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# Contrastive Marking<sup>1</sup> in French Dialogue: Why and How

Monique Vion and Annie Colas<sup>2</sup>

*This experiment studies French-speaking adults' preferences for prosodic marking (focal accent) or morphosyntactic marking (clefing) to express information contrasts in dialogue. Our goal is to determine what syntactic and conceptual factors might contribute to these preferences, by examining for the former, the grammatical function of the item bearing the contrastive mark (subject vs complement) and, for the latter, the size of the class to which the contrasted item belongs (two members vs more than two members.). The subjects' responses on a forced-choice judgment task showed that when only one device was used for contrast, subjects clearly preferred clefing for grammatical subjects and focal accent for complements. When both devices were used (prosodic and morphosyntactic), contrasted subjects were preferred over contrasted complements. Response times were longer when the contrasted item belonged to a two-member class. These results demonstrate that subjects' judgments of the suitability of linguistic devices for expressing information contrasts in French are more highly affected by syntactic factors than conceptual ones.*

## INTRODUCTION

During dialogue, speakers formulate their statements in accordance with what they know (or think they know) about their addressee (experience, skills, current preoccupation, etc.). As the conversation progresses, the speaker compiles and updates a mental model of the conversational partner (Clark & Clark, 1977; Steedman & Johnson-Laird, 1980). This model incorporates a number of presumptions about the knowledge and beliefs the addressee is currently entertaining. In an attempt to establish common ground; the speaker makes assumptions about the information available to the addressee for interpreting what is being said. He/she also assumes that there is some information the listener does not know (Clark & Carson, 1981; Clark & Marshall, 1981; Clark & Haviland, 1977; Haviland & Clark, 1974). As the dialogue develops, the speaker may be led to believe that the information currently in the listener's mind is not applicable to the conversation. Engaged in a collaborative referring process (Clark & Wilkes-Gibbs, 1986; Clark & Schaefer, 1987, 1989), the speaker may then attempt to change the partner's beliefs by introducing an information contrast into the subsequent statements.

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A contrast is a form of implicit negation of what the audience believes. Formally, two oppositions are made: a syntagmatic opposition and a paradigmatic opposition (Touati, 1987). At the syntagmatic level, a contrast is used to focus on a particular element, i.e., to make it stand out as the most important element in the information being conveyed. At the paradigmatic level, a contrast opposes the important element to all other items the addressee might consider in its place. As Chafe (1974, 1976) observed, the speaker who marks a contrast simultaneously does three things: he/she (i) assumes that the listener has at his/her disposal a restricted set of items which might contribute to understanding the statements being made, (ii) selects a particular item among them, and (iii) states that it is the right one. Below, dialogue 1 illustrates this process.

- (1) A: Il paraît que les Martin ont eu un accident de voiture?  
'It looks like the Martins had a car accident?'  
B: Oui, ils n'ont pas vu le stop et ils ont heurté un camion.  
'Yes, they didn't see the stop sign and they hit a truck.'  
A: Ha! Ces hommes, toujours pressés.  
'Oh, men! Always in a hurry.'  
B: C'est Madame Martin qui conduisait.  
'It's Mrs. Martin who was driving.'

Approaching the problem from a linguistic standpoint, a number of studies have proposed functional descriptions for languages spoken in Europe (Borkin, 1984; Bromser, 1984; Chafe, 1974, 1976; Halliday, 1967, 1970; Prince, 1978; Sornicola, 1988). These studies have pointed out two types of devices used to make a contrast: clefting and focal accent.

Clefting has been well documented, at both the syntactic (Knowles, 1986; Moreau, 1976) and the semantic-pragmatic levels. A cleft sentence uses two clauses to express what could have been said in one. In French, clefting is achieved by means of the expression "c'est ... qu" ("it's ...that/which/who"), which has two morphological variants, "c'est ... qui" and "c'est ... que," depending on the grammatical function of the clefted constituent. "C'est ... qui" is used when the clefted constituent is the subject of the sentence (regardless of its semantic role). The form "c'est . . . que" is used when the clefted constituent is a complement (example 2):

- (2) (a) Pierre a invité Jean.  
(2) 'Peter invited John.'  
(b) C'est Pierre qui a invité Jean.  
'It's Peter who invited Jean.'  
(c) C'est Jean que Pierre a invité.  
'It's John that Peter invited.'

