The evolution of the French definite article: from strong to weak*

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1 Goals

• Empirically: Investigate the expansion of the l-article (le, la, les) in Medieval French using parsed corpora MCVF (2010) and Penn Supplement to MCVF (2010).

• Theoretically: Provide support for the hypothesis that the l-article underwent a change from strong to weak definite semantics, which explains its progressive expansion to new contexts of use.

2 Origins and use

• Common assumption: French le, la, les originate from ille (cf. Greenberg’s (1978) hypothesis about the typological origins of definite articles from distal demonstratives, De Mulder and Carlier (2011)).

Classical Latin:

• Anaphoric relations are mostly unmarked for central discourse referents.

• Demonstratives and identity markers are used for time and place indications.

Late Latin:

• Direct anaphoric relations are increasingly marked by demonstratives hic, is, ille and identity markers ipse, idem, even for central discourse referents.

• ≈40% of all the uses of ille are with relative clauses.

• However, the indirect anaphora of the type “book – D author” is never marked by ille.

Like ille in Late Latin, the l-series in Old French is used in order to establish an identity relation with a previously mentioned antecedent:

(1) Buona pulcella fut eulalia. Bel auret corps bellezour anima... La polle...
good girl was Eulalia beautiful had body more.beautiful soul... The girl...
‘Eulalia was a pious young woman. She had a beautiful body and even a more beautiful soul. The girl...’ (Ste Eulalie, IX c.)

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It is also used for first-mention **definites with a relative clause**:

(2) **Vint en la cambra** [ou eret sa muiler].
    went into the room where was his wife
    ‘He went into the room where his wife was’ *(10XX-ALEXIS-V,11.115)*

- E.g. Rickard *(1989:55)*, Fournier *(2002)* argue that the *l*-series kept a deictic semantics up until the end of the XIII c. Unsurprisingly then, nouns without articles are found with generic and kind interpretation, definite pluralities, abstract nouns, and mass nouns *(Mathieu (2009) among others)*.

(3) **Por amor** Deu e pur mun cher ami...
    for love God and for my dear friend
    “For the love of God and for my dear friend…” *(10XX-ALEXIS-V,45.422)*

(4) **Soleill** n’ i luist
    Sun not there shines
    “The sun does not shine there.” *(1100-ROLAND-V,78.951)*

(5) **Kar vasselage** par sens nen est **folie**
    since courage by reason not is folly
    “Since the courage with reason is not a folly.” *(1100-ROLAND-V,131.1737)*

Cf. Modern French:

(6) **Pour *(l’) amour** de Dieu...
    for the love of God
    “For the love of God”

(7) ***(Le) soleil** n’ y brille pas
    the sun not there shines neg
    “The sun does not shine there”

(8) **Car *(le) courage** avec raison n’ est pas *(la) folie
    car the courage with reason not is neg folly
    “Since the courage with reason is not a folly.”

- However, in Old French the *l*-series was also used in contexts where a bona fide demonstrative would not have been used:

(9) **et si en corps a grand torment, I’ anima ’n aurra consolament.**
    and if in body has great torment the soul of.it will have consolation
    “And if the body suffers greatly, the soul will receive consolation on account of it.” *(0980-LEGER-V,XXIX.194)*

- This seeming “inconsistency” is commonly discussed as the problem of bare nouns in French (e.g. Mathieu 2009, Carlier and de Mulder 2010, Déchaine et al. 2016).

**Question:**

- How to reconcile the hypothesis about the origins of the *l*-series with the fact that it has neither a demonstrative nor a definite distribution in the Medieval period?
- Sub-problem: how to establish the exact distribution of the *l*-series?
3 Proposal

- Originally, the semantics of the l-series involved an identity relation with a context-given antecedent – “strong” definite semantics.
- An alternative, “weak” definite semantics emerged, which did not involve an identity relation, but only a uniqueness requirement.
- The new lexical entry gradually won over, which accounts for the expansion of the l-series.

3.1 Strong and weak definite articles: a modern example

Austro-Bavarian German has two series of definite articles, “weak” and “strong”.

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Strong articles are used when a DP has an anaphoric or deictic antecedent:

(10) In da Stodtbücherei gibt ’s a Buach über Kanada. Letzens woa I doat und hob ma in detw townlibrary exists it a book about Canada recently was I there and have me #s/des Buach ausboagt.
detw/det_s book borrowed
‘In the public library, they have a book about Canada. Recently, I was there and borrowed that book.’

