

# The Diachronic Shift of Embedded Clauses

- Restructuring of the Control Verb *credere* -

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## 1. Introduction

In Modern Italian, infinitival clause types which appear in the embedded clause are presented in examples (1) to (4).

- (1) *Infinitival clauses in control verbs*: Gianni ordinò a Piero di **andarsene**.  
Gianni ordered to Piero *di* to.go.away  
"Gianni ordered Piero to go away."
- (2) *Infinitival clauses in raising verbs*: Maria sembra **amare** Gianni.  
Maria seems love Gianni  
"Maria seems to love Gianni."
- (3) *Infinitival clauses with the accusative subject*: Ho visto i miei amici **piangere**.  
have seen the my friends to.cry  
"I have seen my friends cry."
- (4) *Infinitival clauses with the nominative subject*:  
Ritengo **esser** Piero uno dei nostri più validi sostenitori.  
consider to.be Piero one of.the our more efficient supporters  
"I think that Piero is one of our more efficient supporters." (Skytte et al. 1991: 485-486)

The verb *credere* of Modern Italian is mainly used as a subject control verb of (1).

- (5) ..., Prisca credeva di **morire** dalla vergogna... (CORIS: NARRATRomanzi)  
Prisca believed *di* to.die from.the shame  
"Prisca felt like a mortal shame"

The control predicate generally takes the *di* infinitival form (*di*Inf) as in (5), but the bare infinitival form ( $\varnothing$ Inf) is barely found:

- (6) ..., i Romani credevano **vedere** quel giorno «una solennissima giustizia»...  
the Romans believed to.see that day a very.solemn justice  
"the Romans believed to see that day «a very solemn justice»" (1940: Saggistica)

Additionally, the infinitival clause within the sentence of the verb *credere* is used as an infinitival proposition accompanied by a predicative complement of the object<sup>1)</sup>:

- (7) ..., credeva possibile **incontrarla**. (1950: Saggistica)  
believed possible to.meet.her  
"he believed it was possible to meet her"

The *di*Inf also appears in this usage as well as the  $\varnothing$ Inf:

- (8) ... nessuno di essi credeva opportuno *di* **limitare** a quei bravi armigeri la facoltà...  
 nobody of they believed appropriate *di* to.limit to those good soldiers the faculty  
 "nobody of them believed that it was appropriate to limit the faculty for those good soldiers"  
 (1910: Saggistica)

Furthermore, the  $\varnothing$ Inf occurs as a predicate of the Small Clause (SC) as in (4):

- (9) ... il primo credeva [<sub>sc</sub> sua missione **fare** il bene e la grandezza del suo paese]...  
 the first believed his mission to.make the good and the greatness of.the his nation  
 "the first one believed that his mission was good and grand nation" (1920: Saggistica)

Beside this, restructuring which happened in Old Italian drops out of use in Modern Italian.

- (10) ..., credendole **poter** tagliare. (13C: *Tesoro*)  
 believing.them can cut  
 "believing he can cut them"

From the above, the use of infinitival clauses within the verb *credere* in Modern Italian is laid out in Table 1.

<Table 1: The use of infinitival clauses within the verb *credere* in Modern Italian>

	In control	Proposition	SC	Restructuring
<i>di</i> Inf	+	±	-	-
$\varnothing$ Inf	±	±	±	-

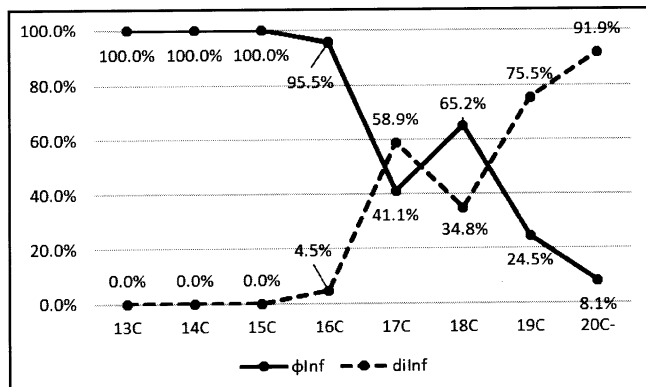
'+' indicates that the use is productive, '±' indicates that it is nonproductive, and '-' indicates that it is not used.

