

“My brother, he drives like crazy”

Contextual salience, linguistic marking and discourse organisation in spoken French

Liesbeth Degand

Centre for Text and Discourse Studies
Université catholique de Louvain
Louvain-la-Neuve, Belgium
degand@lige.ucl.ac.be

Anne Catherine Simon

Valibel
Université catholique de Louvain
Louvain-la-Neuve, Belgium
simon@rom.ucl.ac.be

Abstract

We investigate the degree to which contextual salience à la Chafe (1994) can have an impact on linguistic marking both on the syntactic level and the intonation level and how this can affect the discourse organization in spoken French.

1 Introduction

The ultimate goal of this ongoing research is to investigate to what extent salience can play a role as a discourse structuring device in speech (and writing). To this end, we start by distinguishing two types of salience: contextual salience and linguistic salience.

Following Chafe (1994), contextual salience is a property of the referents occurring in the discourse, i.e. a function of their identifiability by the speaker and hearer. This notion is partly related to the distinction Chafe makes between *active*, *semiactive*, and *inactive* referents (see section 3), since “many identifiable referents achieve salience through their activation within the current conversation” (Chafe, 1994: 100). We will try to show here that this notion of contextual salience interacts strongly with what can be called linguistic salience or linguistic marking.

For the purposes of this article we will define linguistic salience as a property of syntactic structures and intonation units that are linguistically marked, i.e. non-canonical. On the syntactic level, the so-called canonical clause (in French) is generally considered to be of the form “Subject + Verb

+ Complement”. We will consider here that all non-canonical clauses are marked, but will focus only on variation in the subject position (section 4). With respect to intonation, we will consider the unmarked case to be that each clause corresponds to one intonation unit (see Hannay & Kroon, 2005). In French, salience can be achieved either by using specific contour in the final accent position (among others, the falling contour HL on the last syllable of the intonation group) or by adding an optional (secondary) accent on the initial syllable of a word. The spreading of one syntactic dependency unit over several short and clear-cut intonation units rhythmically organised, also can lead to a salience effect (Selting, 2000).

What we shall try to show here is that contextual salience, as expressed through information flow management à la Chafe, has an impact on linguistic marking both on the syntactic level and the intonation level and that this affects the discourse organisation in spoken French. To this end, we analysed two types of spoken discourse, a spontaneous conversation between two acquainted speakers and a (prepared) radio news bulletin. The method used to analyse and segment the discourses will be set out in section 2. In section 3, we will develop the notion of contextual salience and information flow according to Chafe and how these were applied to our sample data. In section 4, we turn to the interaction between contextual salience and linguistic marking, both on the syntactic and the intonation level. In section 5, we investigate the relationship between contextual salience, linguistic marking and discourse organisation on the basis of the conversation data. The main findings are summarised in the concluding remarks.

2 Minimal Discourse Units

In discourse analysis it is commonly acknowledged that discourse is (hierarchically) structured. The assumption is that a piece of discourse is built up from smaller “building blocks” related to one another in a coherent way. What these building blocks actually look like differs according to the discourse model at stake. To represent this structure the prevalent approach is to make use of a discourse tree the leaves of which represent the smallest discourse segments, in our terms Minimal Discourse Units (MDUs). While it has become quite uncontroversial that there is such a thing like a minimal discourse unit, there is no real consensus in discourse-based studies on how to identify this MDU (see Degand & Simon, to appear). With respect to the issue of discourse segmentation, we will here adopt the distinction proposed by Hannay & Kroon (2005) between *strategic units* (‘acts’) and *conceptual units* (‘ideas’). The latter correspond to the conceptual content of the discourse, individualized in the form of *ideas*, i.e. “those items of information” that “can function as domains of activation cost” (Chafe, 1994: 80). Strategic units are entirely dependent on the situated discourse production (and comprehension). They constitute the steps by which the “ideas” are planned, processed and expressed by the speakers/writers. They are linguistically realized in the form of intonation units or punctuation units, and potentially isolating major constituents of the clause, or grouping several clauses into a single intonation unit. Following Chafe (1994: 63) they come in three types: (i) *fragmentary units* are truncated, and are disregarded for the analysis at stake; (ii) *substantive units* convey ideas of events, states or referents; (iii) *regulatory units*, regulate the interaction of information flow; that is, the development of discourse, the interaction between participants, the expression of the speaker’s mental process, and/or the judgement of the validity of the information.

