On the syntax of direct quotation in French

Olivier Bonami
Université Paris-Sorbonne

Danièle Godard
LLF

Proceedings of the 15th International Conference on
Head-Driven Phrase Structure Grammar

National Institute of Information and Communications Technology, Keihanna

Stefan Müller (Editor)

2008

Stanford, CA: CSLI Publications

pages 358–377

Bonami, Olivier & Danièle Godard. 2008. On the syntax of direct quotation in French. In Stefan Müller (ed.), *Proceedings of the 15th International Conference on Head-Driven Phrase Structure Grammar, National Institute of Information and Communications Technology, Keihanna*, 358–377. Stanford, CA: CSLI Publications. DOI: 10.21248/hpsg.2008.21.

Abstract

Direct quotation raises three major problems for grammatical modelling: (i) the variety of quoted material (which can be a non linguistic behavior, or a sign in a different language), (ii) the embedding of an utterance inside another one, (iii) a special denotation, the content of the quotation being the utterance itself. We propose a unary rule, which turns the quoted material into a linguistic sign whose content is itself a behavior, which entertains a resemblance relation to the behavior demonstrated by the speaker. Syntactically, direct quotation comes in two varieties: it can be the complement of a quotative verb, or constitutes a head sentence, modified by an adjunct containing a quotative verb whose complement is extracted and identified with its local features.

1 Introduction

Quotation has recently been amply studied for its implications for the philosophy of language (see Cappelen & Lepore 2007 and references cited therein), semantics (see e.g. Geurts & Maier 2005, Potts 2007) or the foundations of grammar (e.g. Postal 2004), as well as for its stylistic and pragmatic effects (particularly in the French tradition). On the other hand, few studies address the question of its grammatical features in any detail. We take up this question for French direct quotation, which we briefly define by comparison with other varieties of quotation. After summarizing Clark and Gerrig's (1990) view of (direct) quotation as 'demonstration', and explaining how it helps understanding its paradoxical pragmatic properties, we propose an HPSG analysis. First, a unary rule, the *quotation phrase*, turns the quoted material (be it linguistic or not) in a linguistic sign, whose content is a behavior; it accounts for the fact that the quoted material is inserted into the syntax of French, whether it is linguistic or not, and whether it is in French or not, as well as for the special semantic and pragmatic properties of the quotation. Second, the quotation can have two grammatical functions: it is the complement of a quotative verb, or a head clause, modified by an adjunct containing a quotative verb whose complement is extracted, and identified with it.

[†]Aspects of the research reported here were presented at a seminar of the SFB 441 Project A5 at the University of Tübingen (March, 2008), and at the first Congrès Mondial de Linguistique Française (Paris, July 2008) in addition to the HPSG 2008 Conference. We thank for their comments and suggestions the audiences at these events, and in particular Anne Abeillé, Doug Arnold, Tibor Kiss, Frank Richter, Manfred Sailer, and Jan-Philip Söhn, as well as three anonymous reviewers. This research was partially supported by the ANR project PRO-GRAM (`http://pro-gram.linguist.jussieu.fr/`).

2 What is quotation?

2.1 Varieties of quotation

A quotation is an expression in mention, for which the responsible agent is different from the speaker; it is typically signaled by quotes (on writing) or a special prosody (in oral speech). Quotations vary in their pragmatic status. In direct quotation (1a), the speaker reports the speech acts of an agent adopting the perspective of that agent. Thus clause types within the quotation reflect the agent's illocutionary acts, not the speaker's; and indexicals take their reference from the reported speech situation, not from the utterance situation. Hence, the first person possessive determiner *mon* in (1a) refers to Marie, not to the speaker. Direct quotations contrast with so-called 'indirect quotations' (Cappelen & Lepore, 2007), where speech acts are reported from the speaker's perspective, and indexicals are interpreted with respect to the utterance situation; here, reference to Marie is taken up by the third person possessive determiner (1b).[1] They also contrast with so-called 'free indirect speech' (1c), where indexicals take their reference in the utterance situation, but clauses types within the quotation do report the quoted agent's illocutionary acts. In (1c), the interrogative clause reports a question that Marie (not the speaker) asks, but it is a third person determiner that refers to her. Finally, they contrast with cases of 'pure quotation' or 'pure mention' (1d), where the quoted material does not stant for a linguistic *instance* but for a linguistic *type*: in (1d), *blue* refers to the word 'blue', not to some agent's utterance of that word. In the remainder of this paper we will concentrate on direct quotation.

(1) a. Marie a dit : "Mon frère est arrivé".
Marie said: "My brother has arrived."

b. Marie a dit que son frère était arrivé.
Marie said that her brother had arrived.

c. Marie s'interrogeait. Son frère était-il arrivé ?
Marie was wondering. Did her brother arrive?

d. Le mot anglais *blue* veut dire "bleu". *The English word* blue *means 'blue'.*

Direct quotations occur in at least four different constructions: as the complement of a quotative verb (1a); as the head clause with a quotative adjunct, as in (2); as a syntactically integrated part of a sentence, such as the NP *le Président* in (3), variously characterized as mixed quotation (Davidson 1979), 'textual island' (Authier 1992), hybrid quotation (Brabanter, 2005), or subclausal quotation (Potts 2007); or as a stand-alone utterance (4), an *open quotation* in the sense of Recanati (2001).

[1] The term 'indirect quotation' is a convenient misnomer here. There is literally no quotation in (1b), whose syntax and compositional semantics are strictly parallel to that of non-speech related attitude reports. Rather, the sentence reports that a speech act whose content is described by the subordinate clause took place.

(2) a. “Mon frère est arrivé”, annonce Marie.
“My brother has arrived”, Marie announces.

b. “Mon frère est arrivé”, comme a dit Marie.
“My brother has arrived”, as Marie said.

c. Selon Marie, “il n’y a pas pire menteur que mon frère.”
According to Marie, “nobody is a worse liar than my brother.”

