

French modals *falloir* and *devoir* and antecedent determination in Control clauses

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0. Overview: The goal of this paper is to shed new light on the meaning and structure of sentences containing the French modal verbs *devoir* and *falloir* and to explore some important implications such an analysis holds for our understanding of Control phenomena at large. Specifically, the principle in (1) is adopted from some recent work on the syntax of Control clauses (Reed, to appear) in order to build a theory of how the reference of PRO is determined -- the principle in (2), a principle clearly informed by the extensive literature on Control, but which is in no way a simple reformulation of it. This paper, therefore, argues against a strict interpretation of both semantically-based theories of Control (cf. Bach (1979), Chierchia (1984), Dowty (1985), Sag & Pollard (1991), Jackendoff & Culicover (2003) among others) and purely syntactic accounts, such as those that derive Control from syntactic movement (cf. Bowers (1973, 2008), Hornstein (1999, 2000), Takano (2010), among others).

- (1) PRO is the “minimal” N, associated with neither Case nor agreement features in the syntactic component. Its featural make-up is simply [+N], [-expletive].
- (2) By default, PRO must take as its antecedent a c-commanding implicit (see (3)) or explicit argument within the superordinate clausal domain that immediately dominates the clause in which it appears, with lexical semantic specifications ruling out competing potential antecedents. When the preceding structural conditions do not obtain, PRO receives a so-called ‘arbitrary’ interpretation.
- (3) An implicit argument α c-commands β if the lexeme of which α is an implicit argument c-commands β . Williams (1985: 303)

1. Some Empirical Facts: English *must* can be rendered into French in at least three different ways: as *devoir* + infinitive, *falloir* + infinitive, or *falloir* + subjunctive clause. The three can neither be syntactic nor semantic equivalents, however, since the following properties distinguish them. (Further data will be introduced in the talk.)

- Only *falloir* + infinitive (4b) disallows complement clauses in which the embedded predicate does not select for a thematic subject:
 - (4) a. *Il doit y avoir du savon dans toutes les toilettes publiques.*
 - b. **Il faut y avoir du savon dans toutes les toilettes publiques.*
 - c. *Il faut qu’il y ait du savon dans toutes les toilettes publiques.*
‘There must be soap in all public restrooms.’
- Substitution of an embedded thematic predicate in the preceding contexts results in ill-formedness only in the case of *devoir* (5a):
 - (5) a. **Il doit faire attention où on marche ici.* (* on the relevant expletive reading of *il* ‘it’)
 - b. *Il faut faire attention où on marche ici.*
 - c. *Il faut qu’on fasse attention où on marche ici.*
‘You must pay attention when walking through here.’
- On deontic readings, only *falloir* + subjunctive allows the subject of its complement clause to be inanimate (6c) or quasi-expletive (7c).
 - (6) a. **Pour crever ce genre de pneu, un clou doit le pénétrer.*
 - b. **Pour crever ce genre de pneu, il faut le pénétrer.*
(*on the relevant reading that something, not someone, must puncture it.)
 - c. *Pour crever ce genre de pneu, il faut qu’un clou le pénètre.*
‘In order for this tire to go flat, a nail must puncture it.’
- (7) a. **Pour attraper des truites dans cette rivière, il doit faire mauvais.*
- b. **Pour attraper des truites dans cette rivière, il faut faire mauvais.*
- c. *Pour attraper des truites dans cette rivière, il faut qu’il fasse mauvais.*
‘In order to be able to catch trout in this river, it must rain.’

- Epistemic *devoir* is subject to neither of these restrictions cf. (6a) and (7a) versus (8a,b):
 - (8) a. *Ton pneu est dégonflé. Un clou **doit** l'avoir pénétré.*
'Your tire's flat. **A nail** must have punctured it.'
 - b. *Regarde moi ces gros nuages noirs sur le pic là-bas. Il **doit** y pleuvoir.*
'Look at all of those dark clouds hanging over that mountain. **It** must be raining there.'
- Epistemic *devoir* (9) contrasts with deontic *devoir* (10) in that only epistemic *devoir* freely accepts idiomatic complement clauses:
 - (9) *Quand ils ne sont pas d'accord, ces deux-là, les plumes **doivent** voler.*
'When those two don't agree, the fur must (epistemically) really fly.'
 - (10) **S'ils refusent notre offre, les plumes **devront** voler.*
'If they turn down our offer, then the fur (deontically) must fly.'

2. The Analysis: *Falloir* and *devoir* are hypothesized here to be associated with the entries below:

- (11) a. $falloir_1 = falloir + \text{subjunctive}$ Meaning: *It deontically must be the case that p.*
c-selection: _____ ForceP s-selection: <_____, Proposition>
- b. $falloir_2 = falloir + \text{infinitive}$ Meaning: *It is deontically required of NP that p.*
c-selection: _____ (Indirect Object NP), _____ ForceP
s-selection: <_____, Deontic Obligation, Proposition>
- (12) a. $devoir_1 = \text{epistemic } devoir + \text{infinitive}$ Meaning: *It epistemically must be the case that p.*
c-selection: _____ TP s-selection: <_____, Proposition>
- b. $devoir_2 = \text{Raising (non-external-theta-role assigning) deontic } devoir + \text{infinitive}$
Meaning: *It deontically must be the case that p.*
c-selection: _____ Non-Thematic vP s-selection: <_____, Proposition>
- c. $devoir_3 = \text{Non-Raising (external-theta-role assigning) deontic } devoir + \text{infinitive}$
Meaning: *NP deontically must p.*
c-selection: _____ ForceP s-selection: <Subject NP, Proposition>

The argument structures in (11)-(12) interact with the principles in (1)-(3) to yield the properties outlined in Section 1. Here is the partial sample permitted by space constraints:

- **Accounting for the contrast involving *devoir*₂ (4a), *falloir*₂ (4b), and *falloir*₁ (4c):** Only *falloir*₂ (11b) semantically selects for an indirect object NP that may (and, in (4b) does) remain syntactically implicit. This NP bears a deontic obligation with respect to the complement clause, resulting in a semantically deviant reading in which some individual is required to “be soap in all public restrooms.”
- **Accounting for the contrast involving *devoir*₂ (5a), *falloir*₂ (5b), and *falloir*₁ (5c):** The embedded predicate is now thematic. In (5c), the external theta-role is assigned to the overt NP *on* ‘one.’ However, following Reed (to appear), in (5a,b), the Case and phi-featureless nature of infinitival T licenses only PRO – the only NP that can be assigned a thematic role without feature valuation. By the principle in (2), PRO must take as its antecedent one of the c-commanding NPs in the matrix clause. As *falloir*₂ semantically selects for an (implicit) indirect object NP that bears a deontic obligation with respect to the complement clause, this argument serves as the antecedent of PRO. Grammaticality results. The reading of (5b) in which the matrix expletive subject serves as PRO’s antecedent is ruled out as semantically deviant, due to a clash between the two N’s [+/-expletive] features. This is the only reading associated with the ungrammatical example in (5a).
- **Accounting for the contrast involving *devoir*₃ (6a) and (7a), *falloir*₂ (6b) and (7b), and *falloir*₁ (6c) and (7c):** In the ungrammatical examples, syntactic considerations license only PRO. As *devoir*₃ and *falloir*₂ select for an argument that bears a deontic obligation with respect to the complement clause, by the principle in (2), that NP must serve as the antecedent of PRO, resulting in deviant readings in which a nail is required to puncture a tire and the weather is obliged to rain.