

The meaning of final contours in French

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ABSTRACT

We analyze the meaning of intonational contours in French dialogues. We show that it is not related to illocutionary force or impact nor to the speaker's (or the addressee's) commitment. We propose a dialogical-epistemic approach. It is dialogical in that it crucially involves the "fundamental Speaker / Addressee contextual asymmetry" (Ginzburg), *i.e.* the very fact that conversation participants do not share the same context at all time. It is epistemic in that we claim that contour meaning is crucially sensitive to the notion of anticipated revision (by the speaker). The main divide between falling and non-falling contours is correlated to the anticipation publicly signalled by the speaker that her utterance may trigger a revision in the current exchange of turns. The proposal is based on the analysis of actual utterances (phone calls, interviews, radio programs).

0. Introduction

Even though descriptive linguistics has accumulated a lot of evidence against the claim that contours are somehow linked to the marking of illocutionary contrasts in French, the expressions "assertion intonation" or "question intonation" are still in use, which seems to imply that there is some intrinsic link between the formal contrast "falling *vs* rising contour" and the illocutionary divide between "asserting *vs* questioning". There is indeed a general tendency to map the contrast "falling *vs* rising contour" onto the contrast "asserting *vs* questioning" and to claim that intonation is sensitive to the basic usages of language (provide information, get information, get others do something, etc.). But, if one takes seriously the results of empirical observations, the data are the following. The prototypical assertion – *i.e.* a declarative sentence which denotes a proposition whose uttering commits the speaker for current purposes and compels the addressee to accept it – is regularly produced with a falling contour. The prototypical *question de confirmation* – *i.e.* a declarative sentence which requests a response from the addressee in a way that seems to be identical to what interrogatives do – is regularly produced with a rising or a rising-falling contour in French. Nevertheless, there are cases of assertion with a rising contour and cases of *question de confirmation* with a falling contour. Indeed, they are less frequent, but this may be linked to the simple fact that the contexts in which they are appropriate are less frequent. Thus such cases should not be discarded without examination. Hence, the perspective must be

broadened to account for the diversified usages of contours and we must reexamine the meanings of contours.

Those who have worked on intonation in English, considering that intonation contrasts do not belong to illocutionary marking in English too, have proposed an "interactive-attitudinal" approach to intonational meaning. According to Bartels' definition (1999: 42 *et seq.*), "interactive-attitudinal" has to do with the "listener-oriented speaker attitude". Intonation meaning crucially is linked to the notion of commitment (Hamblin, 1970), either the commitment of the speaker alone (Bartels, 1999) or the commitment of both the speaker and the addressee (Gunlogson, 2002). This proposal seems to be relevant, but does not fit the data in French. More precisely, interaction between conversation participants (CPs) seems to be the right perspective to analyze contour meanings, but commitment defined as an attitude of the interlocutors towards the content of an utterance does not characterize the contrasts between contours in French.

Here, we will adopt a dynamic stance towards contour meaning and follow more or less the same track than Bartels, in developing a dialogical-epistemic perspective. It is dialogical in that it crucially involves the "fundamental Speaker / Addressee contextual asymmetry" as Ginzburg (1997) puts it, *i.e.* the very fact that conversation participants do not share the same context at all time. It is epistemic in that we claim that contour meaning is crucially sensitive to the notion of anticipated revision (by the speaker). The main divide between falling and non-falling contours (defined below) is correlated to the anticipation publicly signalled by the speaker that her utterance may trigger a revision in the current exchange of turns. In the terms of the modelization that we will adopt, contour meaning is sensitive to the always-possible mismatch between the updates CPs perform on their respective Dialogue Gameboards as a consequence of the speaker's utterance.

First, we present the final contours in French, *i.e.* the contours that provide the meaningful units for the whole intonation associated with the utterances. Then, we discuss the type of meaning which accounts for the contrasts between formally different contours that are recognized by the speakers. Our proposal is presented in §3. Then, we make explicit the context in which the contours are felicitous. As we shall see, these contexts are best described as contexts in the information state of the CPs. We take up Ginzburg's modelization of these states to make our proposal explicit. Finally, in the last section, we take a sample of non-prototypical utterances (*e.g.* assertion with rising contour, *question de confirmation* with falling contour) in order to show how they are accounted for in our perspective.

Our proposal is based on the analysis of turn contours in various corpora of spontaneous speech (telephone calls, radio interviews, TV shows, interviews) or corpora of recorded dialogues; we have also considered data discussed in the French literature (*a.o.* Fónagy *et al.*, 1973, Fontaney, 1991, Fornel & Léon, 1997).

1. Final contours in French

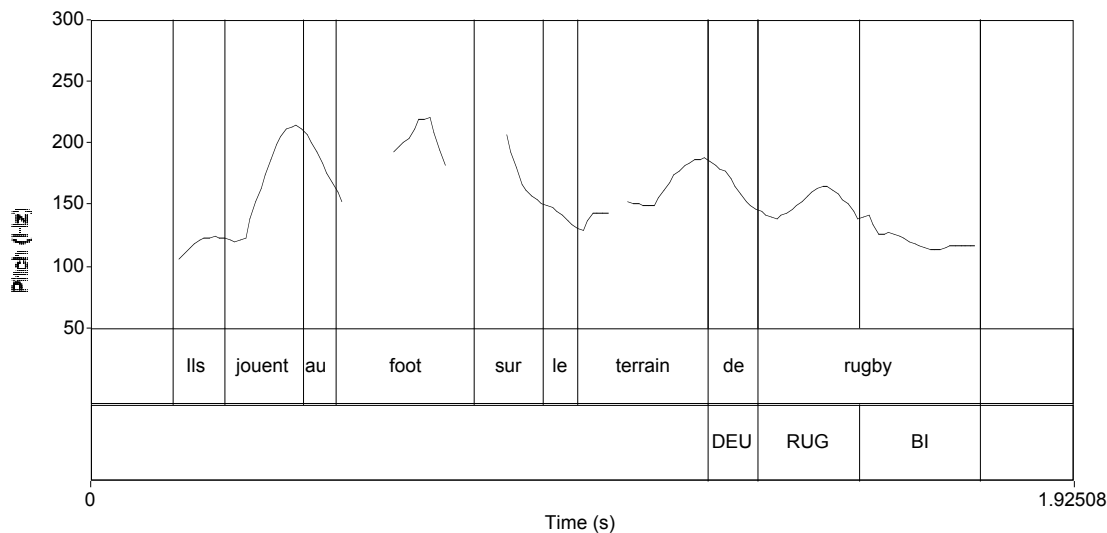
It is usual to consider Delattre (1966) as one of the first systematic account of French contours (*intonations*): it is an unordered list of ten basic contours. Among those, two are continuation contours (*continuation mineure*, *continuation majeure*), two are postfocal contours (*echo*, *parenthèse*), and six are potential final contours. We define final contours as contours anchored on the Designated Terminal Element (DTE) of the utterance (either the last word in the utterance or the last word in the focal domain) (Di Cristo, 1999 ; and for the marking of

focal domain, see Beysade et al., 2001, forth). Among them, four are falling, one is rising and one is rising-falling.

