e.g., *la lezione ha cominciato / è cominciata alle tre* "the class started at three o'clock"). It is certainly a valid suggestion that BE is possible with those verbs that can be independently combined with it, as aspectual and motion verbs tend to keep the auxiliary that their lexical counterpart is associated with. However, there are still two main points to explain. First, it is not clear why auxiliary switch is usually not possible, as in (56). In a derivation with the "cominciare-BE", BE should be expected, just as happens for motion verbs. Second, other verbs that allow for both auxiliaries outside restructuring still do not allow for auxiliary switch. Such an example is *smettere*, which can be combined with both auxiliaries in root clauses (e.g., *il suono del campanello ha smesso / è smesso all'improvviso* "the ring of the bell has stopped out of the blue"), but does not exhibit auxiliary switch in restructuring, as illustrated in (59-b).

This explains why transitive verbs exhibit BE when they are combined with defective arguments, but unaccusative verbs can never combine with HAVE (as they always involve a defective functional head). The "switch" is only from the most specific form (HAVE) to the elsewhere form (BE).

The alternation between BE and HAVE with modal verbs is a reflex of different syntactic structures (*v*P vs. TP complement), and not of lack or presence of restructuring. This is confirmed by the fact that the difference in the auxiliaries does not correspond to the difference between control and raising, as illustrated in Section 9.

I have also discussed the behavior of other restructuring verbs that in general are not subject to auxiliary switch. I have proposed that aspectual and motion verbs combine with a restructuring *v* that is different from the one found with modal verbs and that reminds of, respectively, a transitive and an unaccusative *v*. This explains their resistance to auxiliary switch. I have also provided new data about auxiliary switch for some aspectual verbs (under specific circumstances). I have explained this phenomenon as the result of Merge with the modal v_{restr} head.

As far as I know, in this paper I have provided the first formal analysis of auxiliary selection in restructuring. Nonetheless, there remain some open questions. The most urgent issue is understanding the interaction between auxiliary selection and clitic climbing, which is still far from clear. The idea that both depend on a *v*P complement and always co-occur is supported by the core data (Section 2) and by the (still not entirely clear) behavior of aspectual verbs (Section 10.3). However, there are cases where these two phenomena do not appear together (Section 7). Another question concerns the resistance to auxiliary switch of different aspectual verbs. Similarly, the availability of auxiliary switch is not always exactly equal for all modal verbs *volere*, *potere*, and *dovere*. All of these issues certainly deserve further study.

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DATA AVAILABILITY STATEMENT

The data discussed in this article come from introspection and have been collected by traditional consultative methods. Where explicitly indicated with a reference, the data have been previously reported in the literature cited.

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REFERENCES

Abels, K. 2012. *Phases: An Essay on Cyclicity in Syntax*. Berlin: Walter de Gruyter.

Alencar, D., L. Figuiredo, and C. Kelling. 2005. "Are Reflexive Constructions Transitive or Intransitive? Evidence from German and Romance." In *Proceedings of the LFG05 Conference*, edited by M. Butt and T. H. King, Stanford: CSLI Publications 1–20.

Alexiadou, A., E. Anagnostopoulou, and F. Schäfer. 2015. *External Arguments in Transitivity Alternations: A Layering Approach*. Oxford: Oxford University Press.

Amato, I. 2022. "Auxiliary Selection Is Agree: Person-Driven and Argument-Structure-Based Splits." In *RLLT17*, Vol 8, edited by O. Matushansky, L. Roussarie, M. Russo, E. Soare, and S. Wauquier, volume Special issue of Isogloss Open Journal of Romance Linguistics Barcelona: Universitat Autònoma de Barcelona 1–20.

Amato, I. 2023. Auxiliary Selection in Italo-Romance: A Nested-Agree Approach. Linguistik Aktuell/Linguistics Today, 281. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://doi.org/10.1075/la.281.

Anagnostopoulou, E. 2004. "On Clitics, Feature Movement and Double Object Alternation." In *Minimality Effects in Syntax*, edited by A. Stepanov, G. Fanselow, and R. Vogel, 15–36. Berlin: De Gruyter Mouton.

Baker, M., and J. D. Bobaljik. 2017. "On Inherent and Dependent Theories of Ergative Case." In *The Oxford Handbook of Ergativity*, edited by J. Coon, D. Massam, and L. D. Travis, 111–134. Oxford: Oxford University Press.

Belletti, A. 1990. *Generalized Verb Movement: Aspects of Verb Syntax*. Torino: Rosenberg & Sellier.