Clefting can be used with different constituents of a clause (example 3) or even with an entire proposition (example 4).

- (3) (a) Pierre in 'a raconté hier des souvenirs de son enfance.  
'Péter told me stories yesterday about his childhood.'  
(b) C'est Pierre qui m'a raconté hier des souvenirs de son enfance.  
'It's Peter who told me stories yesterday about his childhood.'  
(c) C'est des souvenirs de son enfance que Pierre ni 'a raconté hier.  
'It's stories about his childhood that Peter told me yesterday.'  
(d) C'est à moi que Pierre a raconté hier des souvenirs de son enfance.  
'It's to me that Peter told stories yesterday about his childhood.'  
(e) C'est hier que Pierre m'a raconté des souvenirs de son enfance.  
'It's yesterday that Peter told me stories about his childhood.'
- (4) C 'est parce qu'it' aimait trop les femmes que Pierre ne s'est pas marié.  
'It's because he loved women too much that Peter never married.'

From a pragmatic standpoint, the clefted constituent is the focus of the assertion. Clefting may correlate with the contrastive function, as in example 5.

- (5) C'est la fatigue qui gagne Jean.  
'It's fatigue that affects John.'

But as we shall see below, clefting and/or focal accent can be used to obtain a variety of contrastive effects.

Linguistic studies dealing with prosodic phenomena<sup>3</sup> such as stress are more recent and probably less familiar to psycholinguists. In French<sup>4</sup>, there are several kinds of stress, one of which is focal accent, of interest to us here (Di Cristo, 1995). Focal accent is used to rank the elements of an utterance, and therefore plays a pragmatic role. It highlights one of the lexical items in the utterance, as in example 6 below<sup>5</sup>.

- (6) (a) l'AMI de Nini a volé des habits

<sup>3</sup> Prosody is the general term used to refer to phenomena such as stress, tone, rhythm, and intonation.

<sup>4</sup> Rossi (1985) distinguishes among three types of stress in French. Internal accent generates intonation. It is a property of the morpheme. External accent is so called because it is not a property of the morpheme and generally does not coincide with internal accent. It is also called focal accent, and fulfills a pragmatic function. Melodic ictus is manifested by a melodic prominence in sequences of more than five syllables without internal accent or intonation morphemes. It appears to be governed by a rhythmic constraint and is located at the point where an external accent could potentially occur.

<sup>5</sup> Di Cristo, personal communication. The stressed word is shown in capital letters.

- 'Nini's FRIEND stole some clothes'
- (b) l'ami de NINI a volé des habits
- 'NINI'S friend stole some clothes'
- (c) l'ami de Nini A VOLE des habits
- 'Nini's friend STOLE some clothes'
- (d) l'ami de Nini a volé des HABITS
- 'Nini's friend stole some CLOTHES'

The function of focal accent in French is to "rhematize" one of the elements of the utterance in cases where there are syntactic constraints which prohibit the occurrence of the conclusive intonation morpheme<sup>6</sup>, the device ordinarily used to fulfill the rhematic function. Focal accent does not necessarily play a contrastive role, but it can be used to this end and is often mistakenly taken for emphatic stress. The two accents should not be confused since focal accent has no intrinsic expressive value (although expressive content may be added to it) (Rossi, 1985). One characteristic of focal accent in French is a rapid change in pitch: "As a general rule an item focussed for contrast is characterized by a global rising-falling pitch pattern. While the fall is always associated with the rightmost full syllable of the item in contrast, the timing of the rising movement lending prominence depends on the objective or expressive character of the focus' (Di Cristo, 1995).

Our empirical study examines the case where the same constituent can be contrasted by clefting, focal accent, or both, as in example 7.