(3) Marie annonce que le “Président” est arrivé.
Marie announces that the “President” has arrived.

(4) “Mon frère est arrivé”. Voilà ce qu’a dit Marie.
My brother has arrived. That’s what Marie said.

Much of the recent semantic and philosophical literature focuses on hybrid and open quotation, which pose important semantic problems. However, they are syntactically quite uninteresting: from a syntactic point of view, hybrid quotations are plain constituents that get the same distribution they would have if used rather than mentioned; and open quotations are simple clauses. Here we concentrate on the other cases, that is, quotative complements (1a) and *incidental quotative clauses*, or IQCs (2a).[2]
They raise three major problems for grammatical modelling. First, the quoted object can be non-linguistic, as in (5). Second, an utterance seems to be embedded in the utterance of another agent. Third, the quotation seems to have a special denotation, its content being the quoted utterance itself, rather than an ordinary content type (e.g. Delaveau 1988, Potts 2007). We briefly explain the theory of quotation which, in our view, accounts best for these properties, before proposing an HPSG analysis, at least for quotations that are amenable to a grammatical representation.

(5) a. Paul a fait : `[speaker frowns]`
Paul went . . .

b. La voiture a fait : `[speaker moves his hand in a zigzag]`
The car went . . .

2.2 Direct quotation as demonstration

We adopt Clark and Gerrig’s view (1990) of quoting as “demonstration”: they contrast quotation, as a mode of communication, both with with describing (the usual one) and monstrating (see deictic elements). Demonstration is similar to mimicking, the speaker imitating the original behavior of another agent. Demonstration has two properties. First, it is a pretend act rather than an illocutionary act: in (1a) the speaker does not assert that Marie’s brother has arrived, but pretends to be Marie making that assertion. This explains the formal and pragmatic properties of direct quotation. On the one hand, the sentence type conforms to what is required

[2] See (Desmets and Roussarie, 2000) for an HPSG analysis of reportive *comme* clauses and (Bonami and Godard, to appear) for a comparison between *comme* clauses and IQCs.

by the original illocutionary act : affirmative in (1a) and (2), interrogative in (6a), imperative in (6b); and indexicals are shifted: in the utterance situation the speaker pretends to be in, Marie is speaking, not him. On the other hand, the speaker does not take responsibility for the act: he does not assert the quotation in (1a) or (2), does not ask a question in (6a), or give an order in (6b).

(6) a. Qui vient, a demandé Marie.
Who is coming, Marie asked

b. Allez vous laver les mains, a dit Marie.
Go wash your hands, Marie said

Second, demonstration is selective: the speaker chooses among the aspects of the original situation which ones he wants to reproduce. This is worth emphasizing, because it goes against a common view which contrasts direct quotation, said to faithfully reproduce the original behavior, and indirect quotation, which is said to be unfaithful. This common view is mistaken, resulting from a confusion between the two dimensions of the typology of quotations. The point is clear in (7) which illustrates two extreme cases, where either the phonetic realization or the content is highlighted. Thus, a quotation is a sign (partially) reproducing a sign or behavior.

(7) a. Il a dit *infractus* et pas *infarctus*.
He said 'infractus' instead of 'infarctus'

b. Marie a dit en chinois : "le Président est arrivé".
Marie said in Chinese: "The President has arrived."

3 Quotation in HPSG

Accounting for these observations within an HPSG grammar is not a trivial task. Here, we provide a rather direct encoding that is heuristically useful, but encounters some foundational problems. These problems as well as a possible solution are outlined in the appendix. In our preliminary account, we take quite literally the idea that the content of a quotation can be a linguistic sign. First, we assume that the content of a quotation is a *behavior*; linguistic signs are particular subtypes of *behavior*, so that when the quoted behavior is linguistic, the content of the quotation is a sign. A partial hierarchy of *behavior* objects is given in Figure 1, whose specifics will be justified shortly. We will not commit ourselves to any specific feature geometry for behaviors, except for the assumption that each behavior has a LOCUS feature indicating the individual who is the locus of the behavior; in linguistic signs the LOCUS coincides with the speaker (8).

(8) a. $\textit{behavior} \rightarrow \left[\text{LOCUS} \quad \textit{ind}\right]$

b. $\textit{ling-sign} \rightarrow \begin{bmatrix} \text{LOCUS} & \boxed{1} \\ \text{SS}|\text{LOC}|\text{CX}|\text{C-INDS}|\text{SPKR} & \boxed{1} \end{bmatrix}$