Belletti, A. 1999. "Italian/Romance Clitics: Structure and Derivation." In *Clitics in the Languages of Europe*, edited by H. van Riemsdijk, 543–580. Berlin: De Gruyter Mouton.

Bentley, D. 2004. "Ne-Cliticisation and Split Intransitivity." *Journal of Linguistics* 40: 219–262.

Bentley, D. 2011. *Split Intransitivity in Italian*. Berlin: De Gruyter Mouton.

Bjorkman, B. M. 2011. *Be-Ing Default: The Morphosyntax of Auxiliaries*. Doctoral dissertation. Cambridge, Mass: Massachusetts Institute of Technology.

Bjorkman, B. M. 2018. "Ergative as Perfective Oblique." *Syntax* 21: 321–361.

Bobaljik, J. D. 1993. "Ergativity and Ergative Unergatives." In *MIT Working Papers in Linguistics 19: Papers on Case and Agreement II*, edited by C. Phillips, 45–88. Cambridge, Mass: MITWPL.

Bruening, B. 2013. "By Phrases in Passives and Nominals." *Syntax* 16: 1–41.

Burzio, L. 1986. *Italian Syntax: A Government-Binding Approach*. Dordrecht: Springer.

Cardinaletti, A., and U. Shlonsky. 2004. "Clitic Positions and Restructuring in Italian." *Linguistic Inquiry* 35: 519–557.

Cerrone, P., and J. Sprouse. 2019. "Testing Split-Intransitivity: An Experimental Investigation of Two Diagnostics in Italian." *Talk Given at GLOW* 42: 2019.

Chomsky, N. 1973. "Conditions on Transformations." In *A Festschrift for Morris Halle*, edited by S. R. Anderson and P. Kiparsky, 232–286. New York: Reinehart and Winston: Holt.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge, Mass: MIT Press.

Chomsky, N. 2000. "Minimalist Inquiries: The Framework." In *Step by Step*, edited by R. Martin, D. Michaels, and J. Uriagereka, 89–155. Cambridge, Mass: MIT Press.

Chomsky, N. 2001. "Derivation by Phase." In *Ken Hale. A Life in Language*, edited by M. Kenstowicz, 1–52. Cambridge, Mass: MIT Press.

Chung, S. 2013. "Syntactic Identity in Sluicing: How Much and Why." *Linguistic Inquiry* 44: 1–44.

Cinque, G. 1982. "On the Theory of Relative Clauses and Markedness." *The Linguistic Review* 1: 247–296.

Cinque, G. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. New York: Oxford University Press.

Cinque, G. 2003. "The Interaction of Passive, Causative, and 'Restructuring' in Romance." In *The Syntax of Italian Dialects*, edited by C. Tortora, 50–66. Oxford: Oxford University Press.

Cinque, G. 2004. ""Restructuring" and Functional Structure." In *The Structure of CP and IP*, edited by L. Rizzi, 132–191. New York: Oxford University Press.

Collins, C. 2005. "A Smuggling Approach to the Passive in English." *Syntax* 8: 81–120.

Coon, J., and S. Keine. 2020. "Feature Gluttony." *Linguistic Inquiry* 52: 1–56.

Cruschina, S. 2012. "Focus in Existential Sentences." In *Enjoy Linguistics! Papers Offered to Luigi Rizzi on the Occasion of his 60th Birthday*, edited by V. Bianchi and C. Chesi, 77–107. Siena: CISCL Press.

D'Alessandro, R., and I. G. Roberts. 2010. "Past Participle Agreement in Abruzzese: Split Auxiliary Selection and the Null-Subject Parameter." *Natural Language & Linguistic Theory* 28: 41–72.

Dagnac, A. 2010. "Modal Ellipsis in French, Spanish and Italian: Evidence for a TP-Deletion Analysis." In *Romance Linguistics 2008: Interactions in Romance. Selected Papers from the 38th Linguistic Symposium on Romance Languages (LSRL)*, edited by K. Arregi, Z. Fagyal, S. Montrul, and A. Temblay, 157–170. Amsterdam: John Benjamins Publishing Company.

Embick, D. 2004. "Unaccusative Syntax and Verbal Alternations." In *The Unaccusativity Puzzle. Explorations of the Syntax-Lexicon Interface*, edited by A. Alexiadou, E. Anagnostopoulou, and M. Everaert. Oxford: Oxford University Press.

Fischer, S. 2004. *Towards an Optimal Theory of Reflexivization*. Doctoral dissertation. Tübingen: Universität Tübingen.

Georgi, D. 2014. *Opaque Interactions of Merge and Agree: On the Nature and Order of Elementary Operations*. Doctoral dissertation. Leipzig: University of Leipzig.