This paper argues that the restructuring verb *credere* in Old Italian has been extinguished in Modern Italian and the complementizer *di* has appeared in Premodern Italian.

## 2. The appearance of the complementizer *di*

Ueno (2017a) diachronically analyzes the non-finite complement of the raising verb *sembrare* and *parere*, and shows that the development of the complementizer *di* occurred in the 17th century. This paper investigates the non-finite complement clause of the control verb *credere*, and the result is shown in the <Figure 1>. After the appearance of the *di*Inf is found in the 16th century, the use rate of it exceeds that of the  $\varnothing$ Inf in the 17th century. It follows that the complementizer *di* developed in the 17th century as with the case of the raising verb.

- (11) Ma non ho creduto **di dover** fissare in forme costanti la varia grafia antica di molte parole...  
 but not have believed *di* must fix in forms constant the various spelling old of many words  
 "But I have not thought to need to fix the various old spelling of many words in constant forms"  
 (16C: *Straparola*)



< Figure 1: The shift of the non-finite complement clause >

Restructuring doesn't take place within the sentence including the *di*Inf which appears from the 16th century. In Modern Italian, the *di*Inf plays a role in the control predicate which is almost sole form, whereas the  $\phi$ Inf serving as a function of the control predicate disappears and it remains as a predicate of the SC and an infinitival proposition. We have determined that the reduction of the  $\phi$ Inf may be related to the development of the complementizer  $\phi$ .

### 3. Restructuring

Burzio (1986) shows that a part of ergative verbs, raising verbs, and control verbs form the restructuring construction, as shown in (12)<sup>21</sup>.

(12) a. *Ergative verbs: andare 'go', venire 'come'*

Giovanni<sub>i</sub> va t<sub>i</sub> [<sub>CP</sub> PRO<sub>i</sub> a prendere il libro]

Giovanni goes to fetch the book

→ Giovanni<sub>i</sub> va [<sub>VP</sub> a prendere il libro] t<sub>i</sub> [<sub>CP</sub> PRO<sub>i</sub> ...]

b. *Raising verbs: dovere 'must', potere 'can', cominciare 'start', continuare 'continue', stare 'stay', sembrare 'seem'*

Giovanni<sub>i</sub> dovrebbe [<sub>CP</sub> t<sub>i</sub> prendere il libro]

Giovanni would.have to.fetch the book

→ Giovanni<sub>i</sub> dovrebbe [<sub>VP</sub> prendere il libro] [<sub>CP</sub> t<sub>i</sub> ...]

c. *Control verbs: volere 'want', sapere 'can', cominciare 'start', continuare 'continue'*

Giovanni<sub>i</sub> vorrebbe [<sub>CP</sub> PRO<sub>i</sub> prendere il libro]

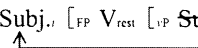
Giovanni would.want to.fetch the book

→ Giovanni<sub>i</sub> vorrebbe [<sub>VP</sub> prendere il libro] [<sub>CP</sub> PRO<sub>i</sub> ...] (Burzio 1986: 324-325)

Cinque (2004) suggests that restructuring verbs admit of two distinct possibilities: regular verbs, heading a VP, which make the monoclausal structure (13b) or functional verbs, directly inserted in the head position of the functional projection, which become the biclausal structure (13a).

- (13) a. [<sub>CP</sub> ... [<sub>FP</sub> ... [<sub>FP</sub> ... [<sub>VP</sub> V<sub>rest</sub> [<sub>CP</sub> ... [<sub>FP</sub> ... [<sub>FP</sub> ... [<sub>VP</sub> V]]]]]]]]]]  
 b. [<sub>CP</sub> ... [<sub>FP</sub> ... [<sub>FP</sub> V<sub>rest</sub> [<sub>FP</sub> ... [<sub>FP</sub> ... [<sub>VP</sub> V]]]]]]]] (Cinque 2004: 133)

Following two varieties of complement control of Landau (2000), Grano (2015) assumes that (13a) is partial control whose predicates have a PRO subject in the CP complement and (13b) is exhaustive control whose predicates raise a subject in the vP-complement. From this it follows that (13) is modified, as shown in (14).