- (7) (a) PIERRE écrit des articles pour un journal.  
'PETER writes articles for a newspaper.'
- (b) C'est Pierre qui écrit des articles pour un journal.  
'It's Peter who writes articles for a newspaper.'
- (c) C'est PIERRE qui écrit des articles pour un journal.  
'It's PETER who writes articles for a newspaper.'

But this is not the only case, as linguistic analyses have pointed out<sup>7</sup>. There are distinctions that can be rendered by using cleft sentences but cannot be easily expressed by focal accent alone. Consider example 8.

- (8) (a) C'est Jean que je n 'ai pas vu.  
'It's John that I didn't see.'

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<sup>6</sup> The conclusive intonation morpheme, which also marks the syntactic organization of the utterance, "is realized by a melodic fall or a static tone in the lower or infra-lower pitch range; it is accompanied by an intensity glissando of about - 10 dB and a duration increase of approximately 100% relative to the mean of unstressed vowels" (Rossi, 1985, p. 141).

<sup>7</sup> We would like to thank an anonymous reviewer for his or her constructive criticism and examples, which led us to add the section that follows.

- (b) Ce n'est pas Jean que j'ai vu.  
'It isn't John that I saw.'  
(c) C'est n'est pas Jean que je n'ai pas vu.  
'It isn't John that I didn't see.'

Example 8a can be used contrastively to correct the impression that I didn't see someone other than John (in the universe of discourse), resulting in the inference that I saw everyone else; example 8b, that I saw John, resulting in the inference that I saw someone other than John; and example 8c, that I didn't see John, resulting in the inference that I didn't see someone other than John. The focally stressed example 9 can be used only to cover the situations expressed in examples 8a and 8b, and is, in fact, ambiguous in that regard.

- (9) Je n'ai pas vu JEAN.  
'I didn't see JOHN.'

Moreover, when the clefted constituent is grammatically complex, it is possible that only part of the constituent is contrasted (example 10).

- (10) (a) C'est le chat de PIERRE qui s'est perdu.  
'It's PETER's cat that got lost.'  
(b) C'est le CHAT de Pierre qui s'est perdu.  
'It Peter's CAT that got lost.'

It is also possible, albeit unusual in ordinary discourse, that a cleft construction is used while the contrast concerns a constituent other than the clefted one. In this case the other constituent is highlighted by a focal accent (example 11).

- (11) C'est la fatigue qui gagne JEAN.  
'It's fatigue that affects JOHN.'

Although "fatigue" is the clefted constituent, "John" is the focused item. Sentences like this can be used to correct an interlocutor's impression that someone other than , John (in the universe of discourse) is the one whom fatigue affects.

In studies with a psycholinguistic approach to the problem, some empirical data are available on cleft sentence processing in English and French (Amy & Vion, 1986; Bronckart, 1979; Hornby, 1971, 1974; Vion & Amy, 1984) and on the function of cleft constructions in dialogue (Hupet & Tilmant, 1986; Tilmant & Hupet, 1990). There are also some empirical data on the processing of stress in English and German for isolated words (Cutler, 1976; Cutler & Foss, 1977, Welsh, 1980) and sentences (Bock & Mazella, 1983; Hornby & Hass, 1970; Maratsos, 1973; Needham, 1990; Pechman, 1984; Terken & Nootboom, 1987).

Among the above studies, those using judgments about the suitability of contrastive utterances with or without clefting (Hupet & Tilmant, 1986) have

shown that cleft constructions are preferred to the uncleft form with the same meaning. However, the utterances judged by the subjects have been given in written form. The authors themselves agree that in the written medium, potentially contrastive uncleft utterances are stripped of the intonation cues they would have in the oral medium. This medium also prevents the study of the extent to which exclusively prosodic marking via focal accent is selected. The preferences previously observed with written dialogues may no longer be obtained for contrastive utterances in oral conversation, where morphosyntactic and/or prosodic marking can be proposed. The following experiment was designed to include prosodic marking in the study of preferences for different ways of expressing a contrast.