1.1 Falling contours

Delattre observes that three of the falling contours that he associates to assertion, command and exclamation (*les descentes de commandement, d'interrogation et d'exclamation*) "do not clearly differ from one another" (1966: 12 ; our translation). Indeed, it is still debated whether they are distinguishable at all ; if they were, it would be by other parameters (see the recent analysis proposed by C. Smith, 2002). What's certain is that they are not distinguishable in terms of "F0 levels or configurations" and we shall consider, following the basic assumptions of the autosegmental-metrical theory, that the basic components of contours are tones generating F0 shapes. As for the falling contour that Delattre calls « *finalité* » (finality), it corresponds to a falling contour realized in a long utterance that gives rise to a chunking of the left portion of the utterance with continuation contours. In fact, this contour is observed in assertive utterances as well as in any of the three types of utterances distinguished by Delattre (*commandement, interrogation* and *exclamation*). Hence, we are dealing with a family of four falling contours, which are not distinguishable in terms of illocutionary import (contrary to the set of labels used by Delattre). A prototypical falling contour is illustrated in (1): ¹

- (1) **ExD.** [Context: Pupils of Mr Bernard's class are playing soccer on the rugby field]
 A : Que font les élèves de la classe de monsieur Bernard ?
What are the pupils of Mr Bernard's class doing?
 → A : Ils jouent au foot sur le terrain de rugby.
They are playing soccer on the rugby field



¹ We use the following labels for describing our data. ExD : experimental data (dialogues recorded in lab) ; PC : spontaneous speech (taped phone calls for conversational analysis) ; RI : spontaneous speech (radio, TV interviews) ; EID : elicited data. Here we use the SAMPA coding for phonemic transcription .

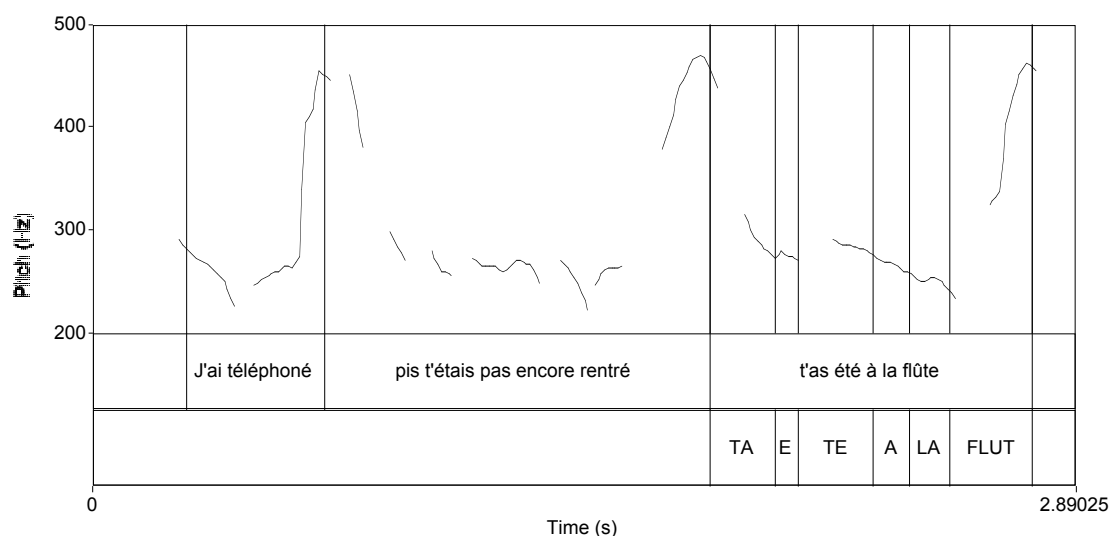
Note for the reviewer : we faced last minute problems of PC/Mac compatibility for IPA transcription. It will be used in the final version.

Falling contours are contours which do not feature any rise in F0 in the analogue for the French of contour's nucleus. The fall spreads over the last Rhythmic Groups (RG) of the utterance or only over the last one (e.g. *sur le terrain de rugby* in (1) above).² On the other hand, non-falling contours do feature a rise in the nucleus. The other types of contours listed by Delattre are non-falling.

1.2 Rising contours

As for the other two contours, Delattre just considers one type. However, empirical studies acknowledge the existence of several rising contours (e.g. Fontaney, 1991). Two are frequent in our corpora : the former features a low plateau or a sharp rise on the last syllable (illustrated in (2) below) and the latter a terraced rise up to the last syllable.³ They seem to be variant as they do not contrast semantically. It has been proposed that the contrast in the shape of the rise might be distinctive (between assertions vs questions, or between continuation rises vs 'illocutionary rises'). Opinions diverge on that matter; nevertheless, it seems safe to assume that there is no strict correlation between one shape of rise and one type of meaning. Among others, Grundstrom 1973 concludes: "nothing indicates that one can distinguish rising contours by the shape of the rise. The convex or concave risings observed by Delattre (1966, p 11) are not obvious in our corpora." (Grundstrom 1973: 29).⁴ By the same token, we are dealing with a family of rising contours.

- (2) **PC.** [Context: Grand-mother to her grand-son after school]
 J'ai téléphoné pis t'étais pas encore rentré t'as été à la flûte ?
I called but you weren't back yet. Have you been to your recorder class?



² Rhythmic groups, also called in the literature Prosodic word or Accentual Phrase, are the basic units of French prosody (see among other, Delais-Roussarie (1995), Mertens (1993) and Jun & Fougeron (2000)).

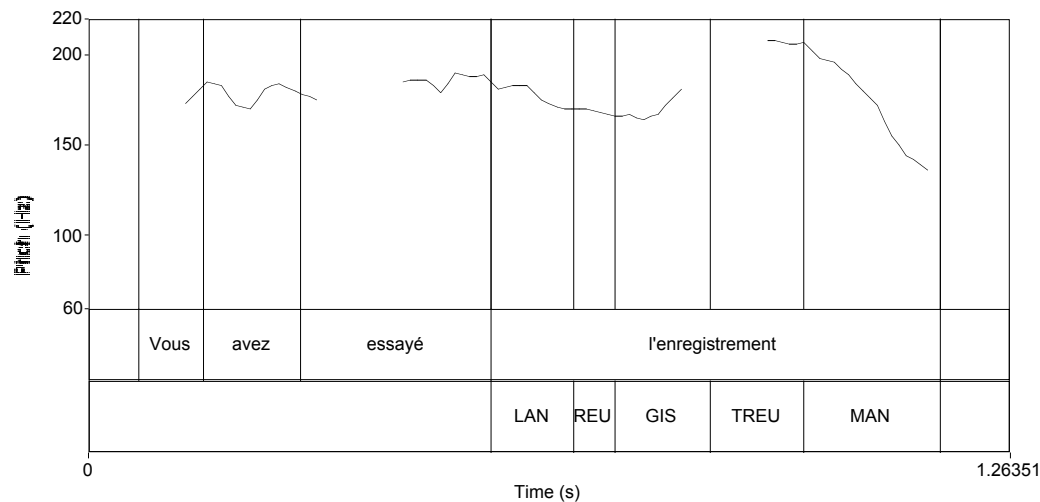
³ Here we leave aside another rising type which is well-known in French literature: "le triangle d'assertion ou de question", described as L H↓H* in Ladd 1996.

