French dont-relative clauses (and their gap)

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1 *de*-phrases

De-phrases (i.e. PPs – or genitive NPs – introduced by a *de*) can be:

- expansions of nouns (without subject island constraint, see example (1)) (Abeillé et al., 2016) — i.e. arguments or adjuncts of N

- complements of verbs

- complements of adjectives (ignored here)

De-complements can be relativized (a.o.) with *dont*.

(1) Cette cuvée très particulière, [**dont** le lancement a this vintage very particular DONT the launching has
eu lieu en 1995], est une reprise de vinification très
taken place in 1995 is a revival of winemaking very
ancienne encore pratiquée en 1935.
old still practiced in 1935
(source: FRench Web As Corpus)

'This very particular batch of wine, whose launching took place in 1995, is a revival of a very old winemaking still practiced in 1935.'

2 PPs[de] and NPs[de]

Extraction of *de*-phrases out of NP

The extraction of *de*-phrases out of NP is impossible in some cases:

1. if the NP is embedded in a PP (example (4))

2. if the N is a verb or adjective derivate and the *de*-phrase can be related to an indirect object or modifier of the verb or the adjective

(2)   * les vacances dont [le retour _] est douloureux
the holidays DONT the return is painfull

'the holidays, the return from which is painfull'

3. when *de* indicates a (local) origin (Sportiche, 1981)

4. in case of multiple *de*-phrases: (Sag and Godard, 1994; Godard and Sag, 1996)

   – a *de*-phrase expressing Agent or Theme cannot be extracted if a *de*-phrase expressing Possessor is also present
   – a *de*-phrase expressing Theme cannot be extracted if a *de*-phrase expressing Agent is also present

Sag and Godard (1994) and Godard and Sag (1996)

Point 2:
- the *de*-phrase is an argument (a genitive NP): it is possible to extract from it
- the *de*-phrase is an adjunct: it is not possible to extract from it (prepositional constraint)

Point 4:
- only the first *de*-argument in the ARG-ST of a noun can be extracted
- order of *de*-arguments: Possessor > Agent > Theme

Kolliakou (1999)
- individual-denoting phrases (IDPs): phrases denoting individuals that refer to an entity in discourse: can be extracted
- property-denoting phrases (PDPs): cannot be extracted
- there can only be one IDP in the ARG-ST of a noun

Abeillé et al. (2006)
- oblique use of *de*: *de* is a preposition, projecting a PP
- nonoblique use of *de*: *de* is a weak head which adopts the head value of its complement

Which *de*-phrases are PPs[de]?

Following *de*-phrases are usually considered PPs[de]:

A. some expansions of the noun which cannot be extracted under any circumstance: local origin, but also compounds-like combinations (example (3))

B. *de*-phrases as non-sentential argument of verbs (example (4))

C. expansions of deverbal nouns, when this expansion can be related to the *de*-argument of a verb (example (2))

(3) a. Le trésor de guerre s'épuise.
the treasure of war declines
'The stock declines.'
   b. *la guerre dont le trésor s'épuise
the war DONT the treasure declines

NB: the compound *trésor de guerre* (lit. 'treasure of war') refers to any kind of capital or savings that are being stocked

(4)   * Voilà le pays dont Paul revient [de la
that's the country DONT Paul returns from the
capitale _].
capital
(Abeillé et al., 2006: 4)
'Here is the country from the capital city of which Paul is returning.'

However, following examples contradict point B:

(5) a. Je me suis assuré [de la vérité de cette déclaration].
I REFL have ensured DE the truth DE this statement
'I checked the truth of this statement.'
   b. D'après cette déclaration, dont je me suis assuré [de la vérité _], j'ai rédigé le présent acte [. . .].
following this statement DONT I REFL have ensured DE the truth I wrote the present act
(source: Chateaubriand, *Mémoires d'outre-tombe* (1ère partie, livre 4), 1848)
'Following this statement, whose truth I checked, I wrote this act'