In addition to the question of whether subjects' preferences will change with a greater range of contrasting devices is the question of the reasons for those preferences. Several possible explanations might be considered. First, they may depend on cognitive constraints. A contrast is defined in reference to the knowledge the listener is assumed to have. To make a contrast, the speaker must assume that there are other possibilities available to the listener. When there are two items in this set of possibilities (often a pair of

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antonyms), the erroneous item the listener has in mind makes the other item in the pair highly accessible, as in example 1. When the set contains more than two items, each individual candidate is less accessible. In the latter case, clefting may be less suitable than focal accent for marking the contrast, since, as Terken and Nootboom (1987) contend, focal accent increases the availability of the piece of information being accentuated.

Second, subjects' preferences may also stem from linguistic constraints which limit the application of prosodic rules. According to Hupet and Tuniant (1986), it is generally prohibited to put an accent on the first item in a French sentence (usually the subject-agent). The authors consider this to be the reason why agent clefting is more frequent than patient clefting in both induced and spontaneous speech production (Hupet, 1988). Placing stress for contrast on words occurring later in the sentence appears to be more likely.

Finally, subjects' preferences may be rooted in their knowledge of the pragmatic and social context of the utterance (Bronckart, 1985). The social setting in which a dialogue is initiated, its goal, and the status and respective ages of the addressees—all of these factors impose constraints on how subjects assess the verbalizations of a speaker. Dialogue creates a typical interaction framework where temporary "offenses" are always possible. This setting forces the partners to engage in a process<sup>8</sup> which allows them to anticipate and repair such offenses. In this framework, the implicit negation of the addressee's assumption, generated by the contrast, should not be perceived as potentially jeopardizing the social images of the partners. Thus, subjects' preferences for certain types of marking may originate from the fact that they are taking these

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<sup>8</sup> This process includes whatever a person does to avoid losing face, including ill fi-ont of him/herself (Goffman, 1973, 1974, 1981).

constraints into account. (Even failing to emphasize a listener's misconception via a contrast is a way of preventing him/her from losing face.)

This experiment attempts to neutralize the effects of the interaction context. It focuses on the linguistic and/or cognitive factors that might determine subjects' preferences for prosodic and/or morphosyntactic marking of contrasts.

## **METHOD**

### **Task**

Subjects were asked to listen to a series of short dialogues and make a judgment concerning the ending remark in each. Two formulations of the last remark were proposed, and the subjects had to select the one they considered to be the most suitable for that particular exchange. To choose between the first and the second formulation (forced choice), the subject pressed the '1' key or the '2' key on the computer used in the experiment. The variables recorded were the key pressed and the time taken to press it.

A title was displayed on the screen before each dialogue so that the subject could activate a knowledge structure to guide dialogue comprehension (Bransford & Johnson, 1972; Dooling & Mullet, 1973). The title described the setting of the dialogue (see the list of dialogue topics in the Appendix).

### **Factors and Design**

The effects of two factors were studied using a 2 X 2 factorial design. The first factor (the syntactic factor) was the grammatical function of the item bearing the contrast. In our case, the item was either the subject or the complement of the utterance to be judged. The second factor (the conceptual factor) was the size of the set of items the speaker might assume the listener was considering for the focused item. In our case, the set contained either two members, or more than two members. By combining these two factors, we could study four types of contrasts (see Table I for an example of each).

The characteristics of the replies to be judged were obtained by combining two variables, each with two possible formulations for marking the contrast: clefting (C) vs no clefting (nC) and focal accent (A) vs no focal accent (nA). The resulting four formulations (CA, nCA, CnA, and nCnA) were paired, making six possible pairs of replies: (CA, nCA), (CA, CnA), (CA, nCnA), (nCA, CnA), (nCA, nCnA), and (CnA, nCnA).

A given subject processed all four contrasts and all six pairs of replies. For a given type of contrast, it took six dialogues to present the reply pairs (a dialogue was assigned to only one of the possible pairs). The replies in a given pair were formulated using the appropriate lexical items for that dialogue. Each subject judged 24 dialogues.



In order to neutralize potential semantic-pragmatic effects linked to dialogue topic, each of the six pairs was associated with each dialogue, and six groups of subjects were established (Table II).