⁴ He adds: "the level of the fundamental frequency of questions is not different from that of other types of utterances (regarding neither the span of the rise nor the mean level of the whole utterance" (ibid.).

1.3 Rising-falling contours

As for the rising-falling contour, Delattre calls it *intonation d'implication*, and he clearly states that it must be distinguished from the rising one: “*l'intonation d'implication* does not have the same shape than the rising question. Auditory tests show that these two intonations are distinct” (1966: 10). Below, we'll show that they should be distinguished semantically as well. Rising-falling contours come at least under two guises: a rise on the penultimate and a fall on the last syllable (we analyze it as a bitone : H+L) and a rise-fall compressed on the last syllable. We illustrate the first case in (3) below with an example which is recognized as a *demande de confirmation* by our informants (for other examples, see Martins-Baltar, 1977, Solignac, 1999).

- (3) **PC.** [Context: after-sales service operator to a customer]
 Vous avez essayé l'enregistrement ?
Have you tried the recording function?



1.4 Analysis

It seems that contour meaning is not amenable to a decompositional analysis in French (along the lines set up by Gussenhoven 1984 or Pierrehumbert & Hirschberg 1990). The different types of tones do not convey the same meaning in all and every contour they constitute. Hence we shall consider contours to be the basic meaningful units of intonation. Here we focus on the most frequent members of the three families we have just introduced. We give in (4) the characterization of each of them. The analysis of starred tones is that of Di Cristo 1999, the left tone in the three contours functions as a left phrase tone (see Grice *et al.* 2000) ; finally, a boundary tone (either H% or L%) is realized at utterance boundary.

- (4) a. Falling : H...L* (L%)
 b. Rising : L...(L) H* (L% or H%)
 c. Rising-falling : L.... H+L* (L%)

2. The meaning of contours

2.1. Contours and the contrast “statement/question”

We can find in the French descriptive tradition many conclusions that contour contrasts are not paired with illocutionary contrasts, in particular with the "statement *vs* question" contrast.⁵ Zwanenburg (1965) observes: "It is impossible to give an interrogative value to a given contour (*melodie*); a contour has such a value only when it is combined with other elements in the utterance in a given context and a given situation." (quoted in Grundstrom). Grundstrom adds (*ibid*: 50): "we have not succeeded in discovering a contour (*un patron prosodique acoustique*) that would be distinctive in the sense that each occurrence of this contour would be necessarily associated to a question. [...] We can claim that the rises, or the variant high plateau, is often the most obvious marking of a question, but all rises or high plateaux are not questions" (*ibid*: 41). We have confirmed these conclusions in an analysis of various corpora of actual conversations (in contemporary standard parisian French).

Moreover, as it is well known, questions when conveyed by interrogative sentences⁶ and in a context where the speaker expects the askee not to refuse the issue raised by the question, are regularly realized with a falling contour. In this respect, French is not different from English (Bartels, 1999; Gunlogson, 2002 or Ladd, 1996).

2.2. Contours and the contrast « asserting/questioning »

We could weaken the claim and propose that the formal contrast "falling *vs* non-falling" is linked to the contrast "asserting *vs* questioning" as defined in some pragmatic approaches (*e.g.* Kerbrat-Orecchioni, 1991). Such a contrast focuses on the impact caused by the utterance on the addressee independently of its basic illocutionary force. An utterance either requests or doesn't request a public response from the addressee. A declarative sentence may be either asserting or questioning. It is asserting when it is used prototypically. In such a case, no feedback is required from the addressee (with the effect that the speaker may assume that the addressee has accepted the content of her utterance without public commitment). It is questioning, when some sort of feedback (acknowledgment, acceptance or confirmation) is requested from the addressee ; this corresponds to what has been called in the literature confirmation question (*question de confirmation*) or verifying question. Typically, a declarative sentence which is questioning triggers a turn which sounds like a response to a polar question (*oui, ouais, non, j'sais pas*, etc.). As for interrogative sentences, they may be either asserting or questioning. They are questioning when they are used prototypically. Their asserting usage corresponds to what is called the rhetorical usage, which precisely consists in suspending the questioning impact of the interrogatives. Rhetorical questions are questions that do not request any answer from the addressee.

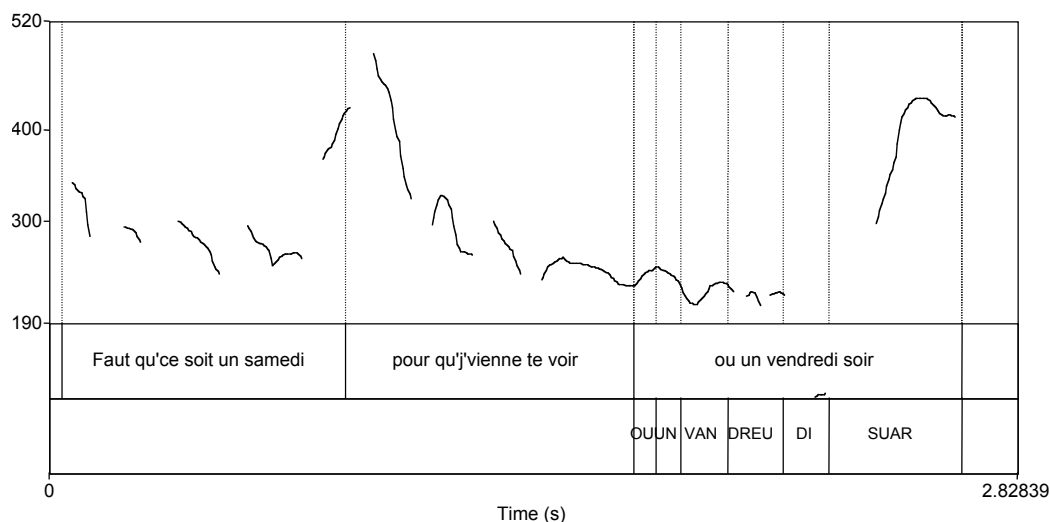
It is correct to observe that declarative utterances with a questioning effect are prototypically realized with a non-falling contour in French, either a rising contour (*cf.* (2) above) or a rising-falling contour (*cf.* (3) above). But, not every non-falling declarative has a questioning effect. On the contrary, some of them have a strong asserting value in contexts. This is illustrated in (5), (6), (7) below:

- (5) **PC.** [Context: A, the grand-son, to his grand-mother B about a school concert]
 A :Vous viendrez ou pas ? *Will you come or not ?*
 [...]
 → B : Je peux pas c'est pas possible faut que ce soit un samedi pour que je vienne te voir
 ou un vendredi soir

⁵ From now on, we leave aside commands and exclamations.