- (14) a. partial control: [<sub>CP</sub> Subj<sub>i</sub> [<sub>VP</sub> V<sub>rest</sub> [<sub>CP</sub> PRO<sub>i</sub> [<sub>VP</sub> Inf.]]]]]]]  
 b. exhaustive control: [<sub>CP</sub> Subj<sub>i</sub> [<sub>FP</sub> V<sub>rest</sub> [<sub>VP</sub> Subj<sub>i</sub> [<sub>VP</sub> Inf.]]]]]]  


In this paper, these derivations as restructuring are adopted.

There are three properties in the restructuring constructions: "Clitic Climbing" (15), "Long Object Preposing" (16), and "Change of Auxiliary" (17).

- (15) Mario **lo** vuole leggere. (Bruzio 1986: 322)  
 Mario it wants to.read  
 "Mario wants to read it."  
 (16) **Questi libri** si volevano proprio leggere. (Bruzio 1986: 322)  
 these books *si* wanted really to.read  
 "We really wanted to read these books."  
 (17) Mario **sarebbe** proprio voluto andare a casa. (Bruzio 1986: 322)  
 Mario would.be really wanted to.go home  
 "Mario would have really wanted to go home."

The clitic generally becomes an enclitic before the infinitive, but in restructuring it climbs in front of the matrix verb such as (15). In the *si*-Passive of (16), Object Preposing has moved the object of the embedded verb into matrix subject position. In (17), the main verb *volere*, which takes auxiliary *avere*, appears with *essere*, the auxiliary selected by the embedded verb.

#### 4. The structure of the verb *credere*

##### 4.1. Restructuring in Old Italian

Egerland (2010) shows that restructuring appears in the following verbs:

- (18) a. the modal verbs: *dovere* 'must', *potere* 'can', *sapere* 'can', *volere* 'want'  
 b. the aspectual verbs: *cominciare* 'start', *finire* 'finish'  
 c. some verbs of state or movement: *stare* 'stay', *andare* 'go', *venire* 'come'  
 d. coactive verbs: *cercare* 'seek', *tentare* 'attempt'  
 e. *solere* 'be in the habit of' (Egerland 2010: 830)

Other than (18), restructuring of Old Italian is found in a wide range of verbs, and one of them is the verb *credere*<sup>3)</sup>. It also indicates the properties of restructuring such as Clitic Climbing (19) and Long Object Preposing (20)<sup>4)</sup>.

(19) ...egli **la credea** consolare.

(14C: *Decameron*)

he her believed to comfort

"he thought to comfort her"

(20) **I Tedeschi** *si* **credettero** avere vinto,...

(14C: *Villani*)

the Germans *si* believed to have won

"it is thought to have won the German"

So far, we observed that the restructuring constructions in Modern Italian similarly exist in Old Italian, but the difference between Modern Italian and Old Italian may be thought to be the nature of infinitive appearing in control predicates. As Ueno (2017a) points out, the  $\varphi$  of  $\varphi$ Inf in Modern Italian is a zero complementizer, whereas in Old Italian it is not the complementizer but the head of the AgrP in the SC structure, since the zero complementizer wasn't developed. For example, the sentence of the raising verb *parere* (21a) seems to be similar to that of the control verb *credere* (21b).

(21) a. ...gli **pare** [<sub>TP</sub> avere guadagnato quello ch'egli dona]...

(13C: *Tesoro*)

to.him seems to.have gained that tha-she gives

"it seems that he has gained the thing that she gives"

b. Onde io non ne **credo** [<sub>TP</sub> avere peccato].