To neutralize potential effects of reply presentation order within each pair, one order was used for half of the subjects and the reverse order for the other half.

## Subjects

Sixty native French-speaking students (male and female) from the University of Provence participated in the experiment. They were tested individually in a quiet room.

**Table I. Types of Contrasts\***

Grammatical function	Set size	
	Two	More
Subject	A renter and an apartment manager - And what about the plumbing problems? - They've been solved at last. - The owner finally took care of it.  Fourth remark: - <u>It's</u> the <i>renter</i> <u>who</u> took care of it. - The <i>renter</i> took care of it. - <u>It's</u> the renter <u>who</u> took care of it.' - The renter took care of it.	At the race track - So the race is over! - It was close all the way. - Obviously, with winners like that!  Fourth remark: - <u>It's</u> <i>Golden Arrow</i> <u>who</u> won the race. - <i>Golden Arrow</i> won the race. - <u>It's</u> <i>Golden Arrow</i> <u>who</u> won the race. - <i>Golden Arrow</i> won the race.
Complement	About getting a job - You must be glad you got a job! - Yes, I was hired as a school teacher. - The Board of Education doesn't pay very well!  Fourth remark: - <u>It's</u> in a <i>private school</i> <u>that</u> I'm hired. - I'm hired in a <i>private school</i> . - <u>It's</u> in a private school <u>that</u> I'm hired. - I'm hired in a private school.	Football: After drawing names - So who are you playing with after all? - We were pretty scared! - It'll be easy to win the Brive team.  Fourth remark: - <u>It's</u> against <i>Saint-Etienne</i> <u>that</u> we'll be playing. - We'll be playing against <i>Saint-Etienne</i> . - <u>It's</u> against <i>Saint-Etienne</i> <u>that</u> t we'll be playing. - We'll be playing against <i>Saint-Etienne</i> .

\*Morphosyntactic marks of clefting are underlined. Items bearing a focal accent are in italics.

## Material and Procedure

Twenty-seven dialogues were generated, 3 to familiarize the subjects with the task and 24 to test the effects of the experimental factors. The characters chosen for the dialogues were familiar to each other (friends, neighbors, co-

workers), so that the conversations would neither start nor end by confirmatory exchanges (Table I presents a sample dialogue for each cell in the experimental design). The practice dialogues were generated in the same manner as the test dialogues (only the structure of the replies differed; see example in the Appendix).

Each dialogue consisted of four speaking turns which alternated between a male and a female speaker. The female made the first and third remarks. After the third remark, two formulations of the male speaker's reply were heard in succession. The same speakers were recorded for all dialogues<sup>9</sup>.

**Table II. Experimental Design**

Type of contrasts																							
Subject two						Subject more					Complement two						Complement more						
Dialogue topics																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reply pairs																							
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5
5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4
4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3
3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2
2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1

Each test dialogue was recorded four times, once with each of the four formulations of the male speaker's final remark. The tempo of the conversation was maintained. Then for each dialogue, two listeners were asked to state which recording of the first three remarks sounded the most "natural." This recording was selected and saved in a computer file using the SoundEdit feature of the MacRecorder system (for Macintosh SE30). The four formulations of the fourth remark for each dialogue were also entered and saved in the computer. The "Hypertalk"<sup>10</sup> program used to run the experiment generated the pairs and assigned them to the dialogue beginnings.

A constant time interval separated the displayed title from the first speaking turn in each dialogue. The time between the end of the third remark and the two formulations of the fourth was also constant. More time was allotted for the latter interval (than that allotted between the first three remarks) to make sure that the first formulation in the pair would not blend with the preceding remarks and to allow subjects enough time to judge the two replies. A preliminary survey with 24 subjects showed that a 1.5-sec interval was considered optimal

<sup>9</sup> Our thanks to Gérard Amy and Elisabeth Dussauze for agreeing to act as speakers in the dialogues.

<sup>10</sup> We extend our gratitude to Jean-Claude Robert for his constant assistance during the writing of the program.

for understanding the first three remarks and choosing one of the two replies (Massip & Vilm, 1987).

