ON INTONATION IN THAI SPONTANEOUS DISCOURSE: BROADCASTING INTERVIEW

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ABSTRACT
The present investigation concerns the intonation organization in a particular variety of thai spontaneous discourse: broadcasting interview. Our goal is first to identify and describe acoustical prosodic markers used as cues for segmentation of longer utterances called « paragraphs », such as accents, pauses, durational units, downdrift segments and resettings, all included in a grid representative of the overall organization. In a second step, all these cues are confronted with the results of syntactic and pragmatic analysis and interpreted as function markers of content values on the enunciative level.

1. INTRODUCTION
The present communication is devoted to the organization of intonation in a particular variety of thai spontaneous discourse: broadcasting interview, as part of a more general research project labelled « Prosodic structures of spontaneous oral speech in different languages », headed by Mary-Annick MOREL, University of Paris III.

Prosodic treatment of spontaneous speech attained recently successful achievements in Europe, and else where, due to new treatment models displayed by DI CRISTO and HIRST [2], E. GÅRDING [3], K.J. KOHLER [5], M-A MOREL and L. DANON-BOILEAU [7]. As far as standard thai is concerned, important progress was accomplished by A. ABRAMSON [1], S. LUKSANEEYANAWIN [6], S. IWASAKI and other thai scholars. As introduction to our present research, we presented a general grammar of thai intonation at the XVIth International Congress of Linguists [4]. The main aim of the present communication is to select highly recurrent patterns and discuss their communicative value in a model derived from M.-A. MOREL [7] with some trends borrowed from E. GÅRDING and K.J. KOHLER.

The corpus of speech material consists in interviews of 4 thai speakers, 2 males and 2 females, thai intellectuals from Bangkok, by Radio France International, about some controversial features of contemporary thai society. Samples hereby analyzed were 2 males and 2 females, thai intellectuals from Bangkok, by Radio France International, about some controversial features of contemporary thai society. Samples hereby analyzed were mostly from 2 informants SY, male and MG, female (whose colourful language is characterized by highly diversified intonation patterns). The radio reporter, of laotian origin, interviewed the speakers in lao or in a thai ideolecot: his performance could hardly be used in an analysis of interactive communication.

Our methodology included following stages: 1. Auditory analysis and accurate phonetic transcription (examples presented, but not discussed in this paper), 2. Acoustical analysis of suprasegmental parameters as cues and prosodic markers, 3. Syntactic analysis and enunciative interpretation of the prosodic markers, 4. Discussion of some specific sequences.

The acoustical data were obtained through the PROZODIK SYSTEM, an analogical device developed by B. GAUTHERON at the Phonetic Institute, University of Paris III.

2. ACOUSTICAL CUES AND PROSODIC MARKERS
Although several segmental changes occur in spontaneous thai speech, as in other languages (e.g. in german [5]), they aren't of any utility for paragraph (longer utterance) segmentation. Nevertheless it is worth to mention: vowel reductions or vowel suppressions: /pʰɛt/ for /práʔɛt/ (country); general suppression of [ʔ] after short vowels; deletion of final _w and _j in compounds before following consonant: /tʰàʔæ/ for /tʰaw̥æ/ (in so far as); replacement of /r/ by /l/ or pure suppression: /ɔː/ for [raw] (we); /pʰɛt/ for /práʔɛt/ etc.

Analysis of spontaneous speech structure relies upon a set of prosodic markers able to segment the discourse in prosodic unit (PU) and then to operate their regrouping in a larger hierarchical macrounit: the extended utterance called « paragraph » (PA) [7]. Morphosyntactic analysis and semantic and pragmatic interpretation intervene only after identification of the PUs.

Main acoustical cues and prosodic markers are: linguistic accents, duration and intensity variations, pauses, F0 downdrift, resetting, focuses and emphatic accents.