(11) Gfoit da #s’/des Haus?
like you det_w/det_s house
‘Do you like that house?’ (Pointing to a house)

Or indirect antecedent (example from Standard German):

(12) Hans entdeckte in der Bibliothek einen Roman über den Hudson. Dabei Hans discovered in the library a novel about det Hudson. In the process fiel ihm ein, dass er vor langer Zeit einmal einen Vortrag von dem Autor remembered he DAT PRT that he a long time ago once a lecture by det_s author besuchthat had.

\[ Wiltschko’s (2012:9) adaptation from Schwarz (2009:24). \]
‘Hans discovered a novel about the Hudson in the library. In the process, he remembered
that he had attended a lecture by the author a long time ago.’ (Schwarz 2009:229–230)

Or else a restrictive relative clauses:

(13) A jeda Vota fiacht si voa dem Moment wenn s’ ödeste Kind ausziagt.
a every father dreads refl for det_s,DAT moment when det_w eldest child moves.out
‘Every father dreads that moment when his eldest child moves out.’

A weak article is used whenever it is part of the common ground that the extension of a nominal
property is a singleton in a given situation:

(14) Wie geht ’s ’n da/*dea Frau?
how goes it prt det_w/det_s woman
‘How is your wife doing?’ (Wiltschko 2012:7)

Similar pairs in: Several German dialects (Standard, Rhineland, Cologne), Hausa, Lakhota (Schwarz
2009), Icelandic (Ingason 2016), North Frisian (Ebert 1970).

4 Strong and weak definite semantics (Schwarz 2009)

4.1 Strong definite semantics

• Elbourne (2008) for English demonstratives and Schwarz (2009) for German strong articles
propose that the LF of such anaphora-oriented determiners involves a silent individual pronoun.

• The function they denote, if defined, establishes an identity relation between the referent of
the silent pronoun and the referent of the DP.

(15) [i [[[D_{strong} s_r] NP]]
where i is an individual pronoun index and s_r a situation pronoun.

(16) \[D_{strong} = \lambda s . \lambda P_{<s,\leq t>>} . \lambda y : \exists x![P(x)(s) & x = y] . \iota x[P(x)(s) & x = y]
(\text{adapted from Schwarz (2009)})

(17) \[1 \text{ des s_r Haus}]^g \text{ is defined if there exists a house identical to g(1) in the situation g(r),}
if defined, \[1 \text{ des s_r Haus}]^g = g(1) \text{ (i.e. the individual picked out by the index 1)}

• By assumption, the assignment function g is defined just in case there is a salient individual in
its range to which it can map the index 1.

• For the determiner function to be defined, the individual to which g maps 1 has to be a house
in the situation g(r).

• Therefore, for this DP to be felicitous there has to be a salient house in a given situation. This
captures the antecedent condition on the distribution of strong articles/demonstratives.

For the indirect anaphora case:

(18) \[D_{strong} = \lambda s . \lambda P_{<s,\leq t>>} . \lambda y : \exists x![P(x)(y)(s)] . \iota x[P(x)(y)(s)]
(\text{adapted from Schwarz (2009)})
4.2 Weak definite semantics

\[(19) [[[D_{\text{weak}} s_r] \ NP]] \text{ where } s_r \text{ is a situation pronoun}\]

\[(20) [D_{\text{weak}}] = \lambda s . \lambda P_{<s,<e,t>} : \exists!x[P(x)(s)] . \mathbf{t}x[P(x)(s)]\]

(adapted from Schwarz (2009))

\[(21) [s' \ Haus s_r] \text{ is defined iff there exists a unique house in the situation } g(r),\]

if defined, \([s' \ Haus s_r] = \mathbf{t}x[[\text{house}][x](g(r))]\) (i.e. unique house in the situation \(g(r)\))

- For the utterance to be felicitous, in a given situation there has to be a unique house.