Degand & Simon (to appear) developed a workable set of segmentation principles that proceeds in two steps: (i) segmenting the flow of speech into MDUs, and (ii) distinguishing between different types of MDUs (fragmentary, substantive, regulatory). The first step, i.e. the segmentation procedure, follows from three independently performed analyses. First, the discourse at hand is

segmented into syntactic dependency units distinguishing between nuclei and adjuncts. Each nucleus or adjunct is a potential candidate for constituting an MDU, but its effective status, as MDU, as fragment of MDU or as grouping of more than one MDU, depends on the intonation contour of the chunk. Second, the discourse is segmented into intonation units identified in terms of major intonation boundaries. Thirdly, the two segmentations (which are far from being completely equivalent) are compared and it is this interaction that makes it possible to decide which segment may be considered an MDU, and which may not. Very briefly, our working hypothesis is that an MDU amalgamates one intonation unit with one dependency unit (1)¹. This corresponds to Chafe’s (1994:65) observation that “[m]any substantive IU [intonation units] have the grammatical form of single clauses”. Hannay & Kroon (2005) take a similar position to define their *discourse acts*. We believe however, in line with Selting (2000), that the syntactic (dependency) units should also play their role when defining the minimal discourse units². Thus, when one dependency unit is broken down into two or more intonation units, the MDU will amalgamate several intonation units with one dependency unit (2). When two or more dependency units are comprised within one intonation unit, the MDU will amalgamate one intonation unit with two dependency units. Two cases can occur: either the dependency units are syntactically independent from one another, but the propositions are condensed into one idea unit corresponding to an MDU (3), or there is a syntactic dependency between the dependency units, in which case there is a clear projection of two dependency units into one supra-syntactic unit, corresponding to the MDU (4). Once the MDU segmentation is completed, each MDU is identified as being either (primarily) substantive or regulatory (for further details, see Degand & Simon, to appear). Since only substantive units contain referents (related to contextual

¹ In our examples dependency units are marked with a #, pauses with a /, intonation units are given on separate lines; regulatory units are underlined.

² Actually, we believe that the position taken by Chafe (1994) and Hannay & Kroon (2005) is justified in a perspective of discourse production, where every intonation unit constitutes a step in the discourse planning process. Spoken discourse understanding is however not strictly intonation based but recourse to syntactic patterning too (see e.g., Monschau, Kreyer, & Mukherjee, 2003; Cutler, Dahan, & Van Donselaar, 1997).

saliency), we will only take those into account here, and further disregard regulatory units.

- (1) puis j'ai eu un petit
accrochage avec euh mon
ami Pacs euh / #
[BLAjv11, 550]
then I had some trouble with
uhm my friend Pacs uhm
- (2) comme si euh s/ pendant
tes / tes heures de tra-
vail /
as if uhm / during your /
your working hours /
ben c'est ton patron qui
paye tes clopes quoi #
[643-644]
well it is your boss who pays
your cigarettes y'see
- (3) ils travaillent ils sont
très / très corrects #
[120]
they work they are very /
very correct
- (4) moi j'ai ouvert le Pio's
bar # parce qu'Oli fer-
mait sa soirée / # [665]
me I opened the Pio's bar be-
cause Oli closed his party

3 Contextual Saliency

According to Chafe (1994: 100), contextual saliency “has to do with the degree to which a referent ‘stands out’ from other referents that might be categorized in the same way. It may be established by the discourse, by the environment within which a conversation takes place, by the social group to which the participants in a conversation belong, or by commonness of human experience”. Saliency is linked to the identifiability of a referent, and does not completely correlate with activation cost, since inactive referents may be “salient” (shared) for contextual (the proximal environment of the speakers) or cultural reasons, and not for having been mentioned earlier within the conversation.

On the other hand, information in the mind of the speakers may be in any of three activation states (active, semiactive and inactive), according to whether it has been mentioned so far or not. Information that follows up on an idea that is already active for the listener is verbalized by the speaker as *given*, while information that activates an idea

that was previously inactive for the listener is verbalized as *new*. When referring to an idea that was previously semi-active, the speaker verbalizes it as *accessible* information (Chafe, 1994: 74). Note that “accessible information tends to be expressed in more or less the same way as new” (75). Chafe makes use of this threefold distinction to account for the information flow in discourse: each intonation unit is hypothesized to verbalize no more than one new idea; within an intonation unit, the given information is typically verbalized with a weakly accented pronoun, new and accessible information with an accented noun or noun phrase.

