

# **The creation of a prosodically transcribed intercultural corpus: The Hong Kong Corpus of Spoken English (prosodic)**

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## **Abstract**

*This paper describes a new addition to the growing number of spoken corpora, the Hong Kong Corpus of Spoken English (prosodic), which has the relatively rare and additional benefit of being both orthographically and prosodically transcribed. The corpus comprises approximately one-million words spread evenly across four sub-corpora: academic discourses, business discourses, conversations, and public discourses. The corpus described in this paper consists of just over half of the full Hong Kong Corpus of Spoken English (orthographic), which is a two-million word corpus of naturally occurring talk between Hong Kong Chinese and speakers of languages other than Cantonese. This paper describes the contents of the HKCSE (prosodic), the discourse intonation systems (Brazil 1997) used to denote speakers' intonation choices, and the software specifically designed and implemented to interrogate the corpus, together with examples of some of the search functions available to the user.*

## **1 Background**

The work to compile the Hong Kong Corpus of Spoken English (HKCSE) began in the mid-1990s with the collection of half a million words of naturally occurring conversations (see Cheng and Warren 1999), and has grown to include a total of four sub-corpora each consisting of 50 hours of naturally occurring talk (i.e. approximately two million words in total). The four sub-corpora were chosen to represent the main overarching spoken genres found in the Hong Kong context, namely academic discourses, business discourses, conversations, and public discourses. Each sub-corpus consists of a variety of discourse types and participants. It was decided to further enrich the HKCSE as a research, learning and teaching resource by adding a prosodic transcription to the ortho-

graphic transcription. A combination of financial constraints and quality of data issues resulting from working with naturally occurring data has meant that it has not been possible to prosodically transcribe all of the HKCSE (orthographic). Nonetheless, with 53 per cent of the HKCSE now prosodically transcribed, and soon to be available in electronic format for others working in the field, the HKCSE (prosodic) is, we believe, the largest prosodically transcribed corpus currently in existence.

## 2 Contents of the HKCSE (prosodic)

The HKCSE (prosodic) comprises 106 hours of intercultural, spoken discourses. Table 1 summarises the composition of the four sub-corpora in the HKCSE (prosodic).

Table 1: Contents of HKCSE (prosodic)

Discourse type	Duration
<b>Academic discourse (28 hours 30 min)</b>	
Lectures	587 min
Seminars	648 min
Student presentations	199 min
Tutorials and supervisions	244 min
Workshops for staff	30 min
<b>2 Business discourse (29 hours 14 min)</b>	
Service encounters	114.5 min
Meetings	215.9 min
Interviews	622.2 min
Presentations and announcements	638.6 min
Conference call/video conferencing	33.7 min
Informal office talk	120.3 min
Workplace telephone talk	9.2 min

<b>3 Conversation (27 hours)</b>	
<b>4 Public discourse (25 hours)</b>	
Speeches	682.4 min
Speeches followed by Q&A	210 min
Press briefings (followed by Q&A)	77.6 min
Interviews (TV & radio)	478.7 min
Discussion forums	26.2 min

As described above, the Conversation sub-corpus was the first to be compiled, and details about the composition and characteristics of this sub-corpus are described in Cheng and Warren (1999). The Academic Discourse sub-corpus in the HKCSE (prosodic) was compiled between 1997 and 1999. It consists of lectures, seminars, tutorials, and staff workshops, which were collected from various faculties and departments, including the departments of English, Hotel & Tourism Management, Construction & Land Use, Institute of Textiles & Clothing, Manufacturing Engineering and Applied Biology & Chemical Technology, and the English Language Centre within the Hong Kong Polytechnic University. Most of the data were audio-recorded but some were video-recorded.

The Business sub-corpus, which was compiled between 1998 and 2002, contains a range of discourse types audio-recorded in various business- and professional-related contexts, for instance, hotel and airport reception or information desks, meeting rooms in business organizations and the administrative offices of the Hong Kong Polytechnic University, and other offices in Hong Kong. Some data were obtained from the websites of the different organizations.

