Determiners as a probe into diachronic information structure

This paper addresses the status of preverbal direct objects in Medieval French from formal semantic and syntax points of view based on novel quantitative corpus data. Quantitatively, I show that direct objects (DOs) in OVS configurations stand out among DOs in other syntactic positions in that they are characterised by an incidence of demonstrative determiners that is several times higher than that in any other syntactic position. This, as well as manual examination of the relevant data, strongly suggest that the configurations in question involve DOs that function as *new or shifted topics*. Specifically, I propose that Topic as a functional projection introduces an element with respect to whose situation the whole proposition is evaluated. If the element in question is an overt DP, an implicature arises that this is a newly introduced information, since otherwise a more economical null pronominal would have been used.

Word order flexibility in Medieval French. Restricting our attention to transitive finite clauses with overt arguments (excluding clitic object pronouns because of their fixed immediately preverbal position even in the earliest texts), Medieval French features all 6 possible order permutations, 5 of which declined during the Medieval period leaving SVO as virtually the only option (at least in declaratives). Such "flexibility" has been widely attributed to the presence of information structure-related projections in the structure Medieval French clauses. For instance, [6] attributed the disappearance of Object-initial clauses in Medieval French, (1), to the disappearance of a discourse-oriented left-peripheral projection.

However, there is no consensus about the exact semantic and/or pragmatic import of the alleged left-peripheral projection(s) in Medieval French, partly because the orders in question escape a narrow characterisation

(1)   [Iceles miracles]$_{obj}$ vit [li pelerins]$_{sbj}$
      these miracles   saw the pilgrim
      "The pilgrim saw these miracles." (1210-BORON-PENN-P,32.441)

(e.g. as hosting only old or only new information or only definites etc.), and quantitative generalizations became possible only recently with the emergence of large-scale historical treebanks ([8], [9]). In what follows I present quantitative data on the properties of direct object DPs in OVS which, I argue, support the hypothesis that those function as shifted topics.

Probing into the information structure in diachrony. In the absence of native speaker's judgements on pragmatics or prosody, one proxy for the information structural status of a DP can be the determiner type because among those we often find presupposition triggers, such as definite, demonstrative, and possessive determiners. Since presuppositions are commonly conceived of as constraints on what kind of information a context has to entail in order for an utterance to be used felicitously, presupposition triggers can inform us about the role of the corresponding DP in the information structure of the clause, that is, whether there is an association between a given position and a particular kind of information. Table 1 shows the distribution of determiner types with DO for each transitive configuration based on the MCVF & Penn Supplement treebank ($\approx$1,5 mln words). (OSV & VOS being exceedingly rare by the time of the first attested sources, we excluded them from consideration. We also put the adjective *tel* 'such' in a separate category because of its frequency and special, antecedent-oriented, semantics.) A zero determiner cannot be interpreted as necessarily non-definite since during that period definite determiners had not yet spread onto the whole system, and bare nouns were used also in contexts where Modern French requires definite articles (e.g. [7]).

	OVS	SOV	VSO	SVO
definite	0.19 (139)	0.27 (255)	0.25 (478)	0.28 (4293)
demonstrative	**0.21** (153)	0.06 (54)	0.03 (64)	0.04 (578)
tel 'such'	0.7 (49)	0.01 (14)	0.01 (21)	0.01 (114)
possessive	0.7 (50)	0.18 (177)	0.17 (330)	0.17 (2611)
indefinite	0.2 (16)	0.03 (26)	0.04 (81)	0.04 (687)
partitive	0.1 (6)	0 (1)	0.02 (32)	0.02 (287)
zero	0.44 (322)	0.45 (434)	0.47 (903)	0.45 (7082)

Table 1: Determiner types with DOs across word orders in Medieval French

Demonstratives and topic shift. In otherwise quite similar distributions in Table 1, one striking feature is the incidence of demonstratives with DOs in OVS (the difference in proportions between OVS and its closest "rival" in terms of the rate of demonstratives, SOV, is statistically significant ($\chi = 88.35$, df = 1, p< 2×10^{-16}). In fact, besides zero demonstratives, which are a grey zone in that we are not aware of a formal proxy to the semantics of those DPs, demonstratives are by far the most frequent determiner type with DOs in OVS. In what follows I argue that demonstrative DOs are prime candidates for the status of shifted topics due to

their semantics and occupy Topic projection in OVS. Specifically, I will argue that the use of a demonstrative points to the existence of a newly introduced referent and that demonstratives, unlike weak pronouns, provide a situation parameter which, I assume, can play the role of topic situation, a crucial attribute of the topic position.