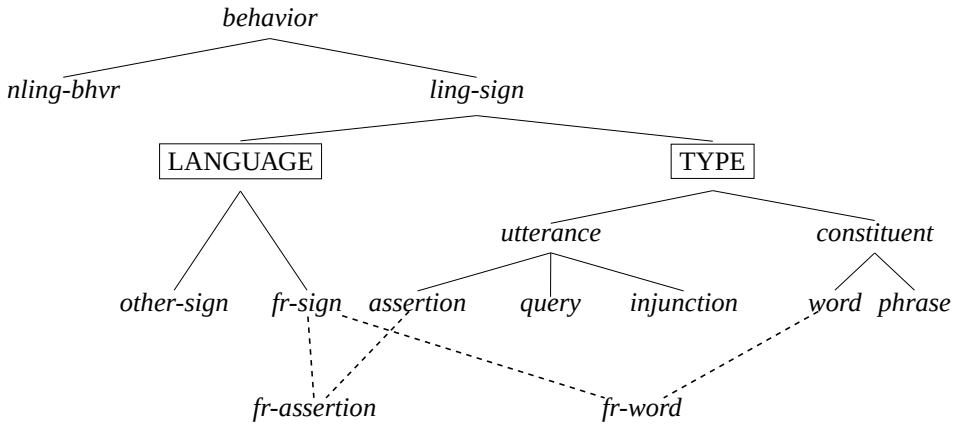


Figure 1: Hierarchy of quotable behaviors

The second move is to introduce quotations in syntactic trees. This is not an easy task, because of the formal diversity of the quoted material (e.g. Delaveau 1988, Clark & Gerrig 1990, Postal 2004). It can be a sentence (1a), a word (7a), an ungrammatical sentence (9a), a realization of an utterance containing repairs or stuttering (9b), a sign in a different language (9c), a nonlinguistic sign (5a), or even a non-sign (5b). This suggests to Postal (2004) that quotative complements should be treated as an open slot, providing in turn a strong argument in favor of a constraint-based approach to syntax. While Postal's analysis is elegant in the general case, it remains that we need a syntactic analysis of at least some quotations. In the IQC construction, the quotative clause can be linearized in the middle of the quoted material (10a). This works only if the quoted material is linguistic (10b) and in the same language (10c), but when it does, the point of insertion is constrained syntactically; e.g. it cannot occur in the middle of a word (10d).

(9) a. Paul a écrit : "Marie est content", avec une faute d'accord.
Paul wrote "Marie est content", making an agreement mistake.

b. Paul a dit : "Marie croy. . . savait que je viendrais".
Paul said: "Marie believ. . . knew that I would come."

c. Paul a dit : "I'm asleep!"
Paul said: "I'm asleep!"

(10) a. Le Président, dit Marie, est déjà arrivé.
(litt.) *The President, said Marie, has already arrived.*

b. *Pshhhhh, fit le ballon, shhhh.
(litt.) *Pshhhhh, went the balloon, shhh.*

c. *The President, dit Marie, has already arrived."

d. *Le Pré, dit Marie, sident est déjà arrivé.

To account for this data we assume the unary construction in (11).[3] This construction takes any behavior, and turns it into a linguistic sign whose content is itself a behavior. The demonstration (2) and the behavior that is actually referred to (1) are not identified, because we know from (7b) that they can differ in important ways; rather, there is a background assumption that the demonstration resembles some aspects of the quoted behavior. We assume that, for a French grammar, signs in French (*fr-sign*) are the only *behavior*s with a linguistic analysis in terms of the familiar HPSG feature geometry. Thus only these are amenable to a syntactic analysis making the insertion of an IQC possible.

(11)
$$\left[\begin{array}{l} \textit{quotation-ph} \\ \textsc{content} \quad \boxed{1}\ \textit{behavior} \\ \textsc{context} \quad \left[\textsc{background} \quad \left\{\textsf{resembles}(\boxed{2},\boxed{1})\right\}\right] \end{array}\right]$$
$$\Big|$$
$$\boxed{2}\textit{behavior}$$

4 Complement quotation

Let us now turn to the analysis of complement quotation as in (1a), or (5). Interestingly, quotative verbs can select properties of the quoted behavior, even when that behavior is not linguistic or homolinguistic. While quotation verbs are quite diverse, three classes can be identified from that point of view. Verbs such as *dire* 'say' can take any complement as long as it is a linguistic sign: it can be in any language (7b) and of any linguistic category (7a), but a non linguistically conventionalized sound emission will not do (12). Verbs such as *affirmer* 'state', *demander* 'ask' or *ordonner* 'order' select an utterance with a specific illocutionary type (13a,b), but the language is not constrained (13c). Finally *faire* 'do' accepts all behaviors, linguistic or otherwise (5). This data motivates the details of the hierarchy in Figure 1, and is accounted for by the lexical entries in (14). These give rise to the analysis in Figure 4 for (2).

(12) *Paul a dit "hips"
Paul sait "hips" (=Paul hiccupped)

(13) a. Paul affirma : "Marie n'est pas là".
Paul stated: "Marie is not there."
b. *Paul affirma : "Est-ce que Marie est là ?"
Paul stated: "Is Marie there?"
c. Paul affirma : "Marie is there".

[3] It is natural to assume that quotation marks in writing are the exponent of this construction, when present.

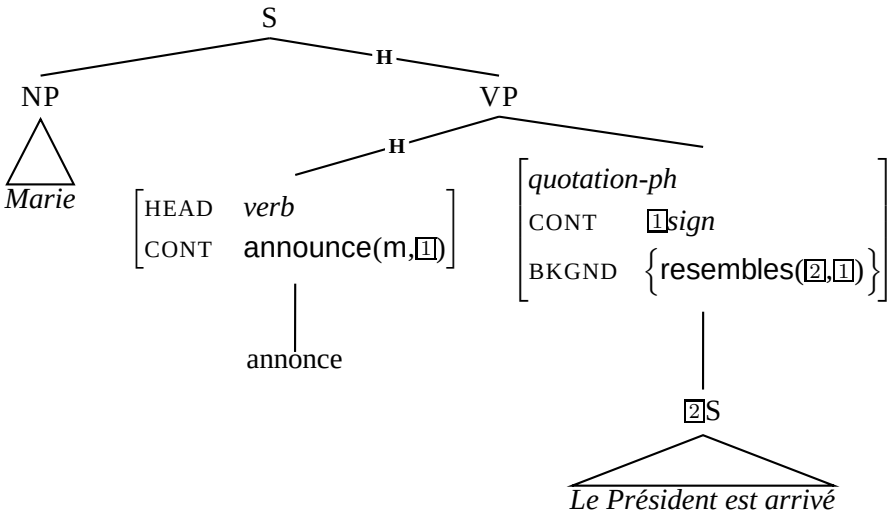


Figure 2: Sample analysis for a complement quotation construction

(14) Direct quotation verbs

a. *dire* 'say':