Proposal:

- In Medieval French the LF of the \(l\)-series was simplified from strong to weak: the individual pronoun disappeared (situation arguments removed to clarity).

\[(22) [i [[D_{\text{strong}}} \ NP]] \rightarrow [[[D_{\text{weak}}}] [NP]]\]

- Accordingly, the semantics of the \(l\)-series was reanalyzed:

\[(23) \lambda P_{<e,t>} . \lambda y . \exists!x[P(x) \& x = y] . \mathbf{t}x[P(x) \& x = y] \rightarrow \lambda P_{<e,t>} . \exists!x[P(x)] . \mathbf{t}x[P(x)]\]

- With the disappearance of an individual pronoun, disappears the requirement that there be a salient individual with the nominal property in a given situation.

- The “new” requirement is that there be a unique individual with the relevant nominal property in a given situation, not necessarily salient. Roughly, an antecedent requirement is replaced by a uniqueness/maximality requirement.

- How can we check this hypothesis?

5 Distributional blueprints of strong and weak definite articles

- Let us assume that there is a pragmatic pressure to use an element triggering a stronger presupposition whenever its presupposition is satisfied (cf. Maximize presupposition of Heim (1991), Chemla (2008) and others).

- Then the pressure to use the \(l\)-forms would arise in different contexts depending on which presupposition it carries, “strong” or “weak”.

5.1 The strong \(l\)-series

- The pressure to use the strong \(l\)-forms would arise only in contexts providing an antecedent for the DP in question, that is, with (some) individual-denoting nouns and relational nouns relating the referent of the DP to an antecedent.


5.2 The weak \(l\)-series

- The pressure to use the weak \(l\)-forms would arise in all contexts satisfying uniqueness/maximality presupposition, which presumably includes abstract (amour “love”) and mass (argent “money”) nouns.
5.3 Empirical predictions

With a change from strong to weak semantics, the l-forms are expected to expand onto the contexts typically satisfying the uniqueness/maximality presupposition and previously left to the zero article.

- The l-series is predicted to appear at the maximal rate with individual and event denoting nouns and possibly relational nouns from the earliest periods on.
- The l-series is predicted to appear at a growing rate with noun phrases satisfying the uniqueness/maximality presupposition: abstract and mass nouns.

6 Testing the predictions

6.1 Methodology

- Corpus of the project “Modéliser le changement : les voies du français” (MCVF) and Penn Supplement to MCVF (2010).
- Total of 32 parsed texts from the X to XVI cc. (≈ 1mln words).

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sun not there shines
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“The sun does not shine there.”

We classified ≈4000 nouns (orthographic types) in the corpus (≈25% of total) into the following classes:

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. abstract</td>
<td>e.g. <em>amertume</em> “bitterness”</td>
</tr>
<tr>
<td>b. mass</td>
<td>e.g. <em>ambre</em> “amber”</td>
</tr>
<tr>
<td>c. individuals and events</td>
<td>e.g. <em>bataille</em> “battle”, <em>apparition</em> “apparition”</td>
</tr>
<tr>
<td>d. relational</td>
<td>e.g. <em>anceisur</em> “ancestor”, <em>ambasadour</em> “ambassador”</td>
</tr>
</tbody>
</table>

6.2 Results

- We estimated the probability of having various determiners in samples of NPs corresponding to a–d classes above.
  - We limited ourselves to the subject position.\(^3\)

\(^3\)Prepositional phrases and predicative positions should be considered apart because even in Modern French they oftentimes license bare nouns. Direct objects may be part of idiomatic constructions with light verbs which may not require a determiner until Modern French.
We also excluded NPs with quantificational and possessive modifiers, since they may interact with determiners’ presence. Ended up with \( \approx 1000 \) tokens.

- Figures 2 & 3 are as expected given the hypothesis that the passage to the new weak semantics entails the expansion to the maximality-satisfying contexts.

- Figure 3 requires interpretation: let us assume there are contexts a) with antecedents and b) without.
  - In the former we expect to find the strong \( l \)-forms at the highest rate from the beginning.
– The latter divide again in two: b-i) satisfying and b-ii) not satisfying uniqueness/maximality. In the former we expect to see the rise of the new weak $l$-forms.

– On the assumption that the rate of contexts with antecedents (a) stays the same over time, we expect to see a rise which is due to contexts (b-ii) without antecedents but satisfying maximality. This is tentatively what we see in Figure 4.

Figure 4: the frequency of the $l$-forms is almost maximal and does not change. If these contexts had been considered by the grammar as uniqueness- but not antecedent satisfying, we would have expected a gradual rise of the (weak) $l$-forms, contrary to the fact. Preliminary conclusion: such contexts were analyzed as (indirect) antecedent-providing.