The practice dialogues were given first, and then the 24 test dialogues were presented. These two phases of the experiment were run in immediate succession, without any mention of the changeover.

The subjects' instructions were as follows.

You are going to hear 27 short dialogues. Each dialogue is preceded by a title indicating the topic. Each dialogue is composed of four remarks. You will hear the first three remarks, a pause, and then the fourth remark. Two different formulations of the fourth remark will be given, one after the other. When you have heard both, your task will be to state which one seems to you to be the most appropriate to end the dialogue. To choose the first, press key 1; to choose the second, press key 2. Respond immediately with the first answer that comes to your mind. The time you take to decide will be recorded.

At the end of the experiment, the subjects were given the opportunity to comment upon what choices they had made and why they had made them.

## **Predictions**

We predicted that the responses obtained for the experiment as a whole could be ranked by frequency of occurrence. The number of choices was expected to be the lowest for formulations with no marks of contrast (nCIIA) and the highest for ones with two marks (CA). One-mark formulations (CnA and nCA) would fall somewhere in between.

Remember that the experiment was designed to study the effects of syntactic and conceptual constraints on judgments of the suitability or unsuitability of morphosyntactic and/or prosodic marks. If the choice between clefting and focal accent depends on the grammatical function of the focused item, then subjects should prefer clefting for subject contrasts and focal accent for complement contrasts. If the choice between clefting and focal accent depends on the size of the reference set, we can predict that clefting will be chosen more often in cases where there is one alternative to the incorrect item in the listener's mind (won vs lost, true vs false), whereas we can predict, in the light of the scarce empirical data currently available, that focal accent will be considered more suitable if not.

Although it has been suggested that response time is not a reliable measure of processing when central cognitive activity is involved, we chose to examine these data nonetheless. The task proposed here (did indeed involve a cognitive activity of this type, since it required subjects to make a metalinguistic judgment about the last reply in a dialogue of which they started to build, a global mental representation based on the title read and the remarks already heard. However, because the instructions asked them to respond as spontaneously as possible, and because the memory traces of the to-be-judged remarks were transient (the previous remarks could not be reexamined as they might be in the written medium!), there was indeed some pressure on the subjects to answer without delay. The fact that task execution was necessarily rapid suggested that,

although no specific predictions could be made, some conclusions might be drawn from the response time data.

## RESULTS

For each cell in our experimental design, a given subject could choose a given type of reply (defined by combining the syntactic factor and the conceptual factor) up to three times. And, for each of these cases, a dialogue could be preferred up to 30 times with a given reply. Thus, each formulation could be chosen at most 180 times per cell (60 subjects X 3 responses = 6 dialogues X 30 responses), making a total of 720 choices for the whole experiment.

The number of choices observed for each formulation relative to the total number of times that choice could have been made was consistent with our predictions. Formulations with no contrastive marks were chosen the least often (nCnA = 43.6%). These were followed by formulations with clefting (CnA 46.6%) and focal accent (nCA = 51.3%). Those combining clefting and focal accent were chosen the most often (CA = 58%). Essentially the same tendency was noted for the proportion of subjects who preferred a given formulation the majority of the time. Table III indicates how many subjects chose the same formulation at least 8 times of 12 ( $X^2 = 31.40$ ,  $p < .001$ ). Note that formulations with focal accent only (nCA) were chosen more often than formulations with clefting only (CnA).

To test for the effect of the syntactic and conceptual factors on the choices made, two analyses of variance with a 2 X 2 factorial design were conducted for each type of formulation, first with the subjects and then with the dialogues as the random factor. These analyses showed that for formulations containing a contrastive mark of any kind (CA, CnA, and nCA), only the grammatical function of the contrasted item triggered significant effects (Table IV).