$$\begin{bmatrix} \text{ARG-STR} & \left\langle \text{NP}_{\boxed{1}}, \begin{bmatrix} \text{CONT} & \boxed{2}\begin{bmatrix} \textit{ling-sign} \\ \text{LOCUS} & \boxed{1} \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{CONT} & \text{say}(\boxed{1},\boxed{2}) \end{bmatrix}$$

b. *affirmer* 'state':

$$\begin{bmatrix} \text{ARG-STR} & \left\langle \text{NP}_{\boxed{1}}, \begin{bmatrix} \text{CONT} & \boxed{2}\begin{bmatrix} \textit{assertion} \\ \text{LOCUS} & \boxed{1} \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{CONT} & \text{state}(\boxed{1},\boxed{2}) \end{bmatrix}$$

c. *faire* 'do':

$$\begin{bmatrix} \text{ARG-STR} & \left\langle \text{NP}_{\boxed{1}}, \begin{bmatrix} \text{CONT} & \boxed{2}\begin{bmatrix} \textit{behavior} \\ \text{LOCUS} & \boxed{1} \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{CONT} & \text{do}(\boxed{1},\boxed{2}) \end{bmatrix}$$

(15) Marie annonce : "Le Président est arrivé."
Marie announces : "The President has arrived."

Note that, contrary to traditional grammar but in line with Authier-Revuz (1992) and Postal (2004), we assume that quotations are ordinary complements. This account directly for a number of important obervations. Quotations linearize like complements: they must follow the verb but can be followed by a complement

(16a). They can be embedded (16b). They can be (pseudo-)clefted (16c). Finally, they obey selectional restrictions (12-13).

(16) a. Paul a lancé : "donne-moi la main" à Marie, avant de traverser.
Paul called out "give me your hand" to Marie, before crossing the street.

b. Je crois que Paul a lancé à Marie : "Donne-moi la main".
I think that Paul called out to Marie : "Give me your hand."

c. Ce que Paul a dit, c'est "laisse-moi tranquille".
What Paul said was "Leave me alone."

With most verbs, the quotation is an object. However, some intransitive verbs can also introduce a quotation: *s'exprimer* 'to express oneself', *acquiescer* 'to agree', *sourire* 'to smile' etc. (Delaveau 1988). Such verbs combine with a manner adverb or PP, typically *ainsi* 'this way', which we analyze as a complement. Thus, the quotation is also a complement with these verbs, although not an object.[4]

5 IQCs as adjuncts with extraction

Sentences containing IQCs contrast strongly with sentences containing quotative complements. Parts of the quotation may precede the IQC, but there is no evidence that any part of the quotation is a complement of the quotation verb: in particular, no IQC can be followed by one of the verb's complements (17a). The IQC construction cannot be embedded (17b); and the quotation can not be (pseudo-)clefted (17c). On the other hand, the quotation respects the same selectional restrictions with respect to the quotative verb as quotative complements do—compare (18a) with (12) and (18b) with (13b).

(17) a. * "Le Président", annonçait Paul, "est déjà arrivé", à Marie.
the President announced Paul is already arrived to Marie

b. *Je crois que "Donne-moi la main" a lancé Paul à Marie.
I think that "Give me your hand", Paul called out to Marie.

c. * Ce que, annonçait Paul, c' est
that which announced Paul that is

"Le Président est déjà arrivé".
the President is already arrived

[4]These intransitive quotative verbs can also combine with a manner adverb, followed by a quotation, as in (i). We take this to be an instance of open quotation, where it is an independent clause, anaphorically linked to the adverb.

(i) Marie s'est exprimée ainsi : "Puisqu'il le faut, j'irai."
Marie expressed herself in this way: "Since it is necessary, I will go."

(18) a. * “Hips !”, dit Paul.
“Hips!”, Paul said.

b. * “Est-ce que Marie est là ?”, affirma Paul.
“Is Mary there?”, Paul stated.

To account for this, we assume that (i) IQCs are adjuncts to independent clauses (the quotation), and (ii) they are extraction constructions where the gap is identified with the modified quotation. Thus syntactically, IQCs are quite similar to bare (*that*-less) relative clauses (19): in both cases, the content of the gap element within an adjunct clause is identified with the content of the head the adjunct clause combines with.[5]

(19) The book$_i$ [you ordered $\_\_\_{}_i$] has arrived.

This is made explicit in the construction in (20), which is used in a simple example in Figure 3. Notice that this analysis allows one to account for selectional restrictions such as those in (18) in much the same way as one accounts for selectional restrictions imposed by the verb in a relative clause on the noun modified by the relative clause: selectional restrictions are passed from the verb’s lexical entry through SLASH and MOD to the head.

(20) *head-IQC-ph*$\rightarrow$*head-adj-ph* $\wedge$

$$\begin{bmatrix} \text{S} \\ \text{IC} & + \\ \text{SLASH} & \{\} \end{bmatrix}$$

$$\text{H}$$

$$\begin{bmatrix} \textit{quotation-ph} \\ \text{SYNSEM} & \boxed{1} \end{bmatrix} \qquad \begin{bmatrix} \text{S} \\ \text{MOD} & \boxed{1}\,[\text{LOC} \quad \boxed{2}] \\ \text{SLASH} & \{\boxed{2}\} \end{bmatrix}$$

That IQCs are extraction constructions is confirmed by three properties that oppose them to other adjunct clauses. First, IQCs give rise to two types of subject inversion (see Kayne, 1972, for the basic description of inversion patterns in French): simple affixal subject inversion (21a), and subject NP inversion (21b); complex inversion is ruled out (21c). Notice that in subject NP inversion, the subject can be followed by a complement of the verb; as (Bonami et al. 1999) shows, this can only occur in extraction contexts. Second, IQCs belong to a family of incidental clausal constructions of French, traditionally called *incises*, which share the property of being embedded without a formal mark of embedding (initial complementizer, preposition, or wh- phrase). In some incidental clauses, the host clause corresponds to a pronoun within the incidental clause (22a). But this is incompatible with (direct) quotation: if the host is a direct quotation, as indicated by the reference of the first

[5]Of course bare relative clauses and IQCs are quite different semantically: bare relative clauses are intersective modifiers, whereas, clearly, IQCs semantically embed the head they combine with.