(13C: *Novellino*)

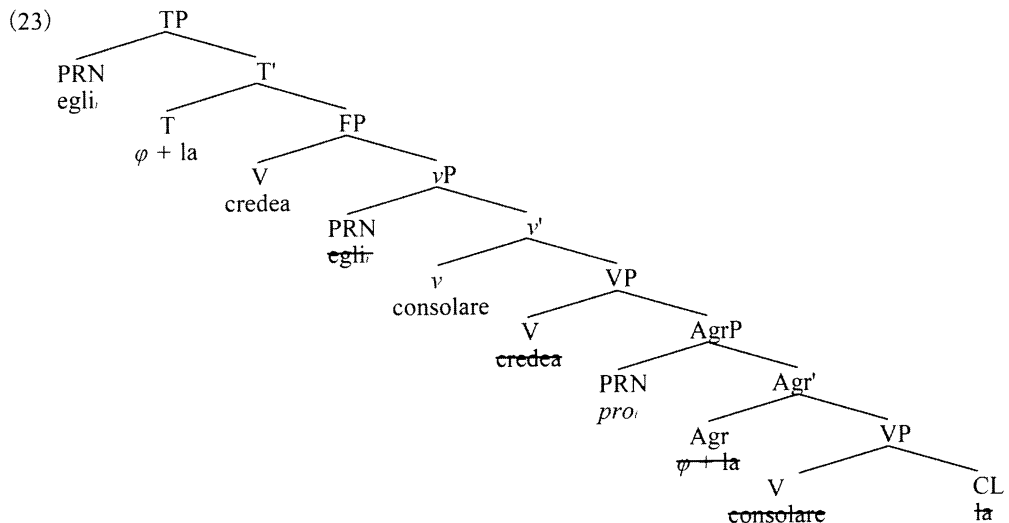
hence I not of.them believe have sinned

"Hence I don't believe to have sinned"

For this reason, we analyze the control predicate of the verb *credere* as a SC, and illustrate the embedded clause of (21b) as (22) below:

(22) [<sub>AgrP</sub> *pro* [<sub>Agr</sub>  $\varphi$  [<sub>VP</sub> avere peccato]]]

Supposed that control predicates are the SC structures, the derivation of (19) is shown in (23) below:

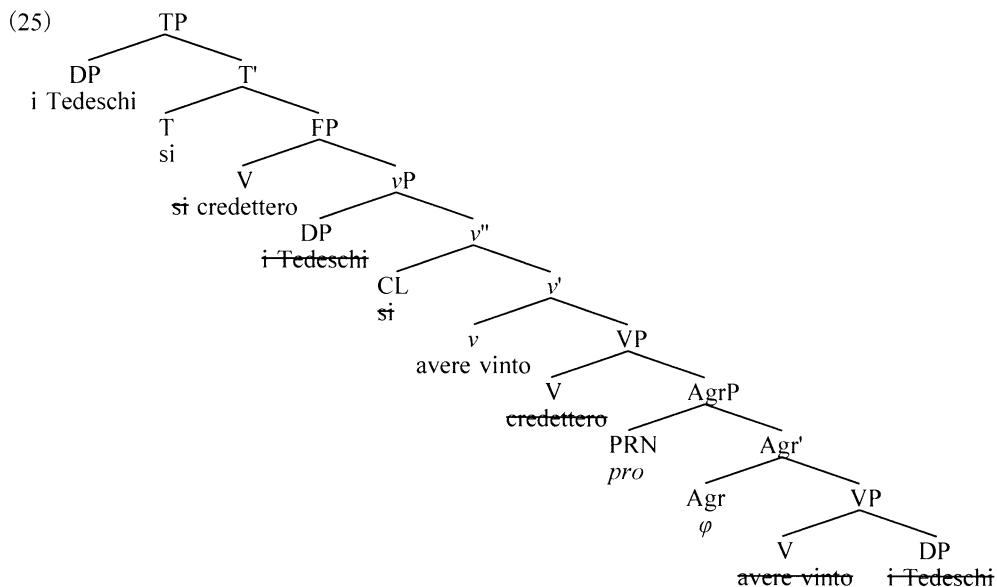


In (23), the clitic *la* incorporates to the embedded Agr, and the  $\varphi + la$  complex then moves up to the head of the matrix clause TP. The matrix verb *credea* moves to the FP due to restructuring.