2.1. Linguistic accent. Thai like French and Vietnamese [2] displays a group accent with demarcative function on the last syllable of the group; secondary accent /ə/ may affect an initial syllable or an other syllable with a special phonetic or semantic weight: example from figure 1: [ŋɔ̖ːŋtɔ̀mɔ̖ːnɔ̀bɔːl] « in so far (I) know isn't it ». Accented units (AU) may consist of polysyllabic lexemes, or of compound words (lexies) or of syntagmas (in this examples). Accented syllables are identified through full maximal differentiation of the 5 tonemes and important increase in duration of the accented syllable, whereas innacented syllables, of whatsoever position in the AU, undergo tonal neutralisation and, according to their origin bear one of the two architonemes: /t/, high architoneme, or /tʰ/ non high [4]. So AUs strictly delimited by their proper markers function as basic Immediate Constituents of the utterance. AU contains 2 to 9 syllables, with a mean value of ± 6 syllables, 2 syllable units are mostly enunciative particles: e.g. /nàkʰá/, /nàkʰáʔ/ : longer units (7 to 9 syllables) contain learned words borrowed from the written language like :
2.2 Duration and Intensity variations

In spite of the use of final lengthening as a boundary marker of AU, there exists a certain tendency for regulation and isochrony compensation: short groups are lengthened and longer shortened in discourse. In addition semantic considerations interfere: e.g., (SY2) function words are enhanced [ṭāyi][cəz?], [cəz?]. 17 cs., normally + 5cs.: signal of the uncertainty of the enunciator: something must be done (but what? ) idem [bāy māz]. 4cs. + 21 cs.: « in order to have » (but what? ); relaturs like [iṭiɔ] or [māz] (SY2): « help people who: . » ( ? ); hesitation perplexity or shyness to continue « who is fallen in the profession woman » ( ! ! ). In the same sentence [ˈniːj] « new » (new situation), the first time 12 cs., the second time even accented at the end of the utterance only 9 cs.: « new » the second time is no longer « new » !. Lengthening before pause is not general. As a matter of fact, intensity parallels F0. F0 curves in a logarithmic scales (e.g. in semitones) and intensity curves in relative db have the same shape, notwithstanding minor discrepancies due to tonal organisation: so in [pʰʊ ɐ] (falling tone) F0 peak is 4cs. earlier than intensity peak.

2.3. Pauses

They play an important role in segmentation, not by themselves only but always in conjunction with resetting (initiated tone height of the top line of the following sequence)

2.3.1. Silence pauses

are of 2 kinds: short pauses from 5 to 9 cs., only respiratory, generally between preamble and rhyme, characterized by the fact that the following downdrift group starts with a lower height than the preceding: H2 > H1: longer pauses: 20cs and more, the following downdrift group starts with higher height: H2 > H1. This longer pause has a closing function: end of the paragraphs: e.g., figure 2, H1 [riː kʰʌp], F0 123, 130 Hz, pause 24 cs., H2 [³tuː] F0 156 Hz.

2.3.2. Non silent pauses

or virtual pauses marked by « prepositional vowel lengthening, F0 modulation, intrusive glottal stop etc. and by important resetting of the following downdrift group: H2 > H1: e.g. figure 1: H1 [kʰʌn] F0 120, 93 – 87 Hz, H2 [tən tʰiː ɕjʊ], F0 123, 151, 126 Hz. Virtual pauses of this kind have an opening function: introducing comments or secondary arguments completing the preceding paragraph. As a conclusion we can say that resetting height in more important than pause interruption.

2.4. F0 variations, grids and resettings

As that is a tonal language, absolute pitch values and their variations can’t be used in studying intonation: tones and accents are subordinated to sentence intonation and undergo reciprocal modifications. Phonological components of the oral sentence (paragraph) are tones, accents (word and group accents), focus and emphasis prominences on the sentence level, boundaries. Sentence intonation integrates all this components (with their phonetic parameters) in its own structure. The best representation of sentence interpretation would be « a set of auxiliary lines » called « tonal grid » [3] on which all this parameters are inserted. Previous analysis of thai tones [4] demonstrated that phonemic heights are of 3: High, Mid and Low. So we need a three line grid with a Top line (for evolution of high), a Base line (for evolution of low) and Mid line (for evolution of mid tone and mid components of the others tones) (figure 1)

In the sample H and M undergo declination, but not L which remains unaffected. The High line declination, called downdrift, is about –30%, id. ± 5 semi-tones. Downdrift segments correspond to utterance (paragraph) components: here the « preamble ». In that the grid is always in normal condition falling.