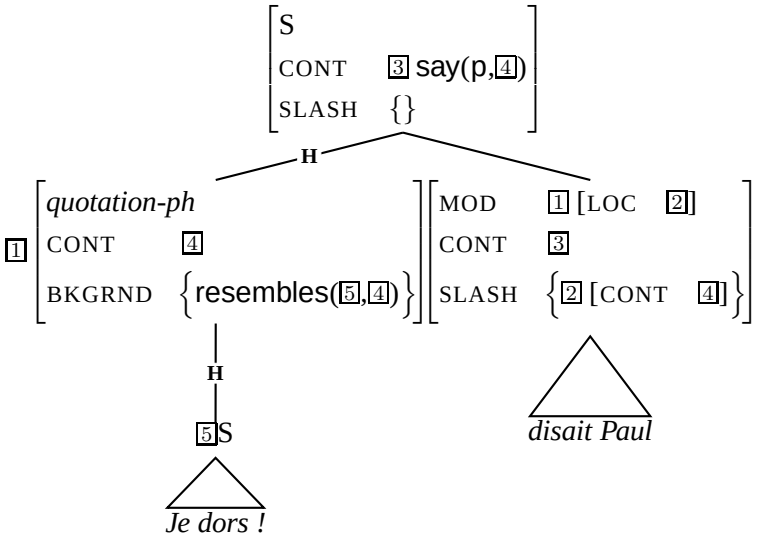


Figure 3: A simple IQC

person possessive determiner in (22b), then the incidental clause must contain a gap. Third, there is an unbounded dependency between the quotation and the quotative verb (23a); once again this does not work in non-quotative adjunct clauses (23b).

(21) a. "Le Président est arrivé", annonça-t-elle à la presse.
"The President has arrived", she announced to the Press.

b. "Le Président est arrivé", annonça Marie à la presse.
"The President has arrived", Marie announced to the Press.

c. * "Le Président est arrivé", Marie annonça-t-elle à la presse.

(22) a. Son$_i$ frère, Marie$_i$ l'a dit, est arrivé.
(litt.) Her brother, Marie said so, has arrived.

b. *Mon$_i$ frère est arrivée, Marie$_i$ l'a dit.
My$_i$ brother has arrived, Marie$_i$ said it.

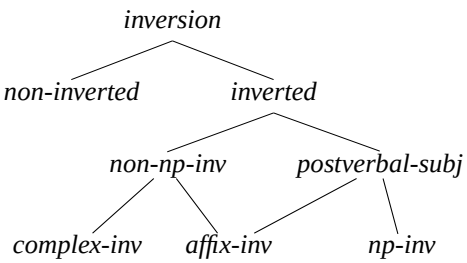
(23) a. "Je n'en peux plus", semblait croire pouvoir dire Paul.
"I am worn out", Paul seemed to believe to be able to say.

b. *"Je n'en peux plus", Paul semblait le dire.
"I am worn out", Paul seemed to say it.

(20) accounts directly for the properties discussed so far except the distribution of subjects. We adopt a version of the linearization approach to extraction-triggered inversion of Bonami *et al.* (1999). The head feature INV takes one of the values in (24a); an *np-inv* value triggers noncompaction of VP complements (while all other dependents are compacted in French). (24b) makes sure that no preverbal subject,

be it affixal or phrasal, is possible in IQCs, ruling out complex inversion.[6]

(24) a.



b. *head-IQC-ph* $\rightarrow \left[\text{NHD-DTRS} \quad \left\langle \left[\text{INV} \quad \textit{postverbal-subj}\right] \right\rangle\right]$

Most of the quotative verbs which occur in IQCs are the same ones that take a quotative complement (except for the gap status of the argument). However, some verbs are possible in IQCs that may not introduce a quotative complement (Cornulier, 1973; Delaveau, 1988; Monville Burston, 1993), as illustrated in (25) and (26). Many of these verbs are propositional attitude verbs turned into speech verbs by metaphorical extension (25). Others are originally intransitive verbs reporting a linguistic or otherwise expressive behavior (26). To account for such cases, we assume that verbs like *imaginer* or *hoqueter* have a lexical entry where they subcategorize for a quotation gap. The entry in (27) allows the verb to occur in IQCs, but not with a complement quotation, because the second argument is a gap.

(25) a. "Maintenant, je me transforme en boule de feu", imagina Paul.
"Now I transform into a fireball", Paul imagined.

b. *Paul imagina : "Maintenant je me transforme en boule de feu."
Paul imagined: "Now I transform into a fireball."

(26) a. "Je n'en peux plus", hoqueta Marie.
"I can't stand it anymore", Marie gasped.

b. *Marie hoqueta : "Je n'en peux plus."
Marie gasped: "I can't stand it anymore."

(27) *imaginer* 'imagine':

$$\left[\begin{array}{ll} \text{ARG-STR} & \left\langle \text{NP}_{\boxed{1}}, \left[\begin{array}{ll} \textit{gap} & \\ \text{CONT} & \boxed{2}\left[\begin{array}{ll} \textit{assertion} & \\ \text{LOCUS} & \boxed{1} \end{array}\right] \end{array}\right] \right\rangle \\ \text{CONT} & \text{imagine\_and\_state}(\boxed{1},\boxed{2}) \end{array}\right]$$

[6](24b assumes inversion to be mandatory, as it is in formal standard French. Inversion is only optional in informal standard French (i). Nonstandard varieties also allow the construction in (ii), where the IQC is introduced by a complementizer.

(i) "J'en peux plus", Paul m'a dit.