The last sub-corpus to be constructed in order to complete the compilation of the HKCSE is the Public Discourse sub-corpus compiled between 2001 and 2002. The discourse types are primarily public speeches and presentations and press briefings made by speakers from the Hong Kong Government SAR, banks, public utilities, public forum and conference and event organizers, etc. There are also interviews or forum discussions broadcast on the radio or television.

### 3 *Discourse intonation*

The discourse intonation system developed by Brazil (1985 and 1997) and others (see, for example, Coulthard and Brazil 1981; Coulthard and Montgomery 1981; Sinclair and Brazil 1982; Hewings 1990; Cauldwell 2002) is primarily concerned with the function of intonation in English and its communicative value. This system is of particular relevance to the researchers working with the HKCSE to further our understanding of discourse, intercultural communication and (intercultural) pragmatics (see for example, Cheng 2004a, 2004b, 2004c; Cheng and Warren 2003, 2005; Warren 2004a, 2004b). The choice of discourse intonation for the prosodic transcription of the HKCSE is also in line with those (see for example, Couper-Kuhlen and Selting 1996: 12–13) who call for the examination of the functions of intonation in naturally-occurring discourses to better determine their pragmatic and situated meanings. Another advantage of Brazil's systems within discourse intonation, as stated by McCarthy (1991: 114), lies in the possibility to deal with the four different aspects of discourse intonation individually, "while not losing sight of either the sense of the importance of speaker choice and adjustment to the constantly changing state of play between participants in the talk".

As pointed out in a study by Chun (2002: 15–45), discourse intonation offers a different description of intonation to the grammatical (see, for example, Chomsky and Halle 1968; Liberman and Prince 1977; Pierrehumbert 1980; Pierrehumbert and Hirschberg 1990) and the attitudinal (see, for example, O'Connor and Arnold 1973; Crystal 1975 and 1995). The first of these, the grammatical description of intonation, suggests that there are tones which are typically chosen with particular syntactic structures, such as rise tone with yes/no questions, and fall tone with *wh*-questions, statements and commands; and that even when the conventional structure is not employed, the meanings conventionally associated with them will also be spoken with these same tones. The attitudinal description of intonation ascribes to tones a set of meanings depending on the function of the utterance. The rise tone, for example, is described as having the attitudinal meaning of 'reassuring' with *wh*-questions (Cruttenden 1997: 99) and 'non-committal' or 'grumbling' with declaratives (Cruttenden 1997: 97). The rise-fall tone can mean 'impressed' with yes/no questions and declaratives or 'challenging' with 'clauses of any syntactic type' (Cruttenden 1997: 92–93). In terms of the break with attitudinal descriptions (see, for example, Cauldwell 1997), discourse intonation can in part be traced back to the work of Halliday (1963 and 1967), who developed a phonological typology based on meaning-making grammatical choices, although in discourse intonation the link

to grammatical forms has gone (Chun 2002: 36). Importantly, then, discourse intonation consists of a set of choices available to speakers. These choices are not formulated with reference to grammar and do not have fixed attitudinal meanings.

The application of the discourse intonation framework has not been confined to British English. The discourse intonation of other varieties of English such as Malaysian English (Hewings 1986, Knowles and Don 2004) and Singaporean English (Goh 1998 and 2000), and other languages such as Italian, German and Swedish (Hewings 1990) have been analysed. Such studies suggest that the system described by Brazil (1985 and 1997) has wider applications. Therefore while the creation of the HKCSE (prosodic) is breaking new ground in applying a discourse intonation framework to Hong Kong English, it is by no means the first attempt to apply it to data that are not 'standard' British English.