⁶ We count as interrogative *wh*-sentences or sentences with subject-clitic enclisis.

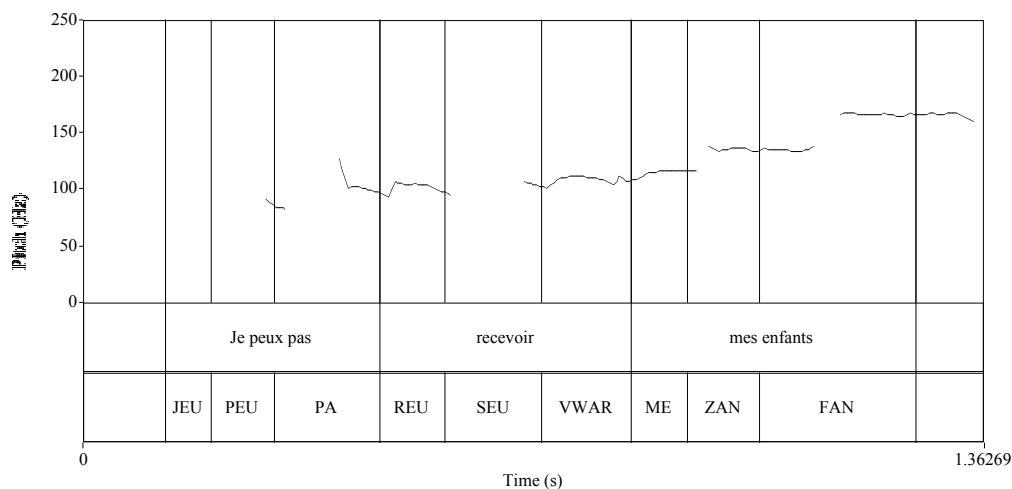
I can't it's not possible it has to be a Saturday for me to come and see you or a Friday evening



(6) **RI** [Context: a man in a social center interviewed on the radio]

[Nous, on est dans des centres d'hébergement. Bon, moi personnellement, j'ai trois enfants,] mais je ne peux pas recevoir mes enfants.

We live in a social centre. Well, personally I have three kids,] but I can't have them visit me here



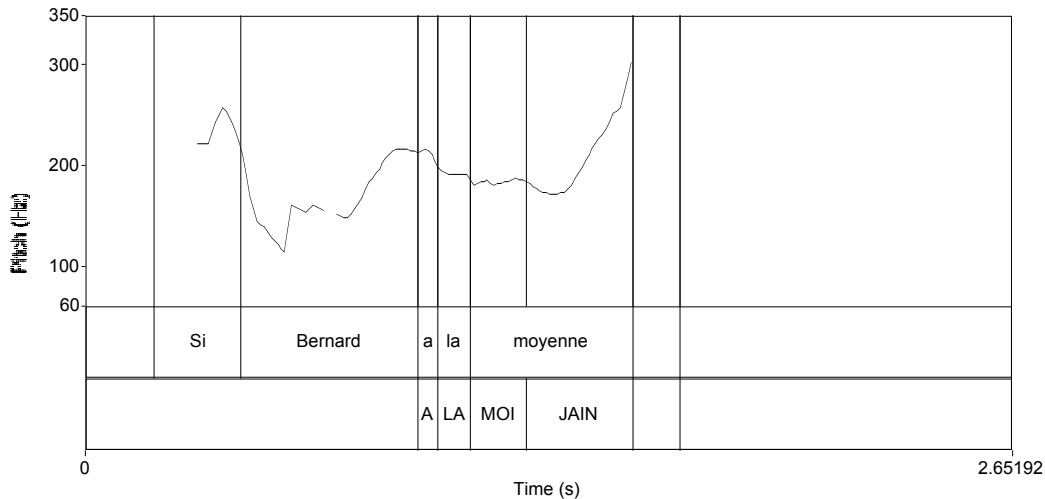
(7) **ExD.** [Context: Two teachers are talking about a new textbook in the teachers' room.]

A: Aucun élève ne mérite de passer en terminale !!

No student deserves to go in senior class.

→ B: Si! Bernard a la moyenne.

No! Bernard has got Cs

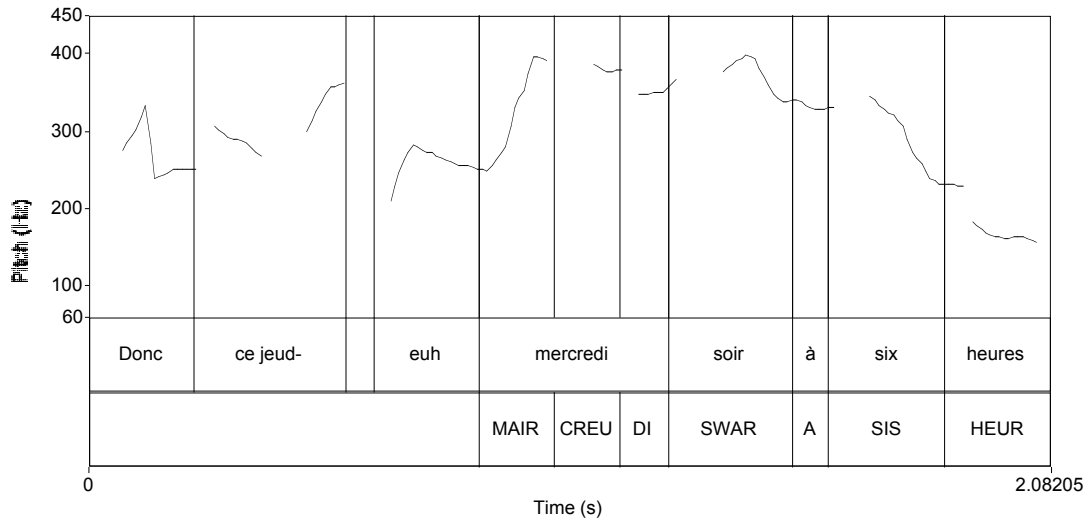


This reminds us of the usage of high assertions in English as reported in Selkirk (1995) : “the fall-rise contour of (8) [her (1)] would make it appropriate as a contradiction of the assertion *Nothing in this cupboard is a good source of vitamins*” (ibid. : 551).