While the literature on determiner semantics agrees that demonstratives and definite determiners both trigger existence presupposition, demonstratives have been argued to introduce an additional requirement, namely, that there be an antecedent either in the preceding context or in the immediate speech situation. [4] models this property by assuming that the composition of demonstratives involves silent individual and situation pronouns. This predicts, in particular, that the relevant antecedent should be accessible in the immediately preceding context since **a)** a silent individual pronoun does not carry ϕ-features, which have been argued to facilitate long-distance anaphora (e.g. [3] on the relevance of feature specification for the antecedent requirements of two Chinese anaphors; also the finding of [14, 180] for
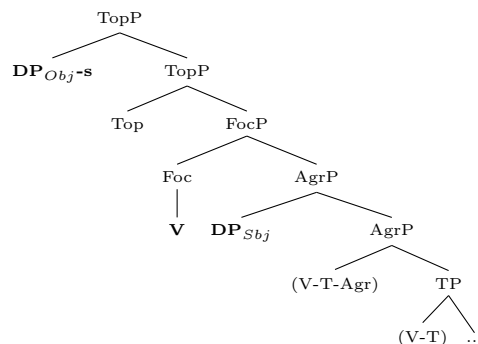

Figure 1: OVS in Medieval French

Spanish that 80% of demonstrative DPs have their antecedents in the immediately preceding utterance) and **b)** demonstratives have been observed to require that the extension of the nominal predicate *not* be entailed to be a singleton (relativized to a contextually restricted domain, as for most quantifiers, [5]). Consider, on the one hand, the infelicity of *I fed #that/the dog* in a context which entails that the speaker owns just one dog and where *the* is therefore expected to be used (see the discussion in [12, 86]) and, on the other, the felicity of *that* where relative to the minimal salient situation the nominal predicate's extension includes two individuals: *A woman$_i$ entered from stage left. Another woman$_j$ entered from stage right. That/#the woman$_j$ was carrying a basket of flowers* (based on [10] & [13, 74]).

To sum up, the featural poverty of the silent pronominal element in the structure of a demonstrative and the non-uniqueness effect predict that the successful resolution of its reference requires that the relevant antecedent be immediately accessible. For our purposes, this means that the use of a DPs with a demonstrative (putting aside cases with relative clauses which enable demonstrative DPs to be used without any antecedent) points to the presence of an antecedent in the immediately preceding utterance and also indicates that the antecedent is a newly introduced one. An already mentioned antecedent realized as a pronoun or a definite DP would have been incompatible with the non-uniqueness requirement of the demonstrative, consider: *Ann painted a house$_{new}$. That house really needed it.* vs. *Ann painted the house/it$_{old}$. #That house really needed it.*

That a newly introduced referent is picked up in the following utterance already suggests that it is a good candidate for the role of a shifted topic. In addition, the fact that a demonstrative is chosen over a simple (clitic) pronoun in French points in the same direction: namely, I assume that demonstrative DPs introduce a silent situation pronoun ([4], [11] a.o.), unlike clitic pronouns, which are structurally deficient in that sense, building on the proposal of [1, 86]. This pronoun, if placed appropriately high in the structure, as **s** in Fig. 1, can serve as an Austinian topic situation with respect to which the whole utterance is evaluated, assuming a framework along the lines of [11, 86-119]. On this reasoning, the high incidence of demonstrative with DOs in OVS is a strong argument in favour of their placement in Topic projection (cf. [14, 175] argue for Spanish that "speakers use demonstratives to mark topic ... shifts").

Conclusion. I presented new quantitative facts bearing on the information structure of OVS in Medieval French, namely, a significantly higher rate of demonstratives with DOs than in any other configuration, which, I claim, points to their shifted topic status. These findings may help us to bridge Old French with Late Latin information structure, given the findings of [2] for Latin embedded clauses, namely, that those involve a left-peripheral position almost exclusively hosting DOs with demonstratives.

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