4 Contextual Saliency and Linguistic Marking

What we shall try to show here is how MDUs verbalize ideas as a function of their “saliency” and / or activation state. Both syntactic and intonation means were investigated. We restricted our observation to the subject position in the clause and hypothesized that active referents would be verbalized with canonical syntax (with a weakly accented pronoun in the subject position) and neutral intonation; on the other hand, semi-active and active referents should be verbalized using non-canonical syntactic and / or intonation structures.

4.1 Contextual Saliency and Syntactic Marking

Syntactic Marking

Following a dependency grammar developed for spoken French by Blanche-Benveniste and colleagues (1990), unmarked syntactic structures encode the predicate with its dependents in an overt and straightforward way, the “canonical form” with the structure Subject + Verb + Complement; what Benveniste et al. (1990) call the “dispositif direct”. Other structures are specialised in marking a certain degree of saliency. Table 1 gives an overview of a number of those salient structures concerning the subject position (examples based on Blanche-Benveniste et al., 1990: 55 ff).

<i>Syntactic structure</i>	<i>Examples</i>	<i>Functions</i>
Direct/canonical	le chef a composé ce menu the chef has composed this menu	« neutral »
Extraction	C'est le chef qui a composé ce menu it is the chef who has composed this menu	Focalisation on X (c'est X qui/que P)
Presentational	Il y a le chef qui a composé ce menu there is the chef who has composed this menu	Topic introduction
Pseudo-cleft	ce qu'il aurait voulu, le chef, c'est composer le menu what he would have liked, the chef, is composing the menu	Topic introduction
double left marking	le chef, <u>il</u> a composé ce menu the chef, he has composed this menu	Topic introduction
double right marking	Il a composé le menu, <u>le chef</u> he has composed the menu, the chef	Topic recall

Table 1: Syntactic marking of the subject position in (spoken) French (Benveniste et al. 1990)

We extracted all marked syntactic structures from our two discourse samples, i.e. the spontaneous conversation (approx. 7800 words, 360 turns, 705 substantive MDUs) and the radio news (305 words, 4 turns, 19 substantive MDUs). The small size of the samples, especially the radio news, precludes any systematic generalisation, but it is nevertheless interesting to note some striking divergences between the two samples in terms of marked syntactic structuring. Table 2 gives an overview of the structures found in the two discourses.

<i>Syntactic structure</i>	<i>Spontaneous conversation</i>	<i>Radio news</i>
Canonical	365 (79,3%)	15 (78,9%)
Extraction	6 (1,3%)	4 (21,1%)
Presentational	3 (0,06%)	
Pseudo-cleft	8 (1,7%)	
double left marking	61 (13,2%)	
double right marking	17 (3,7%)	

Table 2: Syntactic structuring in spontaneous conversation and radio interview

Most striking is the difference between the two types of discourse regarding the use of marked syntactic structuring. In the radio interview, only one type of marked syntactic structure is used, namely the extraction structure (*c'est X qui...*). The picture is totally different for the spontaneous conversation which displays high variation in syntactic subject marking. This is in line with Vignaux' (1995) observation that con-

versations show more variation in the semantic relationship between subject and verb, and thus in point of view and perspective. Especially, double left marking is used to introduce the subject in a non-canonical way (*X, il/elle/ça ...*). With respect to the proportion of canonical structures, the discourses do not, at first sight, seem to diverge. A closer analysis is needed here to expose underlying divergences. We will furthermore investigate whether the use of marked and unmarked structures can be related to the activation status of the referents in subject position.

Syntactic structures and (non) salient referents

In our everyday conversation corpus, most of the canonical syntactic structures contain a pronominal subject (*il, je, ça*) referring to an activated referent (or state or event) in the context. Example (5) is typical of the use of weak pronouns in the subject position, to refer to active referents (in this case, the speaker himself, and a friend with whom he quarrelled).