Equal grid is extraction of some segments worth to be considered apart, e.g. incidental and final post rhamatic adjustment: rising grid due to contrastive expressions. Grid range is highly marked by enunciative and attitudinal meanings: expanded grid, emphasis or importance of the considered segment; compressed grid, secondary comments or unimportant adjunctions. Unlike what happens in other languagees, the grid always keeps at least 2 lines. A grid reduced to 1 line exceptionally is possible for a segment with only 1 static tone, no examples in the corpus.

Resetting are the begining of the new discourse segment embedded in a new grid (figure 1): rhyme [ɬɛn dɛnjaŋ ŋː jite ³luː niː kʰʌp niː ɬɛm ɬɛn sɛm kʰʌn] (top line 143 – 120 Hz, base line 98 – 87 Hz, mid line 113 – 93 Hz. Focus and emphatic accent are best analysed as out of grid, e.g. [³biː kʰɛm sɛm kʰʌn kʰɛː] (give importance and then) ; [³hɛː] and [³kʰɛː] are to put out of grid, their values are 143–90 Hz and 127–90 Hz respectively, whereas 117–104 Hz for top line and 110–101 Hz for base line of segment between 2 focus/emphatic accent.

3. SYNTACTIC ANALYSIS AND ENUNCIATIVE INTERPRETATION OF THE PROSODIC MARKERS

In spontaneous speech, strict categories of the grammar of written language must to be avoided. The general organization of an oral paragraph is derived from the theme-rheme or given-new information. Basically, the paragraph may be analysed in Overall topic which presents the frame, actors, circumstances of enunciation called Preamble plus Rheme including the new information about the topic. A more detail analysis isolated in the preamble: Ligatur unit (relation with the preceding utterance), Modalisation or Modal adjustment, Point of view of the enunciator and Restricted theme or Frame, e.g., figure 2: [tən tʰiː ɕjʊniː] (top line 147–107 Hz), individualized as autonomous downdrift unit and analysed as ligatur plus modal adjustment ; [pʰɛːt ɬʰɛːj] law ɬɛn niː cː miː sɛm an ŋː], (topline 151–101 Hz, base line remains at 93 Hz) as a second downdrift unit, syntactically an independent sentence functioning as a frame downdrift. Micro analysis of this frmae identifies a Nominal component [pʰɛːt ɬʰɛːj] law] (top line 151-113 Hz, base line 143-93 Hz), plus modal adjustment [ɬɛn niː cː] (top line 101-98 Hz, base line 93-95 Hz) plus verbal component [miː sɛm ŋː] (top line 117-101 Hz, base line 93-87 Hz) boundary is the real pause after [miː] 9 cs. (respiratory pause before the following rhyme). The rhyme conveys the new information. It may consist in a verbal unit with its specific determinators (secondary actors, circumstances, adjustment). Rheme may be the extension of a verbal phrase or predicate or a syntactical autonomous, the whole
4.1 Prosodic perturbation features. Prosodic character of some sequences can be modified by particular intonation features which are in general of three types: focus, expressive and emotional accented syllables and contrastive stressed sequences. These three intonation features modify in most cases the direction and width of grid, e.g., focus (discussed here above) higher the level of grid and changes its direction: rising grid. The expressive and emotional accented syllables accompanied by lengthening of duration and optionally followed by a pause, may change direction and width of grid. This pivot [3] on the syllable is to put outside and interpreted separately. The expressive and emotional accented syllable always indicates enunciator’s hesitation or formulation of his own discourse. It is often related to grammatical words, such as [n, stíň] (relative) which shows other articulation of information. As for contrastive accented sequence which modifies in general the direction and width of grid as in expressif and emotional accented syllable, it can be of two alternate accented syllables: [pòv ân dìch] láp "nâch rût hâm] (whether the result will be productive or not), as well as alternate two sequences of 4-5 syllables: [e]aj while: "nâch lêw kî dìch pòv hâm] (took too much time and inefficient)