Following the derivation of the *si*-Passive of Belletti (2019), *si* of (20), which is the external argument of the lexical verb and fills the specifier position of the functional *v* head, head-moves to the head of FP, and further moves to the head hosting clitics, illustrated in (24).

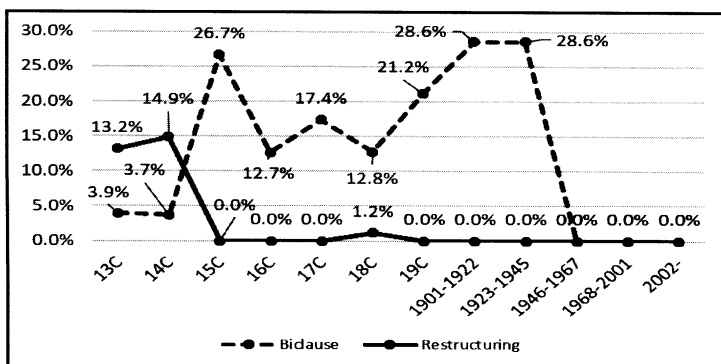
(24)  $[_{TP} \text{ si } [_{VP} \text{ si } [_{VP} \text{ credettero } [_{AgrP} \text{ avere vinto i Tedeschi}]]]]$

(24) is restructured as in (25):



(25) shows that the direct object *i Tedeschi* moves through the specifier of *vP* to the specifier of  $TP^{51}$ .

The restructuring constructions of the verb *credere* have disappeared in Modern Italian. The <Figure 2> shows a diachronic shift in restructuring of  $\varphi$ Inf predicates.



<Figure 2: The diachronic shift of restructuring<sup>61)</sup>>

The <Figure 2> shows that restructuring disappears in the 15th century. In other words, this phenomenon is the disappearance of restructuring from the SC structure. Furthermore, the biclausal structure of  $\varphi$ Inf predicates vanishes in the middle of the 20th century.

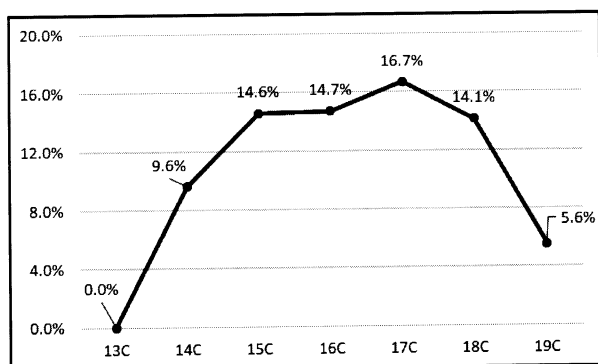
#### 4.2. The SC structure

Consider the following sentence which has an overt infinitival subject of the embedded clause:

- (26) ...voi non credeste [<sub>AgP</sub> **queste** [<sub>VP</sub> *esser parole e favole*]],... (14C: *Decameron*)  
 you not believed these to.be words and fables  
 "you didn't believe these to be words and fables"

(26) takes as the same SC structure as the previous section, but the subject of the clause isn't a null *pro* but an overt *queste*<sup>71</sup>.

The <Figure 3> shows the ratio of the SC structure which has an overt subject in the  $\varphi$ Inf predicate<sup>81</sup>.



<Figure 3: The SC structure in the  $\varphi$ Inf predicate>

The use of this structure has appeared since the 14th century, and occurs with lower frequency in Modern Italian.

#### 4.3. Infinitival proposition of the object

The <Figure 4> shows the diachronic shift of the use of the verb *credere* with infinitival proposition accompanied by a predicative complement of the object.

The  $\varphi$ Inf as an infinitival proposition has appeared since the 17th century, and the *di*Inf since the 18th century.