- (5) BLA_{jv1} ben euh **je** l'ai
pas frappé tu
vois
well uhm I didn't
hit him you see
BLA_{nd1} |- m
BLA_{jv1} **on** s'est -| em-
poignés
we grabbed hold of
each other

on s'est poussés
 we pushed one an-
 other
 puis **je** dis
 dégage d'ici /
 then I say get out
 of here
 et / **il** s'est
 assis / [852-857]
 and/ he sat down

In those cases, each clause is usually uttered in one intonation unit and respects the “one new idea per intonation unit” rule set out by Chafe. From the 365 canonical subject constructions retrieved from the conversation data, 335 (91,8%) display a weak pronoun in subject position, 20 (5,5%) have a full lexeme, and 10 (2,7%) are impersonal constructions. Another picture emerges from the radio news in which 6 out of 15 (40%) canonical substantive MDUs contain a lexical subject, 7 (46,6%) are pronominalised subjects and 2 (13,3%) show an impersonal construction. This divergence can be explained in terms of register, higher frequency of nominal subjects being an indicator of formal language (Benveniste, 1997:106).

As for the marked syntactic structures, they seem to specialize in introducing referents that are still inactive in the context, whether they are identifiable or not. The “double marking” construction typically allows the speaker, first to introduce a new (or accessible) referent, and then, once the referent has become active, to predicate on it. Thus a marked syntactic structure is used to introduce an inactive referent.

(6) et sa copine
 and his girlfriend
elle fait quoi ?
 [503-504]
 she does what

In example (7), the “double marking” left dislocation construction “les parents” (*the parents*) is used to select a more precise referent, because the pronoun “ils” (they) in the preceding utterance refers to the members of the whole family (parents and children), whereas the next utterance concerns the parents only. Here, a marked syntactic structure is used to refer to a semi-active referent.

(7) je crois qu'ils ont re-
 tiré un très bon prix
 hein //
 I believe they got a very
 good price hm
 ouais ben je veux dire
 les / les parents euh /
 yeah well I mean the/ the pa-
 rents uhm /
 la campagne leur
 convient bien / [429-
 430]
 the countryside suits them

Actually, to introduce a semi-active referent, speakers most often make use of the clitic left dislocation (77% of the cases), mostly within a turn to reactivate a referent (very often the speaker). In (8) the active referent is “ma cousine” (*my cousin*), when the speaker wants to refer to himself again (re-activation), he uses a double left marking construction (“moi, je ...”). This reactivation can go hand in hand with a function of emphasis or contrast. In (9), the two speakers are talking about their common friend *Oli* (Olivier) and about his way of driving. They do so during 15 MDUs preceding this fragment, continuously referring to him as “il”. In [308-309] new referents (“other people”) are introduced, in [310] a left dislocation (“lui, il ..”) is used to reactivate *Oli* and to emphasize that his driving behaviour is in contrast with that of the other people. This contrast is also intonationally marked by a secondary accent on “lui”.

(8) parce que
 cos'
ma cousine m'a appelé
 my cousin called me
 mais euh / moi j'ai fait
 / mon travail d'élec-
 tricien quoi [79-81]
 but uhm I I did my job as
 electrician see

(9) ouais il y en a qui -|
 fument un stick [308]
 yeah there are some [people]
 who smoke a stick
 d'autres qui / qui
 roulent comme des tarés
 quoi [309]
 some others who drive like
 crazy see

mais lui il roule comme
 un fraisé quoi [310]
 but he he drives like crazy
 see

Left dislocated constructions (with “double marking”) require a ‘compulsory prosodic boundary’ (Mertens 2005) between the unit that introduces the referent and the unit that provides the relevant information about it. This means that one cannot at the same time introduce a referent that is not yet active and predicate about it³. This is in line with Chafe’s “one new idea constraint” (1994:108-119).

The other marked syntactic structures (Table 1 above) are also systematically used to (re-) introduce new (inactive) or given (semi-active) referents in the discourse. Although frequencies of these structures are too low in our data to allow any systematic generalisation, we would like to draw attention to some tendencies. Presentational and pseudo-cleft constructions seem to be used preferably to introduce new referents in the discourse, the former introduce nonidentifiable referents (9 above), the latter identifiable ones (following Chafe’s (1994: 93-94) notion of identifiability). Extraction constructions seem to be reserved to re-activate and emphasize a semi-active (identifiable) referent (thus fulfilling a similar function as left double marking). Finally, right marking seems to be used in the first place as a kind of “after thought recall” (Benveniste et al., 84), that is emphasis on an active referent (10).