**Table III.** Number of Subjects Making the Same Choice the Majority of the Time, by Formulation (N = 60)

Criterion	nCnA	CnA	nCA	CA
Chosen at least 6 times of 12	27	26	37	41
Chosen at least 8 times of 12	10	9	15	23

These results are consistent with the predictions that utterances with clefting only (CnA) would be chosen more frequently when the contrasted item was the grammatical subject and that those with focal accent only (nCA) would be chosen more frequently when the contrasted item was a complement. The effect was not as statistically clear-cut for utterances bearing both contrastive marks (CA). These utterances combined a mark which was more prone to be accepted for grammatical subjects (clefting), with a mark which was more prone to be accepted for complements (focal accent). The observed preference in the CA case was comparable to the one observed for cleft-only utterances, namely, a preference for sentences where the focused item was the grammatical subject. In these cases, morphosyntactic marking via clefting prevailed over prosodic marking.

Table V presents the total time taken to respond for each formulation. Note in general that responding took approximately 1 sec.

The only possible way to examine response time was to analyze the data with the dialogues as the random factor, since for a given cell (obtained by combining the syntactic and conceptual factors), the number of responses obtained for each dialogue varied (but was nonzero), whereas a given subject may have never chosen a given formulation. The results given below should be understood solely as preliminary indications-as food for thought for designing further research. Analyses of each formulation expressing a contrast were conducted for the mean and median response times (the statistical data given below pertain to the medians).

**Table IV. Mean Number of Choices, by Formulation**

	By subject, DV (0,3)				By dialogue, DV (0.30)			
	Grammatical function		F(1,59)	p	Grammatical function		F(1,20)	p
	Subj.	Compl.			Subj.	Compl.		
CA	1.9	1.6	6.929	.0108	18.8	15.9	4.256	.0523
NCA	1.2	1.8	38.070	.00001	12.4	18.3	27.913	.00001
CnA	1.7	1.2	30.727	.00001	16.8	11.1	26.499	.00001

**Table V. Response Time, by Formulation**

Response time (msec)	CnA	nCA	CA
Mean	1092	1175	1141
Median	900	758	817

The only significant effects obtained for the means concerned the dualmarked formulations (CA). The same effects were found for the median response times. Contrary to the findings obtained above for selection frequency, an effect was found here for every factor. Responding was faster when the focused item was a complement [ $F(1,20) 4.398, p .0489$ ]. This means that CA formulations with a focused complement were chosen less often, but more rapidly. The response times were also shorter when the reference set contained more than two members [ $F(1,20) 9.188, p.0066$ ]; this effect was more pronounced than the preceding one. Dual marking seems to have been chosen more rapidly when the candidate items were less accessible. A tendential interaction was also obtained between these two factors [ $F(1,20) = 3.409, p = .0797$ ], indicating a greater difference between the response times for grammatical subjects (longer times) and complements (shorter times) when the reference set was small than when it was large (Fig. 1). An analysis of the main effects showed that the shorter response times (observed for complements regardless of the size of the reference set and for grammatical subjects when the reference set had more than two members) did not differ significantly from each

other. Only the response times observed for grammatical subjects with a two-item reference set differed from those observed in the other three cases [syntactic factor effect at the "two" level,  $F(1,20) 7.776$ ,  $p .011$ ; conceptual factor effect at the "subject" level  $F(1,20) = 11.895$ ,  $p = .003$ ].

Although a similar effect was not observed for mean response times, a significant effect of the conceptual factor for the clefting-only formulation (CnA) was obtained on median response times. As with CA, clefting alone was chosen more rapidly when the reference set contained more than two items [ $F(1,20) 9.624$ ,  $p = .0056$ ].