Grano, T. 2015. *Control and Restructuring*. Oxford: Oxford University Press.

Grimshaw, J. B. 1982. "On the Lexical Representation of Romance Reflexive Clitics." In *The Mental Representation of Grammatical Relations*, edited by J. Bresnan, 87–146. Cambridge, Mass: MIT Press.

Hale, K., and S. J. Keyser. 1993. "On Argument Structure and the Lexical Expression of Syntactic Relations." In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, edited by K. Hale and S. J. Keyser, 53–110. Cambridge, Mass: MIT Press.

Hale, K., and S. J. Keyser. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge, Mass: MIT Press.

Halle, M., and A. Marantz. 1993. "Distributed Morphology and the Pieces of Inflection." In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, edited by K. Hale and S. J. Keyser, 111–176. Cambridge, Mass: MIT Press.

Harley, H., and R. Noyer. 1999. "Distributed Morphology." *Glot International* 4: 3–9.

Heck, F. 2008. *On Pied-Piping: Wh-Movement and beyond*. Berlin: De Gruyter Mouton.

Heck, F. 2016. *Nonmonotonic Derivations*. Habiliation thesis. Leipzig: Universität Leipzig.

Heinat, F. 2006. *Probes, Pronouns and Binding in the Minimalist Program*. Doctoral dissertation. Lund: Lund University.

Kayne, R. S. 1975. *French Syntax: The Transformational Cycle*. Cambridge, Mass: MIT Press.

Kayne, R. S. 1989. "Null Subjects and Clitic Climbing." In *The Null Subject Parameter*, edited by O. Jaeggli and K. Safi, 239–261. Dordrecht: Foris.

Kayne, R. S. 1993. "Toward a Modular Theory of Auxiliary Selection." *Studia Linguistica* 47: 3–31.

Koizumi, M. 1994. "Layered Specifiers." In *Proceedings of NELS 24*, edited by M. Gonzàlez, 255–269. Amherst: GLSA.

Laka, I. 1993. "Unergatives that Assign Ergative, Unaccusatives that Assign Accusative." In *MIT Working Papers in Linguistics 19: Papers on Case and Agreement I*, edited by J. D. Bobaljik and C. Phillips, 149–172. Cambridge, Mass: MITWPL.

Lasnik, H. 1995. "Verbal Morphology: Syntactic Structures Meets the Minimalist Program." In *Evolution and Revolution in Linguistic Theory*, edited by H. Campos and P. Kempchinsky, 251–275. Washington, D.C: Georgetown University Press.

Legate, J. A. 2003. "Some Interface Properties of the Phase." *Linguistic Inquiry* 34: 506–515.

Legate, J. A. 2005. "Phases and Cyclic Agreement." In *Perspectives on Phases*, edited by M. McGinnis and R. Norvin, 147–156. Cambridge, Mass: MIT Working Papers in Linguistics.

Legate, J. A. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, Mass: MIT Press.

Lonzi, L. 1986. "Pertinenza Della Struttura Tema-Rema per l'analisi Sintattica." In *Tema-Rema in Italiano*, edited by H. Stammerjohann, 99–120. Tübingen: Gunter Narr Verlag.

Marantz, A. 1984. *On the Nature of Grammatical Relations*. Cambridge, Mass: MIT Press.

May, R. 1985. *Logical Form: Its Structure and Derivation*. Cambridge, Mass: MIT Press.

McCawley, J. 1984. "Exploitation of the Cyclic Principle as a Research Strategy in Syntax." In *Sentential Complementation*, edited by W. de Geest and Y. Putseys, 165–183. Dordrecht: Foris.

McCawley, J. 1988. *The Syntactic Phenomena of English*. Chicago: University of Chicago Press.

Mensching, G. 2000. *Infinitive Constructions with Specified Subjects: A Syntactic Analysis of the Romance Languages*. Oxford: Oxford University Press.

Merchant, J. 2001. *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press.

Merchant, J. 2013. "Voice and Ellipsis." *Linguistic Inquiry* 44: 77–108.

Müller, G. 2009. "Ergativity, Accusativity, and the Order of Merge and Agree." In *Explorations of Phase Theory: Features and Arguments*, edited by K. K. Grohmann, 269–308. Berlin: De Gruyter Mouton.

Müller, G. 2010. "On Deriving CED Effects from the PIC." *Linguistic Inquiry* 41: 35–82.