(10) Il y a / oui oui des
gens sont même pf /
 there are / yes yes some
 people have even pfff /
 moi je les ai éjectés
les gens /
 I I have thrown them out the
 people /

To conclude this section on the relationship between contextual salience and syntactic marking we can affirm that our hypotheses have been confirmed. With the exception of right dislocated marking, all salient syntactic structures are used to introduce new referents into the dis-

³ See Lambrecht (1988) for the same analysis with cleft presentation constructions in spoken French.

course or to re-activate semi-active ones. In conversation, canonical structures (with weak pronouns in subject position) are used talk about active, i.e. contextually salient referents.

4.2 Marked Intonation Structures

The French intonation system comprises several tones whose function is to mark a boundary of a certain degree.

L-L-	(falling) low tone	Finality
H/H	rising high tone	Continuation
HH	high tone	major bound- ary, continua- tion
/LL, LL, \LL	low-to-mid tone	minor bound- ary, continua- tion

Table 3: Neutral French tones in final group position (following Mertens’ 1987 transcription system)

As far as the syntax-intonation interface is concerned, it has been observed that the syntactic elements within the same dependency structure (see section 4.1.1) can be grouped by intonation so that the “neutral” (default) intonation reflects the dependency relations (except for double marking which may require typical intonation structures) (Mertens, 2005).

In addition to these boundary tones there are so-called “marked” tones adding pragmatic or enunciative meaning. Again following Mertens, these tones are the following:

HL, HL-	high-to-mid or high-to low-falling tone	Focalisation
H+H+	rising extra- high tone	Continuation
H	initial high tone (second- ary accent)	Emphasis of part of the intonation group
appendix	low and level se- quence of syllables	minor bound- ary, continua- tion

	after a final boundary tone (final accent)	
--	---	--

Table 4: Marked French tones in final group position (following Mertens' 1987 transcription system)

We wanted to examine whether marked intonation could be related to the activation of an inactive referent (new information). As already mentioned in section 4.1.2, our data contain only few nominal subjects. As a consequence, no initial accent could be found in subject position (since weak pronouns do only very rarely carry any accent). The marked accents we could retrieve were final intonation group accents appearing mostly on the predicate. They thus seem to be linked more with some form of emphasis or sometimes with the attitude of the speaker, as in (11) (capitals in the transcription express a focal accent of the type HL or an initial accent H) expressing strong emotion.

- (11) euh j/ c'est vraiment
de la HAINÉ quoi
uhm / it's really HATRED you
know
je l'aurais vraiment /
Explosé quoi
I would really have / EX-
ploded him y'know
il y a pas d'autre MOT
quoi [928-931]
there's no other WORD y'know

Within our data, we did not find any intonation marked element thus acquiring a special status regarding its saliency through the discourse. This could be the result of the informal and non-prepared status of spontaneous discourse, which seems to privilege syntactic marking to fulfil this saliency function (section 4.1.2).

An alternative way of marking saliency is described by Selting (2000). It concerns the spreading of one syntactic dependency unit over several short and clear-cut intonation units rhythmically organised. This pattern is especially present in our radio news sample when a full NP occupies the subject position in the "direct" SVO construction type. In those cases where the subject NP is not yet contextually salient, it is realised within a separate intonation

unit (pause) (see (12)). The function of this additional prosodic break is to make an inactive referent contextually salient exactly in the same way as presentational constructions do (see 4.1.2). The first intonation unit activates the nonsalient referent, the second provides information about it (cf. prosody of left dislocated constructions described in 4.1.2).

- (12) le gouvernement bruxel-
lois réuni ce matin
(0.35)
the Brussels government
meeting this morning (pause)
vient d'en décider [...]
has just decided ...

We did not find this strategy in our conversation data where syntactic marking is used in such contexts to respect Chafe's "one new idea constraint" (see 4.1.2).

In sum, intonation marking is not the preferred device in spontaneous conversation to introduce or reactivate contextually nonsalient referents. In the formal register of radio news bulletins intonational "oversegmentation" seems to be one way to introduce nonsalient referents in canonical SOV constructions.

5 Contextual saliency and discourse organisation

Finally we would like to examine whether the distribution of marked and unmarked structures within the discourse can be related to the overall organisation of discourse, in particular to the hierarchical organisation in discourse topics. Discourse topics are "aggregate[s] of coherently related events, states, and referents that are held together in some form in the speaker's semiactive consciousness." (Chafe, 1994: 121). Conversations typically focus on different topics, moving from one topic to the other.