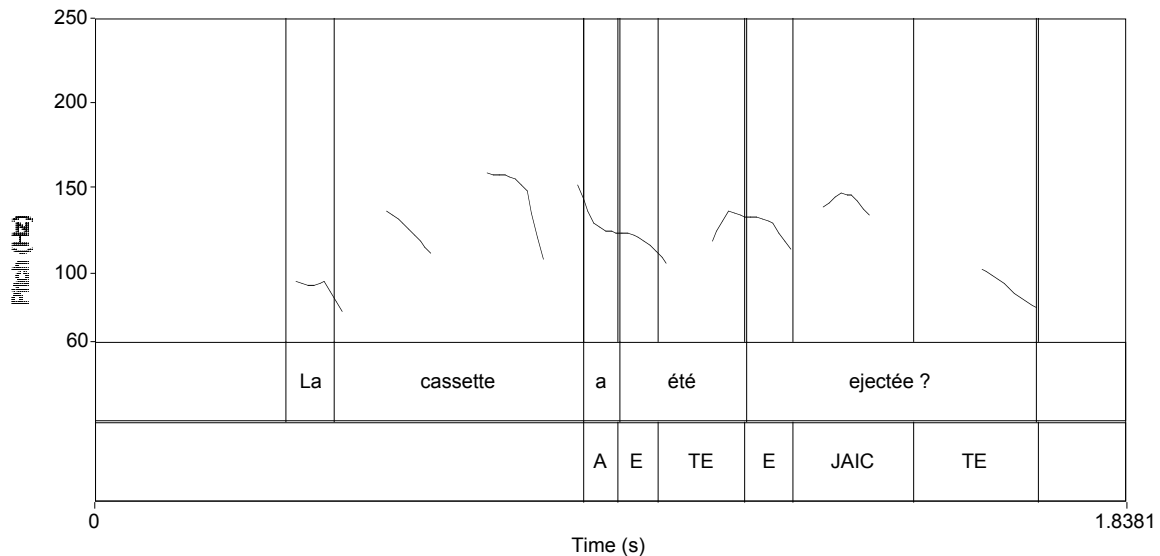
- (8) Legumes are a good source of vitamins
 H* L H%

On the other hand, in French, a non-falling contour is not compulsory for a declarative sentence to be questioning since we observe questioning declarative sentences with a falling contour:

- (9) **PC.** [Context: A, the mother, is asking B, a teacher, a rendez-vous; it took several turns to narrow down possible dates and times]
 A: et:: mm vendredi ben euh j'ai pas encore tout fini pour Patrice alors ça me fait un peu juste
 Hum, Friday, let me think, I haven't finished yet for Patrice so it's too soon
 → B: bon ben attendez hein (.) donc euh jeu mercredi soir à six heures
 Wait a minute. So Thurs- Wednesday evening
 A: oui yes



- (10) **ExD.** [Context : a customer and a after-sales service phone operator]
 B: Que s'est-il passé ? *What happened?*
 A: La cassette a été éjectée. *The tape was ejected*
 B: La cassette a été éjectée *The tape was ejected*
 B: Oui *Yes*



This has been observed in English and Dutch too (Beun, 1990). The context of such a usage has been identified: this is a context where verifying questions are appropriate, *e.g.* in a query when the querier has reached the piece of information she was seeking and she checks it as a conclusion of the interaction. In the French tradition, Fónagy *et al.* (1973: 85) glosse it in the following terms: "I am almost sure of a positive answer, but I prefer to be absolutely certain", which, by the way, is just an informal gloss of what verifying question are.

To sum up, the contrast "falling vs non-falling" does not seem to be paired with the contrast "asserting vs questioning" either.

2.3. Contour and commitment

Recently, it has been argued that intonation meaning in English has something to do with the notion of commitment (Hamblin, 1970). According to Bartels (who adopts a compositional approach to contours), the phrase tone L- is a mark of the speaker's commitment.⁷ According to Gunlogson (who adopts an holistic approach to contours and restrict *de facto* her analysis to declaratives), falling is a mark of the speaker's commitment and rising a mark of the addressee's commitment. These analyses fall short with "rising assertions" as illustrated in the examples (5)-(7) above. The contour of these utterances is rising and can be analyzed as a sequence L..H* (cf. (4) above). They are also counter-examples to Gunlogson's analysis, since the content of those assertions certainly is not part of the addressee's commitment set.⁸

A full-fledged critique of the approach in terms of commitment would take us too far afield as Bartels and Gunlogson use the notion differently. Our proposal will be grounded in a framework in which the notion of commitment is crucial. Intonation in French does not signal the commitment of the CPs towards the content of their utterances; rather, it signals the anticipation by the speaker of the addressee's reception of her commitment. The speaker makes public that she anticipates that her commitment will not be accepted as a joint commitment by the addressee, or that her question will not be accepted as relevant in the current activity.

2.4. Recapitulation

To recapitulate, the data to account for are the following:

- (a) Illocutionary force or illocutionary impact is not univocally marked by contours. A declarative always denote a proposition;⁹ a declarative sentence with a questioning value may be falling, and a declarative sentence with an asserting value may be non-falling. In other words, it seems justified to take it that contour meaning does not belong to speech act theory in any respect.

- (b) Utterances in which the speaker anticipates a readily acceptance of her commitment (what we have called prototypical assertions, but this is also the case with prototypical questions conveyed by interrogatives) are realized with a falling contour. On the contrary, a non-falling contour is chosen when the speaker anticipates that the addressee is liable not to accept her commitment. Due to space limitations, we will not analyze non-falling contours with interrogatives here ; nevertheless, our proposal is meant to account for them as well and this will be shown in future work.

⁷ Bartels' approach is hard to apply to French because of the phonotactic differences between French and English. We have analyzed the falling contour of French as a sequence H.. L*. *Mutatis mutandis*, then, Bartels' proposal could be rephrased as "L* indicates the speaker's commitment". Note that the use of declaratives with a questioning impact appears to be less constrained in French than in English.

⁸ By the way, (8) seems to be a counter-example in English as well.

⁹ By the same token, intonation does not have the coercive power to transform a declarative sentence into an interrogative sentence. This is why we assume a "true-to form analysis" (Gunlogson, 2002) of the relations between syntactic types and denotations: declarative sentences denote propositions and interrogative sentences denote questions (analyzed as lambda-expressions) (Ginzburg & Sag, 2000).

3. Contour and revision

The main feature of dialogue (and language use in general) is that participants (CPs) cannot be considered as sharing the same common ground at every point of the interaction: an addressee is always in a position not to understand the utterance directed to her, or not to accept it because she does not accept its content or the intention she attributes to its producer. Moreover, CPs are always in a position to revise their commitments or their beliefs according to what happens in the interaction. Our claim is essentially that intonation meaning is crucially sensitive to that asymmetry between CPs, and more precisely, to the asymmetry pertaining to the acceptance of commitments. The speaker is committed to the propositions or the issues conveyed by her assertions or questions respectively, whereas the addressee may refuse them and raise the issue whether they can be considered as joint commitment for the current dialogue. If the addressee is in the position of not accepting a commitment of her partner, the speaker is also in the position of anticipating such a refusal. Such an anticipation can have multiple reasons that belong to the unpublicized belief of the speaker: the speaker knows or fears that the addressee disagrees, the speaker wants to provoke the addressee by attributing her the possibility of disagreeing (polemic use) or the speaker wants to clear space for the addressee for disagreeing (polite use), etc.

3.1. Content of the proposal

Our main contention can be summarized as follows:

- (11) Contours signal which reception the speaker anticipates for her turn.