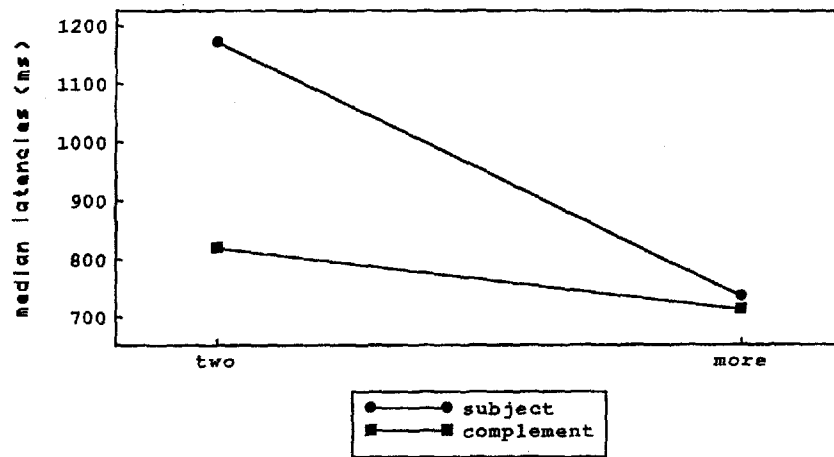


Fig.1. Interaction between the syntactic factor and the conceptual factors.

## DISCUSSION

The objective of the present study was twofold. First, unlike previous studies, our aim was to put subjects in experimental conditions which resembled the real-world circumstances. in which contrastive utterances are encountered, namely, in a conversational setting. Second, and more importantly, we hoped to gain insight into how linguistic and cognitive factors affect subjects' preferences for a given type of contrastive marking in speech.

Regarding the first objective, the experimental device was designed so that we could collect judgments of oral dialogues. This allowed us to show that subjects preferred utterances with prosodic marking. In the type of dialogue chosen (dialogues between peers), utterances containing a contrastive focal accent (alone or combined with clefting) were preferred over utterances with clefting alone. To obtain a more complete view of subjects' preferences for prosodic, syntactic, or morphosyntactic marking, the study could be extended in two directions using the same experimental device. One could use contrastive utterances in which several types of marking are often combined, as in negative utterances such as "Non, Madame Martin conduisait" (No, Mrs. Martin was

driving) vs "Non, c'est Madame Martin qui conduisait" (No, it was Mrs. Martin who was driving) vs "Non, MADAME Martin conduisait" (No, MRS. Martin was driving). And one could use a wider variety of dialogues where contrastive utterances are found. This would provide a better picture of how metalinguistic judgments vary as a function of the pragmatic aspects of the situation.

The second objective—the main goal of this study—was pursued in order to provide evidence of the importance of two factors: the grammatical function of the contrasted item and the size of the set to which it belongs. The experiment demonstrated the importance of the syntactic factor in the judgments made. As predicted, to mark a contrasted item, subjects preferred cleft constructions when the item was the grammatical subject and focal accent when it was a complement. Relative to the findings of previous studies, this result presents three new points. (1) It shows that the same constraints govern judgment and production (as studied so far). In both cases, subjects prefer clefting over focal accent for making contrasts when the focused item is the grammatical subject. (2) It shows, as Hupet and Tilmant (1986) suspected, that subjects prefer to use focal accent to contrast complements. (3) Finally and above all, it shows that syntactic constraints are

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(CnA) was obtained on median response times. As with CA, clefting alone was chosen more rapidly when the reference set contained more than two items [ $F(1,20) = 9.624, p .0056$ ].

#### DISCUSSION

The objective of the present study was twofold. First, unlike previous studies, our aim was to put subjects in experimental conditions which resembled the real-world circumstances in which contrastive utterances are encountered, namely, in a conversational setting. Second, and more importantly, we hoped to gain insight into how linguistic and cognitive factors affect subjects' preferences for a given type of contrastive marking in speech.

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## APPENDIX

### Dialogue Topics

#### Subject Two

After the conference  
Repairing a car  
The day after the maneuvers  
Unfinished business  
A renter and an apartment manager  
The ups-and-downs of construction

#### Subject More

After a rugby game  
About a car race  
At the race tracks  
A round of French bowls  
At the National Assembly.  
Before a tennis match

#### Complement Two

Preparing for vacation

About getting a job  
Buying clothes  
Chess tournament  
About travelling  
Last-minute reservations

#### Complement More

Leaving for the service  
  
Football: after drawing names  
About contracts  
At a café  
Writing award  
Signing up for youth activities

### Sample Practice Dialogue

#### *At the Office*

- Oh, Mr. Binet, you look upset! .
- Yes, my daughter is having health problems again. .
- She already had bronchitis last year ... .
- Two years ago.
- That was two years ago.

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