(6) a. Il s' occupe [de la carrière de Mickaël Landreau].
he REFL cares DE the career DE Mickaël Landreau
'He takes care of Mickaël Landreau's career.'
   b. Proche de l' ex-gardien du PSG Mickaël Landreau, dont il s' occupe [de la carrière _ sur le plan
friend of the ex-goalkeeper of-the PSG Mickaël Landreau DONT he REFL cares of the career on the level
juridique], l' avocat Didier Domat a déjà défendu avec succès les intérêts du Racing et du
legal the lawyer Didier Domat has already defended with success the insterests of-the Racing and of-the
Red Star par le passé.
Red Star in the past
(source: http://www.leparisien.fr/abo-paris/l-homme-qui-fait-trembler-la-fff-11-06-2010-959398.php)
'Friend of the PSG ex-goalkeeper Mickaël Landreau, whose career he takes care of on the legal level, the lawyer Didier Domat has already defended successfully in the past the Racing's and the Red Star's interests.'

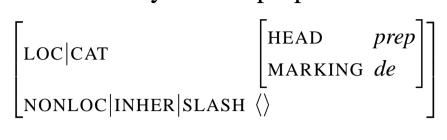This seems however not restricted to *de*-complements of verbs:

(7) l' eau d' irrigation dont il plaide [pour la rationalisation de l' usage _]
the water of irrigation DONT he argues for the rationalization of the use
(source: http://www.lesoirdalgerie.com/articles/2017/02/04/article.php?sid=208772&cid=2)
'the irrigation water, whose usage he argues for the rationalization of'
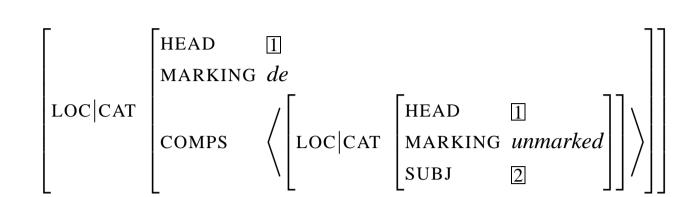
3 The HPSG analysis

de*-phrases

Our analysis of *de*-phrases follows Abeillé et al. (2006):

(8) Lexical entry for the preposition *de*

$$\begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & prep \\ \text{MARKING} & de \end{bmatrix} \\ \text{NONLOC|INHER|SLASH} & \langle\rangle \end{bmatrix}$$

(9) Lexical entry for the weak head *de*

$$\begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & \boxed{1} \\ \text{MARKING} & de \\ \text{COMPS} & \left\langle \begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & \boxed{1} \\ \text{MARKING} & unmarked \\ \text{SUBJ} & \boxed{2} \end{bmatrix} \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix}$$

- *de*-phrases complements of nouns
  – all expansions of the noun are part of its ARG-STR
  – some expansions of nouns are PP[de] (local origin, etc.)
  – some expansions of nouns are NP[de]; semantics rules constrain which one of them can be extracted out of the NP (following Godard and Sag, 1996; Sag and Godard, 1994; Kolliakou, 1999)

- *de*-phrases complements of verbs
  – **1st possibility**:
    * complements of verbs are NP[de]
    * PPs stay prepositional islands
    * pros: this accounts for examples like (5) and (6)
    * cons: this does not take into consideration examples like (7)

  – 2nd possibility:
    * PPs are weak islands
    * pros: this accounts for examples like (5), (6) and (7)
    * cons: overgeneralization

Relative pronouns and complementizers

In French, *que* and *qui*$_{subject}$ have been traditionally considered complementizers (Kayne, 1976). Godard (1988) and Abeillé and Godard (2007) have shown that *dont* shares the same properties in this respect.

relative pronouns	complementizers
have to agree in genre and number with their antecedent	are invariable
may semantically constrain their antecedent	no constraint on antecedent
- the antecedent of the relative pronoun *qui* has to be human	
- the antecedent of the relative pronoun *lequel* cannot be pronominal	
- the antecedent of *quoi* has to be inanimate and vague	
no constraint on mode of the main verb of the RC	the main verb of the RC has to be finite
can be used in pied-piping constructions	cannot be used in pied-piping constructions (example 10)