(ii) "J'en peux plus", qu'il a dit.

6 IQCs as incidental adjuncts

We finally discuss the prosodic and linearization properties of IQCs. IQCs have an incidental prosody. Incidentals are phrases which are prosodically autonomous, and tend to be separated from the rest of the sentence by some feature on their right boundary (Fagyal 2002, Mertens 2004, Delais-Roussarie 2005). IQCs have the same positional freedom as other incidental adjuncts, such as adverbs (Bonami & Godard 2007), with one difference: IQCs cannot be the first element of an utterance (although they can begin a clause).

(28) a. * Dit Marie, "Le Président est déjà arrivé".
Says Marie the President is already arrived
b. Le Président, dit Marie, est déjà arrivé.
c. Le Président est, dit Marie, déjà arrivé.
d. Le Président est déjà arrivé", dit Marie.
e. "J'ai promis de le faire", a dit le Président. "Et, a-t-il ajouté, je le ferai".
(litt.) *"I promised to do it" said the President. "and", added he, "I will do so."*

In some (but by no means all) constructions, incidentality correlates with other properties, in particular pragmatic properties. For example, integrated relative clauses (so-called 'restrictive RCs') are part of the main content, whereas incidental relative clauses ('nonrestrictive RCs') convey conventional implicatures (Potts, 2005). This is not the case with IQCs: they are part of the main content, as shown by the fact that they can be denied with the usual means.

(29) A: "Le Président est arrivé", a annoncé Marie.
"The president has arrived", Marie announced.
B: C'est faux ; c'est le chef de cabinet qui l'a dit !
That's not true—the chief of staff said that!

We follow Bonami & Godard's (2007) analysis of incidental adjuncts: incidental adjuncts are clause modifiers, which may linearize in various positions due to the absence of compaction of the head VP daughter inside the French sentence. Adjunct phrases are always compacted, and non-head daughters are compacted in a general way: the only phrases that are not compacted are complement VPs marked as [INV *np-inv*]. Figure 4 illustrates this general analysis in the case of a modal adverb.

We thus take ICQs to be incidental adjuncts. To account for their placement properties, we need to be more precise about the phonology and word-order domains of quotation phrases. When a French sentence is quoted, the IQC may linearize anywhere among the main constituents of that sentence. This follows directly if the quotation phrase (which dominates the quotative sequence, see (11)) inherits the DOM elements of its daughter. When what is quoted is not a French sentence

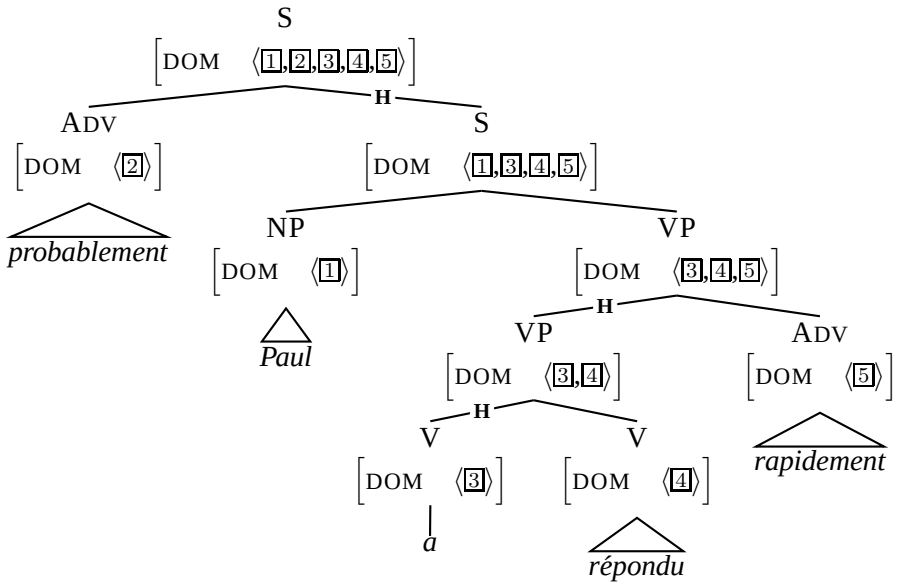


Figure 4: Bonami and Godard's (2007) analysis of incidental adjuncts

(i.e. is a non linguistic sign, or a sign in a foreign language), there is no syntactic analysis for the quoted element, and thus no DOM value to inherit. As a consequence, the IQC may only linearize at the right edge of the quotation (30–31). In addition, the quotation needs not have a PHONOLOGY that conforms to French phonotatics—it may even involve no sound production. To account for this, we operate a distinction between *homolinguistic* and *non-homolinguistic* quotation phrases (32). French homolinguistic quotations are quotations of a French sign. Their phonology is normal French phonology, and their DOM value is inherited from the embedded sign. Non-homolinguistic quotations can be the quotation of any type of behavior. They have a single object on their domain, whose phonology is of a special type *any-phon*, which is a placeholder for any type of realization (that does not need to conform to French phonotactics).

(30) a. "Pshhhhhhh", fit le pneu de la voiture.
The car's tire went "pshhhhh".

b. *"Pshhhh, fit le pneu de la voiture, "shhhh"

(31) a. "Ich bin hungrich", dit Paul.
"Ich bin hungrich", Paul said.

b. *"Ich bin", dit Paul, "hungrich". le pneu de la voiture.