To check whether the differences observed are due to a nominal class difference or a random variation in data, we estimate the distribution of the variable DETERMINER with values yes and no in our four samples:

\[
P(\text{DETERMINER} = \text{yes}|\text{DATE} = d) = \frac{e^{\alpha + \beta \cdot \text{Date}}}{1 + e^{\alpha + \beta \cdot \text{Date}}}
\]

Figure 5: Determiner presence with different noun classes

Regression parameters:

<table>
<thead>
<tr>
<th>Noun class</th>
<th>$\alpha$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
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<td>7.4411</td>
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</tr>
<tr>
<td>Individual/Event</td>
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</tr>
<tr>
<td>Abstract</td>
<td>-4.563</td>
<td>0.0039</td>
</tr>
<tr>
<td>Mass</td>
<td>-4.768</td>
<td>0.0044</td>
</tr>
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7 Conclusions and discussion

- We hypothesized a passage from strong to weak definite semantics in the history of the \( l \)-forms in French and showed that the attested evolution of the distribution of the \( l \)-forms is compatible with this hypothesis:

- \( l \)-forms rise in frequency in contexts satisfying the maximality presupposition, but not in contexts providing an (indirect) antecedent.

The nature of the reanalysis

What made the change possible? One suggestion:

- The semantics in (18) delivers the antecedent-anchored (directly referential) interpretation demonstratives and strong articles are known for.\(^4\)

\[(25)\] Every father dreads that moment. (A specific context-given moment)

- However, it was also noticed that under some conditions DPs with distal demonstratives and strong articles stop being antecedent-anchored (e.g. Neale 1993, Dever 2001).

- This mostly happens in the context of restrictive relative clauses (Powell 2001, Simonenko 2015).

\[(26)\] Every father dreads that/the moment [when his eldest child moves out]. (For every father there is a different moment)

To accommodate both readings, (18) can be modified as follows.

\[(27)\] \[D_{\text{strong}}\] = \( \lambda s \cdot \lambda P_{<s,<e,t,>}, \lambda Q_{<s,<e,t,>} : \exists ! x [P(x)(s) & Q(x)(s)] \cdot \tau x[P(x)(s) & Q(x)(s)] \]

- If the second argument is filled by a singleton property denoted by a type-shifted pronoun (Partee 1987) – the property of being identical to the referent of the pronoun – a directly referential reading arises.

- If the second argument corresponds to the denotation of a restrictive relative, the reading is quantificational (Simonenko 2015), characteristic of “weak” definites, (26).

- In the latter case the presupposition of the DP does not carry the requirement that there be a salient individual with a nominal property, since there is no pronominal element that the assignment function has to interpret.

\[(28)\] \[\text{RelativeClause } [[D_{\text{strong}} \text{ NP}]] \rightarrow [[D_{\text{weak}} \text{ NP RelativeClause}]]\]

\[(29)\] \( \lambda P_{<e,t>} \cdot \lambda y. \exists ! x[P(x) \& x = y] . \tau x[P(x) \& x = y] \rightarrow \lambda P_{<e,t>} . \exists ! x[P(x)] . \tau x[P(x)] \]

- The presupposition therefore boils down to a maximality requirement, as in the case of weak articles, which leads to the expansion in use.

- Recall that \( \approx 40\% \) of all the uses of \textit{ille} are with relative clauses.

• A more intuitive interpretation: That distal demonstratives and articles descending from them allow for an additional modifier in their structure captures the informal intuition that recovering a distal (in time and/or space) referent requires providing additional descriptive content. Furthermore, they can “lose” the pronominal argument because, by virtue of the distal component in their meaning, the referent is normally not present in the immediate context of the utterance.

<table>
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<td>abstract nouns</td>
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Figure 7: The suggested global cycle of the definite articles, cf. Harris (1980), Mulder and Carlier (2006)

References


Déchaine, Rose-Marie, Monique Dufresne, and Mireille Tremblay. 2016. Determiners and feature hierarchy in Old French. A talk given at the New Ways of Analysing Syntactic Variation (NWASV 2) at the University of Ghent, 19–20 May.


Penn Supplement to MCVF. 2010. Penn Supplement to the MCVF Corpus by Anthony Kroch and Beatrice Santorini.