The meanings conveyed by the members of the three families of contours can all be analyzed contrastively as follows:

- (12) By using a falling contour, the speaker signals that she does not anticipate any revision of her commitments (either her commitment set or the issue she commits herself to by questioning).

In the case of an assertive move, the speaker anticipates that the addressee (as soon as she has grounded her utterance) will accept her commitment and behave for the current dialogue accordingly. Accepting someone's assertion means at least consider its content as part of the shared facts for the purpose of the current dialogue. The addressee may well consider its content also as a new member of her belief set in her unpublicized state of belief. As for interrogative moves, the speaker anticipates that the addressee will not question the relevance of the issue.

On the other hand:

- (13) By using a non-falling contour, the speaker signals that she expects that revision may arise in the current exchange of turns.

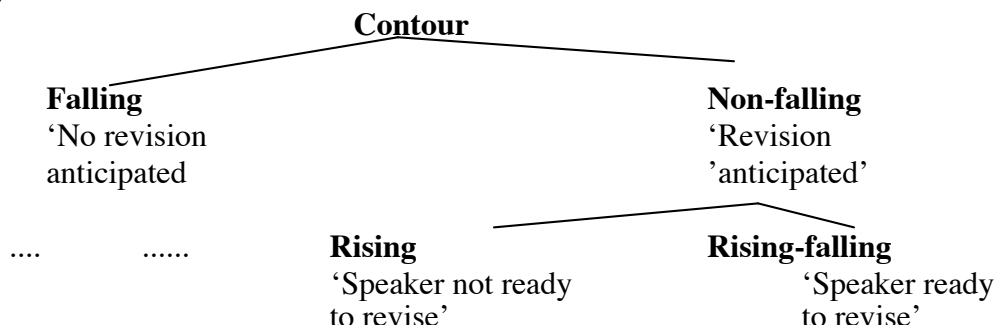
In the case of assertive moves, the speaker anticipates that herself or the addressee may be obliged to revise. In fact, the localisation of the revision is indicated by the choice of the non-falling contour:

- (14) a. By using a rising contour, the speaker signals that she is not ready to revise her commitment, even though she anticipates that it may be incompatible with what she assumes to be the addressee's belief.

b. By using a rising-falling contour, the speaker signals that she anticipates that she may have to revise her commitment along the line of the addressee.

The whole proposal may be schematized as follows:

(15)



3.2. Support for the proposal

The proposal directly accounts for the data we have characterized above. Falling contours signals that the speaker does not expect any problem in the acceptance of her move. That makes it suited for prototypical speech acts since it is assumed that they can be carried out because the addressee will readily comply to Speaker's and Addressee's expected roles. Prototypical assertion implies that the addressee will accept the proposition and take it as part of the "common ground" (in fact, early conception of assertion in Pragmatics are theories of the prototypical impact of assertion). Prototypical questions are questions which the addressee answers without questioning the very issue they raise.

Falling contours appear to be a reflex of the preference for agreement on the addressee's part and that explains that it is so prevalent in actual speech.

Non-falling contours are particularly well fit for the questioning value of declaratives (for the factors which determine the questioning value of an utterance, see below) since they precisely indicate that the speaker does not take for granted the uptake by her interlocutor. The proposition needs the addressee's approval to be considered as a shared resource by both CPs for the current dialogue. In the same time, they are not necessarily linked to a questioning value since it is evidently possible to assert something without the assent of the interlocutor. In this case, the speaker knows beforehand or assumes that her addressee is not ready or willing to accept her point ; she makes it despite the anticipation of dissent, which may give the utterance a nuance of involvement in the content of the utterance. It also accounts for the fact that echo utterances (declaratives or interrogatives) which are not intended as clarification moves, but as expressions of dissent, should be realized with a rising contour:

(16) **EID**

A : [1] Marie est élue. *Mary has been elected.*

B : [2] Marie est élue, il ne manquait plus que ça
Mary has been elected, that's all I needed!
 Falling : # ; Non-falling : ok

A : [1] Qui a été élu ? *Who has been elected ?*

B. : [2] Qui a été élu ? tu manques pas d'air !
Who has been elected? You've got some nerves!

Falling : # ; Non-falling : ok

We shall see in §5 how it accounts for the less prototypical usages after we have clarified the exact relation between the two dimensions "assertion *vs* question" and "asserting *vs* questioning".

Moreover, it accounts for the oddity of certain contour when used with **some** discourse markers. Consider (17) below. In (a), the parenthetical *à mon humble avis* is a litotic way to indicate that the speaker is not ready to change her opinion; a rising-falling contour would be rather odd here. In (b), the modifieur *sans doute* is regularly used to indicate that the speaker doubts on the content of her utterance, here a rising contour would be rather odd but a rising-falling contour is possible. Both contrasts are in keeping with the proposal summarized under (15): in (17a), the speaker indicates that she is not ready to revise her commitment (and the belief pertaining to that commitment); in (17b), the speaker indicates that she is not fully engaged to the content of the proposition ; would she choose a rising-falling contour, she would indicate the addressee that she may follow his line for that matter. Both utterances may be realized with a falling contour since the signaling of anticipated revision is never compulsory.

(17) **EID**

a. Chirac, *à mon humble avis*, gardera Raffarin

Chirac, to my opinion, will keep Raffarin

Falling: ok, Rising: OK, Rising-falling : ??

b. Chirac gardera sans doute Raffarin

Chirac will probably keep Raffarin

Falling: ok, Rising: ??, Rising-falling: OK

4. Contours in a dialogue model

We adopt the game-theoretic approach to dialogue as worked out by Ginzburg. Ginzburg (forth.) is the main source for our analysis, even though we will not follow Ginzburg's proposal in all its aspects. From that perspective, the main contribution of an utterance is to trigger an update of the commitment slate of the speaker (Ginzburg's public gameboard) and to open the possibility for the addressee to accept or discuss the commitment put forward by her interlocutor. First, we set up the theoretical backdrop. Then we characterize the context appropriate to each contour in terms of CPs information state along with the context that triggers the choice of an asserting *vs* questioning move. Finally, we briefly explain the working of statements *vs* questions on the one hand, and that of questioning *vs* asserting moves on the other.

4.1. Dialogical framework

The main feature of Ginzburg's framework is to set up a model in which each CP has her own perspective on the current dialogue. "In attempting to defuse the tension between individual and common aspects of "context", I will adopt the following strategy: conversational interaction will be analyzed in terms of information states of its participants. Each information state will be taken to be partitioned in two : the first component is a quasi-shared object, where each discourse participant/CP records their own version of public interactions. [...] The second component of the discourse participant's information state is the non-publicized aspects of each participant's individual state, the discourse participant's/CP's unpublicized information situation (UNPUB-IS (CP)).[...] Conversational interaction can, I believe, to some

extent, be explained in terms that make reference to publicized information; however, [...] such explanations can ultimately only be partial and require certain unpublicized information in order to have a chance to succeed.” (Ginzburg, *forth.*, chap4, §4.2.1). Thus, a CP information state can be schematized as follows: ¹⁰

(18) CP’s Information state: Dialogue gameboard (DGB)
 Unpublicized information state (UNPUB)

Each component is partitioned into several dimensions. The dialogue gameboard which records the commitments of the speaker is split into:¹¹

- The SHARED GROUND (SG): the speaker’s version of the commitments accepted by the CPs so far;
- The question(s) under discussion (QUD): the speaker’s version of the (list of) live questions so far;
- LATEST-MOVE (LM): the speaker’s version of the turn that precedes her taking the floor.