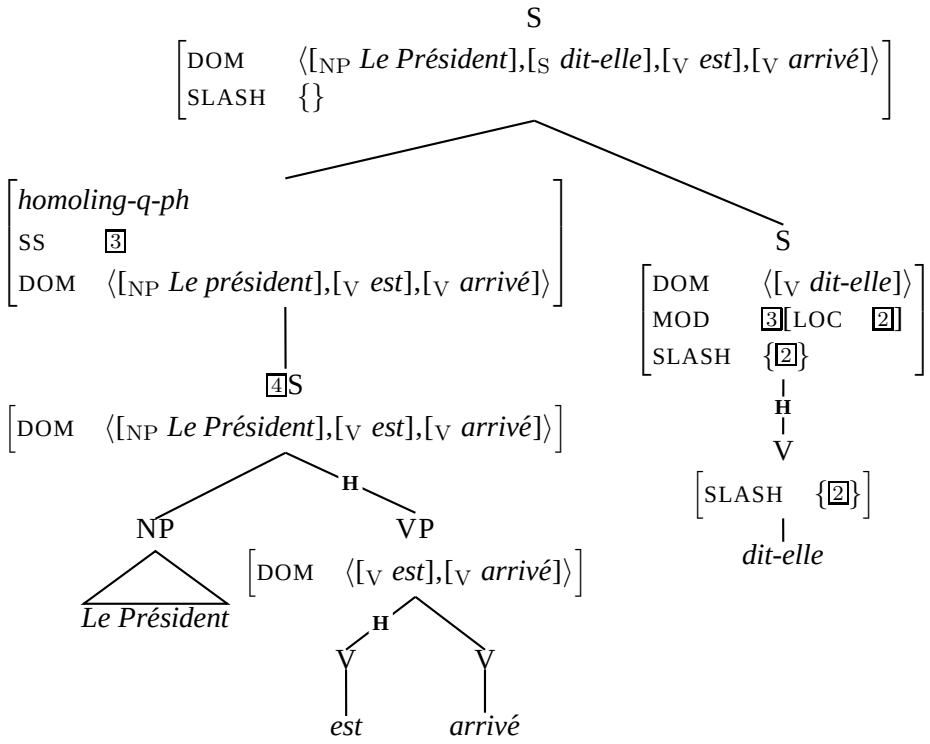


Figure 5: Analysis for (28b)

(32) a. *homoling-q-ph* →*quotation-ph* ∧ [PHON *fr-phon*; DOM 1] — [*fr-sign*; DOM 1]

b. *other-q-ph* →*quotation-ph* ∧ [DOM ⟨[*dom-obj*; PHON *any-phon*]⟩] — *behavior*

Figure 5 illustrates most features of the analysis. The contrast between (28a) and (28e) follows from a constraint on complete utterances.[7]

[7] That constraint may be generalized to other types of incidental clauses, such as the ones in (i-ii). We leave this issue to a future study.

(i) Paul a, semble-t-il, répondu à Marie.
Paul has, it seems, answered Marie.

(ii) *Semble-t-il, Paul a répondu à Marie.

(33) *utterance*→$\left[\text{DOM} \quad \left\langle \neg\left[\text{SLASH} \quad \left\{\left[\text{CONT } \textit{behavior}\right],\ldots\right\}\right],\ldots\right\rangle\right]$

A A more realistic semantics for quotation

In section 1, on the basis of Clark and Gerrig's view of quotation as demonstration, we proposed a semantics for quotation that can be summarized as in (34b).

(34) a. Marie a dit "Mon frère est arrivé."
Marie said "My brother has arrived."

b. $\exists u[\mathsf{resembles}(u, \text{“}\texttt{Mon frère est arrivé}\text{”}) \wedge \mathsf{say}(\mathsf{m}, u)]$
Marie produced an utterance that resembles the utterance the speaker produces when he says "Mon frère est arrivé."

This analysis was then encoded in HPSG, using the unary *quotation-ph* defined in (11). This HPSG analysis has three problematic features. First, the argument of the say relation is taken to be a *sign*, whereas entities occurring as component parts of CONTENT values are normally segregated to a subhierarchy of semantic objects (*sem-obj*). Using nonsemantic objects as arguments to relations is bound to pose problems when an explicit model-theoretic semantics for CONTENT values is constructed. Although it is customary in HPSG studies to leave aside the construction of such an explicit semantics, when possible one should avoid proposing analyses that hamper such a construction. Second, since non-linguistic behavior can be quoted, the proposed analysis forces us to model explicitly non-linguistic behavior as part of the HPSG type hierarchy. Although such an extension is quite limited as presented here (in Figure 1 we only introduced a few new types, and did not propose a featural analysis of non-linguitic behaviors or of non-homolinguistic signs), it modifies the very definition of the empirical domain modelled by an HPSG theory. Such a move should be thouroughly motivated, and it is not clear that quotation is a sufficient motivation. Finally, there is a more directly analytic problem with the proposed analysis: it does not give us the right logic for quotations. When a quotation occurs in the scope of negation or a quantifier, the resembles relation can be embedded in that scope, as illustrated in (35–36). In effect, quotations behave like indefinite NPs whose restrictor is the resembles relation. The use of BACKGROUND in (11) does not allow such a scopal behavior, because BACKGROUND information always gets maximal scope.

(35) Marie n'a pas dit "Je dors."
$\neg\exists u[\mathsf{resembles}(u, \text{“}\texttt{Je dors}\text{”}) \wedge \mathsf{say}(\mathsf{m}, u)]$

(36) Tout le monde a dit "Je dors."
$\forall x[\mathsf{human}(x) \rightarrow \exists u[\mathsf{resembles}(u, \text{“}\texttt{Je dors}\text{”}) \wedge \mathsf{say}(x, u)]]$

We now outline an alternative analysis.[8] The general idea is to keep the CONTENT value of the quotation distinct from the quoted sign in the feature structure, but to equate them via a metaconstraint on the model theoretic interpretation of CONTENT object. To make this idea precise, we need to be explicit about the interpretation of HPSG descriptions. Let $[\![\cdot]\!]_{ling}$ be the interpretation function that maps HPSG descriptions to feature structures (or other appropriate model objects). $[\![\cdot]\!]_{ling}$ maps the CONTENT value of a sign to a feature structure, which is the HPSG equivalent of a logical form for that sign. So one still needs to provide a model-theoretic interpretation of that object; let us call $[\![\cdot]\!]_{sem}$ the function providing that interpretation.