(10) le téléphone [avec l' aide $\left\{\begin{array}{l}\text{*dont}\\\text{duquel}\end{array}\right\}$] il a averti les secours _
the phone with the help DONT he has warned the rescue.service
'the phone which helped him to call the rescue service'

- clauses of the type *relative-clause* are non-headed phrases and consist of a relative phrase (containing a relative word) and a clause from which this phrase is extracted (following Müller, 1999)
- relative clauses introduced by a complementizer however are not a subtype of *relative-clause*, but are of the type *head-complement-phrase*, like other clauses introduced by a complementizer
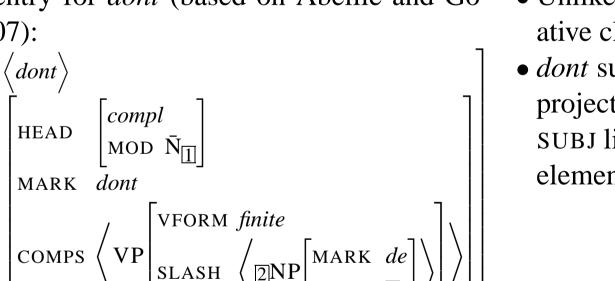
Extraction with dont

Dont is a complementizer and we will assume that it has the following lexical entry:

(11) Lexical entry for *dont* (based on Abeillé and Godard, 2007):

$$\begin{bmatrix} \text{PHON} & \langle dont \rangle \\ \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} compl \\ \text{MOD} & \bar{N}_{[1]} \end{bmatrix} \\ \text{MARK} & dont \\ \text{COMPS} & \left\langle \text{VP} \begin{bmatrix} \text{VFORM} & finite \\ \text{SLASH} & \left\langle \boxed{2}\text{NP} \begin{bmatrix} \text{MARK} & de \\ \text{INDEX} & \boxed{1} \end{bmatrix} \right\rangle \end{bmatrix} \right\rangle \end{bmatrix} \\ \text{NONLOC} & \begin{bmatrix} \text{INHER|TO-BIND} & \langle\boxed{2}\rangle \end{bmatrix} \end{bmatrix}$$

- Unlike the complementizer *que*, *dont* can only build relative clauses. It is therefore always modifying a noun.
- *dont* subcategorizes for a complement which is a verbal projection with all argument saturated (the COMPS and SUBJ lists must be empty). This complement also has an element in its SLASH list.
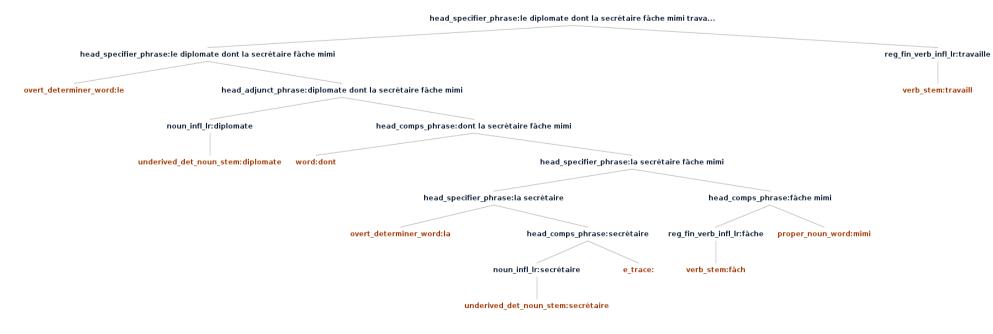
dont* relative clauses without gap

dont relative clauses without gap also exist.

- When *dont* builds a relative clause without gap, the antecedent of the relative clause must be coindexed with a relative pronoun in the relative clause.
- Relative clauses in Hausa exhibit a similar pattern (Crysmann, 2016). Crysmann's analysis defines resumptive pronouns as having an element in their SLASH list (coindexed with themselves).
- The lexical entry in (11) accounts therefore for both kinds of relative clauses.

4 Implementation

Implementation in FrenchGram (part of the CoreGram project, Müller (2015))

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