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The Diachronic Shift of Embedded Clauses

- Restructuring of the Control Verb credere -

Takafumi UENO

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: NARRAT-Romanzi)

    Prisca believed **di** to die from the shame
    "Prisca felt like a mortal shame"

The control predicate generally takes the *di* infinitival form (**diInf**) as in (5), but the bare infinitival form (**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**:

(7)  **..., credeva possibile incontrarla.** (1950: Saggistica)

    believed possible to meet her
    "he believed it was possible to meet her"

- 3 -
The diInf also appears in this usage as well as the φInf:

(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 φInf occurs as a predicate of the Small Clause (SC) as in (4):

(9) ... il primo credeva [sic 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.

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>
<thead>
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<th>In control</th>
<th>Proposition</th>
<th>SC</th>
<th>Restructuring</th>
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<tr>
<td>diInf</td>
<td>+</td>
<td>±</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>φInf</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>-</td>
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'+' 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 diInf is found in the 16th century, the use rate of it exceeds that of the φInf 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: Strararola)
Restructuring doesn’t take place within the sentence including the *di*lnf which appears from the 16th century. In Modern Italian, the *di*lnf plays a role in the control predicate which is almost sole form, whereas the *ϕ*lnf 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 *ϕ*lnf may be related to the development of the complementizer *ϕ*.

3. Restructuring

Burzio (1986) shows that a part of ergative verbs, raising verbs, and control verbs form the restructuring construction, as shown in (12)⁷.

(12) a. Ergative verbs: *andare* ‘go’, *venire* ‘come’
   Giovanni va t [cP PRO a prendere il libro]
   Giovanni goes to fetch the book
   → Giovanni va [vp a prendere il libro] t [cP PRO ...]

b. Raising verbs: *dovere* ‘must’, *potere* ‘can’, *cominciare* ‘start’, *continuare* ‘continue’, *stare* ‘stay’, *semmare* ‘seem’
   Giovanni dovrebbe [cP t prendere il libro]
   Giovanni would have to fetch the book
   → Giovanni dovrebbe [vp prendere il libro] [cP t ...]

c. Control verbs: *volere* ‘want’, *sapere* ‘can’, *cominciare* ‘start’, *continuare* ‘continue’
   Giovanni vorrebbe [cP PRO prendere il libro]
   Giovanni would want to fetch the book
   → Giovanni vorrebbe [vp prendere il libro] [cP PRO ...]  (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. \([CP \ldots [TP \ldots [VP V_{ess} [CP \ldots [TP \ldots [TP V] V_{ess} [TP \ldots [TP V]]]]]]]\)

b. \([CP \ldots [TP \ldots [TP V_{ess} [TP \ldots [TP V]]]]]\)  

(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 V-complement. From this it follows that (13) is modified, as shown in (14).

(14) a. partial control: \([CP \text{ Subj.} [VP V_{ess} [CP \text{ PRO.} [VP \text{ Inf.}]]]]\)

b. exhaustive control: \([CP \text{ Subj.} [VP V_{ess} [TP \text{ Subj.} [TP \text{ Inf.}]]]]\)

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.  
Mario it wants to.read  
"Mario wants to read it."

(16) Questi libri si volevano proprio leggere.  
these books si wanted really to.read  
"We really wanted to read these books."

(17) Mario sarebbe proprio voluto andare a casa.  
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. It also indicates the properties of restructuring such as Clitic Climbing (19) and Long Object Preposing (20)\(^1\).
(19) ...egli la credea consolare.
he her believed to comfort
"he thought to comfort her"

(20) I Tedeschi si credettero averi vinto....
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 [\[avere guadagnato quello ch'egli dona]... 

to him seems to have gained that she gives
"it seems that he has gained the thing that she gives"

b. Onde io non ne credo [\[avere peccato].

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) [\[a_\varphi pro [\[a_\varphi \varphi [\[avere peccato]]]]

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

(23)
In (23), the clitic *la* incorporates to the embedded Agr, and the *ϕ + la* complex then moves up to
the head of the matrix clause TP. The matrix verb *credeva* 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 *ν* head, head-moves
to the head of FP, and further moves to the head hosting clitics, illustrated in (24).

\[
\begin{align*}
\text{(24) } & [TP \quad [\text{fp} \quad [\text{si} \quad \text{credettero} \quad [\text{agp} \quad \text{avere} \quad \text{vinto} \quad \text{i} \quad \text{Tedeschi}] ]]]
\end{align*}
\]

(24) is restructured as in (25):

\[
\begin{align*}
(25) & \quad \begin{array}{c}
TP \\
i \quad \text{Tedeschi}
\end{array} \\
& \quad \begin{array}{c}
T \\
\text{si} \\
\text{v}
\end{array} \\
& \quad \begin{array}{c}
\text{FP} \\
\text{vP} \\
\text{v''}
\end{array} \\
& \quad \begin{array}{c}
\text{DP} \\
\text{CL} \\
\text{si}
\end{array} \\
& \quad \begin{array}{c}
\text{i} \quad \text{Tedeschi}
\end{array} \\
& \quad \begin{array}{c}
\text{avere vinto} \\
\text{credettero}
\end{array} \\
& \quad \begin{array}{c}
\text{VP} \\
\text{AgrP}
\end{array} \\
& \quad \begin{array}{c}
\text{PRN} \\
\text{pro}
\end{array} \\
& \quad \begin{array}{c}
\text{Agr} \\
\text{ϕ}
\end{array} \\
& \quad \begin{array}{c}
\text{VP} \\
\text{DP}
\end{array}
\]
\]

(25) shows that the direct object *i Tedeschi* moves through the specifier of *vP* to the specifier of *TP*.

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

<Figure 2: The diachronic shift of restructuring>
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 biclause structure of \( \phi \)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 [\( \lambda \phi \) queste [\( \lambda \) esser parole e favole]].

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 \( \rho \)ro but an overt queste".

The Figure 3 shows the ratio of the SC structure which has an overt subject in the \( \phi \)Inf predicate".

![Figure 3: The SC structure in the \( \phi \)Inf predicate](image)

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 \( \phi \)Inf as an infinitival proposition has appeared since the 17th century, and the \( d \)Inf since the 18th century.

(27) a. ...credono cosa sicura il viver con le simulazioni,...

believe thing secure the to.live with the simulation

"they believe that living with simulation is secure"

(17C: Boccaccini)
b. ed io mi creo licito 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 diInf.

(28) Io credo anzì 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](image)

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   | diInf           | \( \phi \)Inf   | diInf           | che             | \( \phi \)Inf   | monoclause | biclause   |
| 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 \( \phi \)Inf in the SC has completely disappeared as a control predicate and restructuring in Modern Italian. The use of \( \phi \)Inf slightly remains in 'Proposition' and the SC with an overt subject.

**Notes**

1) This group of verbs includes *afermare* '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 [\( \mathbf{\text{WH}} \)] feature and this feature attracts direct objects.

6) 'Restructuring' indicates the presence of Clitic Climbing and 'Biclaue' indicates the absence. The <Graph 2> illustrates the ratio of appearance to the total \( \phi \)Inf.

7) These can be illustrated as a simplex construction: [\( \wedge \) DP/\( \text{pro} \) [\( \wedge \) [\( \wedge \) \( \phi \) [\( \wedge \) Inf.]]]]

8) The data of the 20th century is excluded, since the appearance of \( \phi \)Inf as control predicates decreases.

**References:**


——— (2018b) "The Diachronic Variation of the Complement Clause in the Unaccusative verbs of Italian: The Small Clause in Old Italian," *Studi Italici* 68, 73-94.