Throughout our conversation nine discourse topics are developed (comprising each between 20 and more than one hundred substantive units). We focused on the way the referent of a new discourse topic is introduced, and how this referent is kept active throughout the topic development. To introduce a new discourse topic, speakers seem to make use of two basic strategies:

- the new referent appears in the predicate of a canonical structure with the speaker as subject (13);
- the new referent is introduced by means of a marked syntactic structure, in our case exclusively left dislocation with double marking, mostly of the lexical type (14).

Example (13) illustrates how the topic “ma cousine Michèle” is introduced. In (14) we see how the inactive (but identifiable) referent “Oli” is introduced.

- (13) tiens j'ai vu ma
cousine Michèle #
by the way I have seen my
cousin Michèle
qui m'a p/ fait tes
éloges # [25-26]
she was full of praise for
you
- (14) ben c'est comme ça
qu'il m'a appris quoi #
[il = instructeur]
well that's how he taught me
y'know [he = instructor]
Oli
il ne sait pas faire sa
marche arrière comme ça
[163-165]
Oli - he can't drive back-
wards like that

Once these referents are activated they remain active or semiactive throughout the development of the discourse topic (and subtopics) according to the rules set out in section 4.

6 Conclusions

We have tried to show in this article how contextual salience and linguistic salience as expressed through syntactic and intonation marked structures interact. We found strong evidence in the conversation data for the hypothesis that active referents (contextually salient) are verbalized with canonical syntax (with a weakly accented pronoun in the subject position) and neutral intonation; while semiactive and active referents (contextually nonsalient) are verbalized using non-canonical syntactic structures. Marked

intonation did not seem to interact with contextual salience. We could also show that the introduction of new discourse topics goes hand in hand with syntactic salience. Systematic analyses of different types of spoken discourse are however still needed if we want to validate these results. This is also the only way to put our segmentation procedure to a test. Ongoing work focuses on the interaction of contextual salience, linguistic salience, and turn-taking in different types of multi-party discourses.

Acknowledgments

The first author is a research associate at the Belgian Fund for Scientific Research (FNRS). This work was supported by grant F.R.F.C. n° 2.4535.02 and by grant n° ARC 03/08-301 from the *Communauté française de Belgique*.

References

- Blanche-Benveniste, C., 1997. *Approches de la langue parlée en français*. Paris : Ophrys.
- Blanche-Benveniste, C., Bilger, M., Rouget, Chr. & van den Eynde, K. 1990. *Le français parlé : études grammaticales*. Paris : Éditions du CNRS.
- Chafe, Wallace. 1994. *Discourse, consciousness and time*. Chicago : The University of Chicago Press.
- Cutler, A., Dahan, D., & Van Donselaar, W.A. 1997. Prosody in the comprehension of spoken language: A literature review. *Language and Speech*, 40 (2): 141-202.
- Degand, L. & Simon, A-C. to appear. Minimal discourse units: Can we define them and why should we? *Proceedings of SEM'05*.
- Hannay, M. & Kroon, C. 2005. Acts and the relationship between discourse and grammar. *Functions of Language* 12 (1): 87-124.
- Lambrecht, K. 1988. Presentation cleft constructions in spoken French. In J. Haiman & S. Thompson (eds), *Clause combining in grammar and discourse*. Amsterdam/Philadelphia: John Benjamins: 135-179.
- Mertens, P. 1987. *L'intonation du français. De la description linguistique à la reconnaissance automatique*. Unpublished Ph.D. (Univ. Leuven, Belgium).
- Mertens, P. 2005. L'intonation dans l'analyse du discours, conference presented at the *Journées Lin-*

guistiques, Institut de Philologie Romane, University of Munich, 7-9 April 2005.

Monschau J, Kreyer R, Mukherjee J. 2003. Syntax and semantics at tone unit boundaries. *Anglia – Zeitschrift für Englische Philologie* 121(4): 581-609.

Selting, M. 2000. The Construction of Units in Conversational Talk. *Language in Society* 29(4): 477-518.

Vignaux, G. 1995. Des arguments au discours. Vers un modèle cognitif des opérations et stratégies argumentatives. *Hermès* 15: 199-225.