As for the unpublicized part of the information state of CPs (UNPUB), it is partitioned into two components:

- The GOAL: the goal of the speaker in uttering *u*;
- The Background (BKGROUND): the unpublicized knowledge/belief store of the CP.

Once again, we depart from Ginzburg’s original proposal by giving more structure to the BKGROUND. We make a distinction between:

- SP(eaker): what the speaker knows/believes;
- ADD(ressee): what the speaker assumes the addressee knows/believes.

This last distinction is crucial for characterizing the context signalled by the choice of a contour.

4.2. Contexts

As we have argued in §3, contour meaning crucially involves an appreciation by the speaker of the context of her utterance, in particular an appreciation of the attitude of the addressee towards the current issue. This explains that it is impossible to state a deterministic relation between a type of situation and a contour. Actual situations or contexts are always viewed through the speaker’s perspective. Hence, we will define the context in which each contour is appropriate in terms of the information state of the speaker. Essentially, the context is characterizable in terms of the compatibility or incompatibility of the content of what we have called SP and ADD above. In other words, it is linked to whether the addressee is ready to take up the content or the goal of the utterance. As any commitment, the choice of a contour is not the direct expression of what the speaker actually believes; it merely corresponds to what she makes public. The same type of evaluation is responsible for the choice of a questioning or asserting move. Pragmatic studies have observed for a long time that the main factor

¹⁰ “ I will introduce the term dialogue-gameboard, to suggest games like Battleships where distinct individuals come to classify a single situation but along the way might have distinct representations » (ibid.).

¹¹ Note that our SHARED GROUND is more restricted than Ginzburg’s FACTS : it only records the one-sided commitments shared during the current dialogue up to the current point of uttering (Clark et al., 1981). It is closer to the The distinction between SG et QUD will be crucial for capturing the illocutionary aspect of utterances.

triggering the questioning or asserting values of declaratives pertains to the appreciation by each CP of their respective authority or knowledgeability about the proposition conveyed by the utterance (a.o. Labov & Fanshel 1977, Kerbrat-Orecchioni, 1991, Beun, 1970). A declarative sentence conveying a content about which the addressee is more knowledgeable will sound questioning for the addressee ; a speaker may choose to be questioning when she anticipates such an uptake. Here, we will just give a formal representation of the context for the choice of contour and we restrict ourselves to the main divide "falling vs non-falling". We leave aside a more explicit account of the context triggering the asserting vs questioning impact.

We have just split BKGROUND into SP(eaker) and ADD(ressee). We also assume that the current issue i selects among the elements of BKGROUND those that are ABOUT i . They are selected in SP and ADD; we note $\text{ThemS}_{\text{Speaker}}$ and $\text{ThemS}_{\text{Addressee}}$ the two subsets of elements of content about the issue (what the speaker specifically knows/believes about the current issue and what she assumes the addressee knows/believes about the issue).

$$(19) \quad \begin{aligned} \text{ThemS}_{\text{Speaker}} &= \{s \in \text{SP}, \text{About}(q, s)\} \\ \text{ThemS}_{\text{Addressee}} &= \{s \in \text{ADD}, \text{About}(q, s)\} \end{aligned}$$

Now, the choice of a falling or non-falling contour reflects a difference in CP's information states that is reminiscent of the difference between defective and non-defective contexts in Stalnacker (1978). From our perspective, it characterizes the unpublicized information state of the speaker:

- (20) a. Nondefective context: what the speaker knows/believes about a given issue is, or may be, compatible with what she assumes the addressee knows/believes about the same issue.
 b. Defective context: what the speaker knows/believes about a given issue is not, or may be not, compatible with what the speaker assumes the addressee knows/believes about the same issue.

More precisely:

- (21) a. Nondefective context:
 The elements making up $\text{ThemS}_{\text{Speaker}}$ and $\text{ThemS}_{\text{Addressee}}$ are compatible.
 b. Defective context:
 The elements making up $\text{ThemS}_{\text{Speaker}}$ and $\text{ThemS}_{\text{Addressee}}$ are not, or may not be, compatible.

Falling contours are used when the speaker presents the context of her utterance as a non-defective context. On the other hand, non-falling contours are used when the speaker presents the context of her utterance as a defective context. Thus contours appear as a means for the speaker to express how she envisions her addressee's attitude towards the commitment she makes with her utterance.

4.3. Utterances and updates

In order to be fully explicit in the analysis of the following examples in section 5, we briefly sketch a dynamic account of the meaning of utterances in the making of dialogue; we will

restrict ourselves to illocutionary aspects of utterances. The illocutionary content of an utterance is to trigger an update of the gameboard of the speaker:¹²

- (22) a. By making a statement, the speaker makes public that she increments SG with a proposition p , *i.e.* she adds p in her set of commitments at this point of the dialogue.
b. By making a question, the speaker makes public that she increments QUD with a question q .

Consider A's turn in (23): at turn [1], A adds the proposition p_0 *that Marie has arrived* to SG, her representation of the commitments available for the current dialogue. It happens that, at turn [2], B accepts it since he goes on with a question that shows that he has accepted A's proposition. This corresponds to the prototypical statement.

- (23) [1] A: Marie est arrivée. *Marie has arrived.*
[2] B: Tu lui as parlé ? *Have you spoken to her?*

At turn [1] in (24), adds the question *Who has been invited ?* to QUD. QUD describes the set of live questions at that point of the dialogue. It happens that, at turn [2], B accepts to resolve the question without questioning the relevance of the question for the current activity or the goal of the asker in asking such a question:

- (24) [1] A: Qui a été invité ? *Who has been invited?*
[2] B: Marie *Marie*

Now, we turn to the asserting/questioning impact that we have distinguished from the illocutionary content:

- (25) a. An utterance is asserting when the speaker increments SG with a proposition derived from her utterance.
b. An utterance is questioning when the speaker increments QUD with a question derived from her utterance.

A declarative sentence is asserting when the sole update made by the speaker corresponds to the proposition denoted by the utterance. This is the case at turn [1] in (23) above. It is questioning when the speaker operates a double update. For example, at turn [1] in (26) below, A adds *that Marie has arrived* in SG and *whether Marie has arrived* in QUD.