Perlmutter, D. M. 1978. "Impersonal Passives and the Unaccusative Hypothesis." In edited by Jaeger, J. J., A. C. Woodbury, F. Ackerman, C. Chiarello, O. D. Gensler, J. Kingston, E. E. Sweetser, H. Thompson, and K. W. Whistler, *Proceedings of the Fourth Annual Meeting of the Berkeley Linguistics Society* 157–191. Berkeley: BLS by the Linguistic Society of America.

Pesetsky, D., and E. Torrego. 2007. "The Syntax of Valuation and the Interpretability of Features." In *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation. In Honor of Joseph E. Emonds*, edited by S. Karimi, V. Samiian, and W. Wilkins, 262–294. Amsterdam: John Benjamins Publishing Company.

Pineda, A. 2014. "What Lies behind Dative/Accusative Alternations in Romance." In *Rllt 2012*, edited by K. Lahousse and S. Marzo, 123–139. Amsterdam: John Benjamins.

Preminger, O. 2012. "The Absence of an Implicit Object in Unergatives: New and Old Evidence from Basque." *Lingua* 122: 278–288.

Preminger, O. 2014. *Agreement and its Failures*. Cambridge, Mass: MIT Press.

Pylkkänen, L. 2008. *Introducing Arguments*. Doctoral dissertation. Cambridge, Mass: Massachusetts Institute of Technology.

Radford, A. 1977. *Italian Syntax: Transformational and Relational Grammar*. Cambridge: Cambridge University Press.

Raposo, E. 1987. "Case Theory and Infl-to-Comp: The Inflected Infinitive in European Portuguese." *Linguistic Inquiry* 18: 85–109.

Reuland, E. 2001. "Primitives of Binding." *Linguistic Inquiry* 32: 439–492.

Reuland, E. 2005. "Agreeing to Bind." In *Organizing Grammar: Linguistic Studies in Honor of Henk Van Riemsdijk*, edited by J. Koster, H. van der Hulst, and H. van Riemsdijk, 505–513. Berlin: de Gruyter.

Rizzi, L. 1978. "A Restructuring Rule in Italian Syntax." In *Recent Transformational Studies in European Languages*, edited by S. J. Keyser, 113–158. Cambridge, Mass: The MIT Press.

Rizzi, L. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.

Rooryck, J., and G. Vanden Wyngaerd. 2011. *Dissolving Binding Theory*. New York: Oxford University Press.

Sabel, J. 1998. *Principles and Parameters of Wh-Movement*. Habiliation thesis. Frankfurt: Universität Frankfurt.

Sorace, A. 2000. "Gradients in Auxiliary Selection with Intransitive Verbs." *Language* 76: 859–890.

Sportiche, D. 1996. "Clitic Constructions." In *Phrase Structure and the Lexicon*, edited by J. Rooryck and L. Zaring, 213–276. Dordrecht: Kluwer.

Sportiche, D. 2014. "Assessing Unaccusativity and Reflexivity: Using Focus Alternatives to Decide What Gets which θ-Role." *Linguistic Inquiry* 45: 305–321.

Wurmbrand, S. 1998. *Infinitives*. Doctoral dissertation. Cambridge, Mass: Massachusetts Institute of Technology.

Wurmbrand, S. 1999. "Modal Verbs Must be Raising Verbs." In *Proceedings of WCCFL 18*, edited by O. Bird, A. Carnie, J. D. Haugen, and P. Norquest, 599–612. Somerville: Cascadilla.

Wurmbrand, S. 2003. *Infinitives: Restructuring and Clause Structure*. Berlin/New York: De Gruyter Mouton.

Wurmbrand, S. 2004. "Two Types of Restructuring - Lexical Vs. Functional." *Lingua* 114: 991–1014.

Wurmbrand, S. 2012. "The Syntax of Valuation in Auxiliary–Participle Constructions." In *Proceedings of WCCFL 29*, edited by J. Choi, E. A. Hogue, J. Punske, D. Tat, J. Schertz, and A. Trueman. Somerville: Cascadilla.

Wurmbrand, S. 2014. "Tense and Aspect in English Infinitives." *Linguistic Inquiry* 45: 403–447.

Wurmbrand, S. 2015. "Restructuring Cross-Linguistically." In *Proceedings of NELS 45*, edited by T. Bui and D. Özyildiz, 227–240. University of Massachusetts: GLSA.

Zanuttini, R. 1997. *Negation and Clausal Structure: A Comparative Study of Romance Languages*. Oxford: Oxford University Press.

Zanuttini, R. 2001. "Sentential Negation." In *The Handbook of Contemporary Syntactic Theory*, edited by M. Baltin and C. Collins, 511–535. Oxford: Blackwell.

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