4.2 Overall rhematic sequence. A series of rhemes put together in the same segment by prosodic cues (discussed here above), constitutes a larger unit of paragraph, an overall rhyme. The series of rhemes can be of predicates sharing the same subject in the first constituent, preamble, as well as a series of successive added informations about the topic mentioned in the preamble [7], as shown in the following example: Preamble: [pàv wà pôw lëf tû lûm mû àk kî vû tû nû hâm] (because after being heard for a while in the past 5 years),

Rheme 1: [hê sînek wà pê fût rûm lûm dísk jàf prà kâmp ac cëp rûm lôw ûm kân wà aû cûn cû hê sîf sëp âk on lôw hâm] (I feel that there’s about 40 women which went for the job called proper),

Rheme 2: [hê wâ cüaj we: lôw. "nâch lêw kô dâj pòv hâm] (that took too much time and inefficient),

Rheme 3: [sîn cüaj wà kà pê cüaj hê wà vû nû àk on rûm sêp kâs] (in average it’s less than 10 persons a year).

Every rhyme can be interpreted as a topic for the following rhyme: e.g. rhyme 1 = topic of rhyme 2, rhyme 2 = topic of rhyme 3.

4.3 Final particles and modal adjustment. Three important roles can be attributed to the final particles in discourse analysis. The final particle shows the speaker’s personal attitude towards his own information, his means to convey his address to accept the information being delivered and his respect to his addressee. The use and choice of final particle are unpredictable. They totally depend on status and relationship of speaker and addressee and on speaker’s convoyancing process. Final particles often found in this study are formed as a sequence of [hìa nì hì]. [hìa] shows immediate reference in situation which needs particular attention and expects some response from addressee, [nì] encourages the addressee to accept or to agree with the information and [hì] shows speaker’s respect to his addressee [8]. The sequence of final particles can occur at different positions in the paragraph. Its role is to limit information units and indicate speaker’s modal adjustment. When appearing within or at the end of preamble, it functions as modal adjustment; as postrhematic modal constituent at the end of rhematic constituent, and as incidental phrase when occurring within the rhematic constituent: i.e., once paragraph formulated, speaker can’t come back and correct his discourse but he can add missing constituent later in term of incidental phrase which is associated to low pitch level and flat range [7].

5. CONCLUSION
Due to the interview situation (radio broadcasting), the social status of the speakers (educated intellectuals), the subject under discussion (society features), the discourse here produced is more or less auteregulated and can be coined as a typical sample of « controlled » spontaneous speech. The corpus under analysis (here ± 30 minutes interviews) must be extended on the same level to gain more datas. In addition, other levels of communication must be investigated e.g. uncontrolled interactive exchanges in informal situations as : free conversations between friends or intimates in the street, at home or in a cafeteria, etc [8].
(about the matter of this centre I totally agree with the centre establishment)

Figure 1

(as a matter of fact thailand should has had this sort of centre for a long time)

Figure 2

(about the corruption problem it's worldwide)

Figure 3

Nevertheless, specific characteristics of spontaneous discourse have been identified: the oral paragraph as main unit, its organization in hierarchical units: accentual units (AU), downdrift units, prosodic phrases included in a grid representation; « formulation » perturbations through focus and emphatic accent, just as in R. THÔM’s « Catastroph Theory ».

NOTES
1. Standard thai and southern lao are very close cognate languages and mutual intercomprehension between the speakers of the 2 languages is always assured.

REFERENCES