- (26) [1] A: Marie est arrivé
[2] B: non

¹² Our definition of a statement differs from Ginzburg's definition. Ginzburg proposes that making a statement means incrementing QUD with the (polar) question *whether p ?* derived from the proposition p denoted by the declarative sentence. In that respect, there is no difference between a question and the answer that resolves it and a statement and the response that accepts it. In other words, all declarative statements conveying a statement are questions of confirmation. It would take us too far afield to present the whole argumentation against such a proposal and we simply here stick to our definitions, that we illustrate in informal terms.

An interrogative sentence is questioning when the sole update made by the speaker corresponds to the question denoted by the utterance. This is the case at turn [1] in (24) above. It is asserting when the speaker operates a double update. For example, at turn [1] in (27) below, A adds *Wouldn't Chirac be right in resigning?* in QUD and the resolving fact *Chirac would be right in resigning* in SG. Dialogue (27) is a typical dialogue in which the speaker intends her question to be taken rhetorically; it happens that at turn [2], B has caught A's intention and goes on with a comment on the resolving fact. In other words, what is called rhetorical questions is a primary example of asserting questions: questions that do not request any response from the addressee and that introduce a proposition in the joint commitments that is not directly denoted by the utterance.

- (27) [1] A : Est-ce que Chirac ne devrait pas démissionner ?
 Wouldn't Chirac be right in resigning
 [2] B : C'est mon avis ! *It is my opinion*

5. Illustration

In this part, we go back to what we have called the non-prototypical cases: asserting declaratives with a non-falling contour and questioning declaratives with a falling contour. Our dialogue framework enables us to locate more precisely the differences in contour meaning/use across languages. In the last paragraph, we briefly present a case study that focuses on a difference between French and English rising declaratives.

5.1. Asserting declaratives with a non-falling contour

According to our proposal, a non-falling contour signals that the speaker considers the context of her utterance as being defective and that she anticipates a revision, either by herself or by her addressee. Independently, an utterance will sound asserting when the speaker assumes that he is more authoritative than the addressee about p. The combination of these features explain the dialogue value of asserting declaratives with non-falling contours. We illustrate such a case featuring both the rising and the rising-falling contour with an example taken from Fontaney (1991: 147), quoted here with her four-level F0 analysis (with 1 being low and 4 high). The scene takes place at a ticket booth ; it involves B (an old lady) and A (the employee in the booth):

- (28) [1] A : C'est quoi .. comme carte *What kind of card is it*
 2 4 1 1
 [2] B : euh c'est cette carte oui c'est cette carte là *This is the card. Yes, this one.*
 2 2 1 3 1-4 2 1 1 1-4
 [3] A : j'la connais pas cette carte hein *I don't know this type of card*
 2 2 2 4 1 4-1 4
 [4] B : ah ben monsieur je la prends toujours ici *I always buy it here*
 1 1 1 1 1 1-3
 [5] A : moi j'la connais pas hein *I don't know this type of card*
 4 1 1 1 4-1 1-2
 [6] B : ben c'est la carte de personne âgée *This is the card for old people*
 1 1 1 1-3

Speaker B uses rising contours at turns [2], [4], [6]: her turns have an asserting effect, she thinks she knows better than the guy at the desk. At the same time, she understands that her

knowledge or belief about the card is not shared and that her addressee is not ready to understand or take up her statements. Speaker A (the employee) first uses a falling contour in the first turn (typical of unbiased questions: he has no reason to assume a defective context, *i.e.* a context in which the answer would not be compatible with his own expectations). He then turns to use non-falling contours (at turns [3], [5]) ; it's now clear that his partner has different knowledge or belief than his. He uses rising-falling contours ; he presents himself as being ready to revise his commitments. Both turns have an asserting effect since he is the ticket man and on duty: he is contextually the one who knows about cards opening special rights.

5.2. Questioning declaratives with a falling contour

A falling contour signals that the speaker considers the context of her utterance as being non-defective and that she anticipates no revision, either by herself or by her addressee. Independently, an utterance will sound questioning when the speaker assumes that she is less authoritative than the addressee about p.

The two features obtain in a restricted type of turn: those called "verifying questions" in the literature. It has been illustrated in (9) and (10) above. (9) illustrates a case in which there are not many options left for the rendez-vous, which makes the teacher's option the only possible if both CPs want to arrive to an agreement, whereas (10) is a case of reprise turn used as a verifying check in the current activity (cf. Fornel & Léon, 1997, who observed several examples of such tours in corpora of service encounters).

5.3. Different questioning impacts of declaratives in French and English

The literature reports a special usage of a high-rising contour in North American and Antipodean English, illustrated in (29) below with the analysis given by Ladd 1996 (his (4.6)):

- (29) [1] A : I have an appointment with Dr Macmillan
 H* H* H%
 [2] B : What's your name ?
 [3] A : Williams Jarvis
 H* H* H%

As Ladd describes it, "it is important to note that both of A's utterances remain statements, in the sense that the propositions "I have an appointment with Dr Macmillan" and « [My name is] William Jarvis" are being asserted, not questioned. The questioning nuance conveyed by the intonation applies to the interaction as a whole, but not to the proposition itself" (Ladd., id, fn5 : 291). As Ladd correctly points out, *J'ai rendez-vous avec le docteur Dumoulin* with any of the non-falling intonations of French would sound rather odd in similar contexts (a patient at the desk of a medical clinic).

In our terms, A's utterances are questioning assertions, but, in this usage, the derived content is not "whether p" (as regular *questions de confirmation* in French). The acceptance of utterances by CPs involves (beside the operations of grounding and comprehension) an evaluation of the goal of the interlocutor. This is the track we follow to account for (29): A indicates that he checks whether his utterance is relevant for the current goal of his addressee. In other words, A makes two updates: the regular one in SG (*e.g.* at turn [3], "[My name is] William Jarvis") and another in QUD: he increments QUD with the question *whether p is appropriate for B's goals* (at [3], whether the disclosure of his name meets B's goals in

asking his question). This type of update that pertains to the relevance of the speaker's utterance with respect to the addressee's current goal (as assumed by the speaker) is not signalled in French by a contour belonging to the family of the rising contours (it requires other grammatical means).

6. Conclusion

We have shown how a dialogical-epistemic approach to contour meaning accounts for the choice of contours in French. It accounts for the prototypical cases represented by assertions with a falling contour and questions of confirmation with a non-falling contour, as well for the counter-examples to the claim that illocutionary force or impact is the primary meaning conveyed by contour overall shape, *i.e.* assertions with a rising contour and "verifying questions" with a falling contour. Those two last cases are crucial since they show the direct effect of contour meaning. When the speaker is verifying, she does not anticipate any revision of her statement, hence the falling contour. When she anticipates that her statement may be (or is) incompatible with the addressee's belief about the current issue, she may choose to make public that she anticipates a revision of the commitments, either her own or the addressee's one, hence a non-falling contour and, according to who might be concerned by the revision, a rising or a raising-falling contour. We have restricted ourselves to declaratives here. Our proposal readily extends to interrogatives. In the case of interrogatives, the commitment is defined as the issue raised by the question. The speaker uses a non-falling contour when she anticipates that this issue may not be accepted by the addressee.

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