Whereas HPSG descriptions are interpreted in a very specific domain (of feature structures or other appropriate objects), CONTENT values are interpreted in an very general domain, containing (models of) individuals, properties, propositions, etc. Since this domain is very general, we can assume that it also includes as a component part the domain of feature structures; that is, the domain of $[\![\cdot]\!]_{ling}$ is a proper part of the domain of $[\![\cdot]\!]_{sem}$. Then we can take quotations to have feature structures of type *sign* as their interpetation via the $[\![\cdot]\!]_{sem}$ interpretation function. This allows us to cleanly separate CONTENT values from signs in the syntax of HPSG descriptions (and in the linguistic interpretation $[\![\cdot]\!]_{ling}$ of these descriptions) while keeping the intuition that the CONTENT of a quotation is a sign. Specifically, we replace the definition of *quotation-ph* in (11) with the one in (37). The metaconstraint linking the two interpretation functions makes sure that the semantic interpretation of the index u' coincicides with the linguistic interpretation of the quoted sign.[9]

(37) *homoling-q-ph* $\rightarrow$

$$\begin{bmatrix} \text{PHON} & \textit{fr-phon} \\ \text{CONT} & \boxed{1} \\ \text{STORE} & \left\{ \boxed{1} \begin{bmatrix} \exists\textit{-rel} & \\ \text{IND} & u \\ \text{RESTR} & \left\{ \mathsf{resembles}(u, u') \right\} \end{bmatrix} \right\} \\ \text{DOM} & \boxed{2} \end{bmatrix}$$

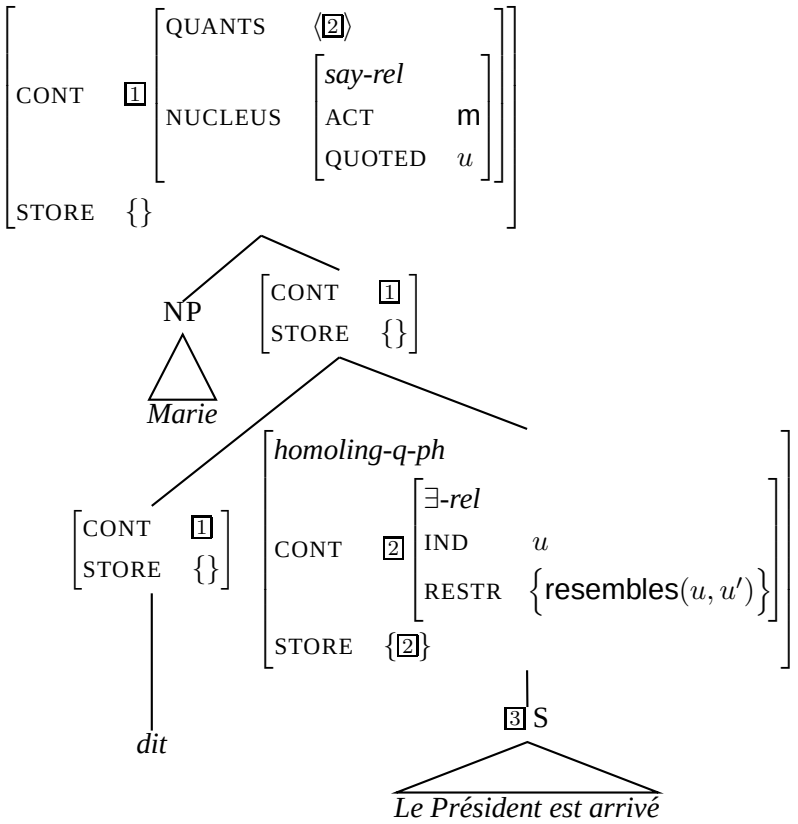
$$\Big| \quad \boxed{3} \begin{bmatrix} \textit{sign} & \\ \text{DOM} & \boxed{2} \end{bmatrix}$$

Metagrammatical constraint: $[\![u']\!]_{sem} = [\![\boxed{3}]\!]_{ling}$

Notice that we are assuming a treatment of scope along the lines of (Ginzburg and Sag, 2000). The new analysis is illustrated in Figure 6. On this analysis, nonlinguistic behaviors need not be modelled explicitly. The type hierarchy in Figure 1 is dropped in favor of a more conventional hierarchy of (homolinguistic) signs.

[8] We are indebted to Frank Richter and Manfred Sailer for suggesting this approach

[9] The formalization of this metaconstraint is far from trivial, and depends heavily on controversial assumptions on the foundations of HPSG. We leave this issue for future work.



where $[\![u']\!]_{sem} = [\![\boxed{3}]\!]_{ling}$.

Figure 6: The final analysis of direct quotation

Selectional restrictions of quotative verbs need not be encoded explicitly as typing requirements on CONTENT values, as in (14), but can be assumed to be verified at the level of model-theoretic semantic interpretation.[10] The Non-homolinguistic quotations are treated as a lexical entry[11] with a special phonology (38). The mimicking relation is not made explicit for nonhomolinguistic quotations, because non-homolinguistic behavior is not modelled explicitly.

[10] Alternatively, selectional restrictions can be verified syntactically by using a subtyping of indexes.

[11] Or alternatively, as a phrase with an empty DTRS list.

(38) *other-quotation* $\rightarrow$*word* $\wedge$
$$\begin{bmatrix} \text{PHON} & \textit{any-phon} \\ \text{CONT} & \boxed{1} \\ \text{STORE} & \left\{ \boxed{1} \begin{bmatrix} \exists\textit{-rel} & \\ \text{IND} & u \\ \text{RESTR} & \{\} \end{bmatrix} \right\} \end{bmatrix}$$

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