- (27) a. ...credono cosa sicura **il viver** con le simulationi,... (17C: *Boccalini*)  
 believe thing secure the to.live with the simulation  
 "they believe that living with simulation is secure"

b. ; ed io mi credo lecito **di trascurare** una immensa serie di azioni cattive,...  
 and I myself believe legal *di* ignore an enormous series of action bad

"and believe myself that ignoring enormous series of bad action is legal" (18C: Verri)

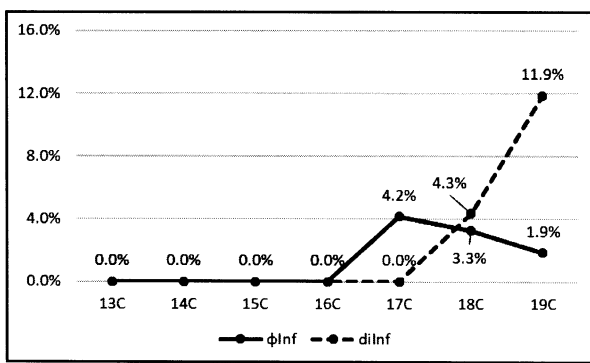
The  $\phi$ Inf as an infinitival proposition takes the determiner in many cases such as (27a). The appearance of the determiner gives supporting evidence that infinitives appearing in the subject of SC are DPs.

We add that the finite proposition like (28) appears in the same period as the *di*Inf.

(28) Io credo anzi probabile **che così** accadesse; (18C: Verri)

I believe rather probable that like-this happened

"I rather probably believe that this happened"



<Figure 4: Infinitival proposition>

## 5. Conclusion

As argued, this paper analyzed how the structure of infinitival clauses following the control verb *credere* shifts. From diachronic perspective, the shift of the structure is shown below:

<Table 2: The diachronic shift of infinitival clauses following the verb *credere*>

	In control		Proposition			SC	Restructuring	
	$\phi$ Inf	<i>di</i> Inf	$\phi$ Inf	<i>di</i> Inf	<i>che</i>	$\phi$ Inf	<i>monoclause</i>	<i>biclause</i>
13C								
14C								
15C								
16C		⋮						
17C	⋮		⋮					
18C	⋮		⋮	⋮	⋮	⋮		
19C	⋮		⋮	⋮	⋮	⋮		
20C	⋮		⋮	⋮	⋮	⋮		



The *di*Inf in the control predicate has begun to use since the 16th century due to the development of the complementizer *di*, whereas at the same time the  $\varnothing$ Inf in the SC has completely disappeared as a control predicate and restructuring in Modern Italian. The use of  $\varnothing$ Inf slightly remains in 'Proposition' and the SC with an overt subject.

#### Notes

- 1) This group of verbs includes *affermare* 'declare', *considerare* 'consider', *credere* 'believe', *pensare* 'think', *ritenere* 'think', *stimare* 'esteem', and *trovare* 'find' (Skytte et al. 1991).
- 2) Lexical categories in (12) are rewritten by the author.
- 3) Egerland (2010: 833) refers to the following verbs: *acconciare* 'prepare', *aiutare* 'help', *ardire* 'dare', *aspettare* 'await', *convenire* 'be necessary', *credere* 'believe', *degnare* 'consider', *desiderare* 'desire', *fallare* 'need', *insegnare* 'teach', *intendere* 'intend', *mandare* 'send', *mettersi* 'set', *minacciare* 'threaten', *osare* 'dare', *prendere* 'take', *promettere* 'promise', *proporre* 'propose', *soffrire* 'suffer', *sperare* 'hope', *temere* 'fear', *usare* 'use'.
- 4) As Egerland (2010: 835) points out, the examples of Change of Auxiliary are not found in restructuring of the verb *credere*.
- 5) We assume that the clitic *si* has the feature similar to a [WH] feature and this feature attracts direct objects.
- 6) 'Restructuring' indicates the presence of Clitic Climbing and 'Biclause' indicates the absence. The <Graph 2> illustrates the ratio of appearance to the total  $\varnothing$ Inf.
- 7) These can be illustrated as a simplex construction: [<sub>NP</sub> DP/*pro* [<sub>VP</sub>  $\varnothing$  [<sub>VP</sub> Inf.]]]
- 8) The data of the 20th century is excluded, since the appearance of  $\varnothing$ Inf as control predicates decreases.

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