#### ***4 The Hong Kong Corpus of Spoken English (prosodic)***

It is both difficult and time-consuming to prosodically transcribe naturally-occurring data, and it requires inter-transcriber reliability measures to ensure the quality of the transcription. The prosodic transcriptions of the HKCSE were subjected to cross-checking involving three individuals, and further quality assurance was provided by a consultant to the project with experience in transcribing and analysing discourse intonation.

The HKCSE (prosodic) is the first large-scale attempt to employ the discourse intonation system to mark intonation, but it is not the first corpus to have added a prosodic transcription. The 500,000-word London-Lund Corpus (Svartvik 1990: 15) has prosodic transcription that shows tone units, onsets, location of nuclei, direction of nuclear tones and two degrees of stress. The 170,000-word Survey of English Usage corpus (Svartvik 1990: 15) has a fuller marking of prosodic features which includes degrees of loudness and tempo, modifications in voice quality and other paralinguistic features in addition to the features in the London-Lund Corpus. The 50,000-word Lancaster/IBM Spoken English Corpus (SEC) (see for example, Knowles et al. 1996; Wichmann 2000) represents the following prosodic features: tone groups, stressed and accented syllables, pitch direction, simple and complex tones, high and low tones, and significant changes of pitch not covered by the tone markings (Taylor 1996: 28–29).

## 5 *The four systems of discourse intonation*

In Brazil's (1997) description of discourse intonation, speakers can select from four systems: prominence, tone, key and termination (see Table 2 below). All of these intonation choices, and there are thirteen in all from the four systems (Hewings and Cauldwell 1997: vii), are motivated by real-time, situation-specific decisions by speakers to add extra layers of meaning to words as they are spoken. All of the thirteen intonation choices occur within the boundaries of a tone unit. In discourse intonation, a tone unit is taken to mean a stretch of speech with one tonic segment, comprising at least one tonic syllable, but which may extend from an onset (first prominent syllable) to the tonic (final prominent syllable) (Hewings 1990: 136). Each of the independent systems is a source of 'local meaning' (Brazil 1997: xi), by which Brazil seeks to underline that these are moment by moment judgements made by speakers based on their assessment of the current state of understanding operating between the participants. It might be pertinent at this point to issue a word of caution because it needs to be borne in mind that intonation alone, let alone one particular choice within the four systems, is not the sole conveyor of discourse meaning. When looking at intonation, the researcher at the same time has to be mindful of all of the other possible contributing factors in the ongoing negotiation of meaning between discourse participants.

*Table 2:* Discourse intonation choices available to speakers

<b>System</b>	<b>Choice</b>
Prominence	prominent/non-prominent syllables
Tone	rise-fall, fall, rise, fall-rise, level
Key	high, mid, low
Termination	high, mid, low

*(Adapted from Hewings and Cauldwell 1997: vii, in Brazil 1997)*

While the orthographic transcription of spoken data is well established, and the conventions quite well-known, the number of spoken corpora that are also prosodically transcribed is very small (see for example, the London-Lund corpus, Svartvik 1990), and thus the representation of prosodic features in corpus data is less standardised. When examples are taken from the HKCSE (prosodic) to be used in the dissemination of our findings, or in our learning and teaching materials, the following transcription conventions are used:

Tone unit	// .... //
Prominence:	UPPER CASE LETTERS
Tone:	↘↗ (fall rise); ↗ (rise); ↘ (fall); ↗↘ (rise fall); → (level)
Key:	high – written above the line mid – written on the line low – written below the line
Termination:	high – written above the line and underlined mid – written on the line and underlined low – written below the line and underlined

The above transcription conventions, which are based on those used by Brazil (1997) and Cauldwell (2002), are very reader-friendly, thanks to the obvious connections between the ways of representing the discourse intonation systems and the nature of the systems themselves. However, it was found that these conventions were not computer-friendly, and so a completely different set of transcription conventions had to be devised that are computer readable. These conventions are described in section 6 of the paper.

Each of the four systems in discourse intonation and their respective choices are briefly described below.

### 5.1 Prominence

Brazil (1997: 23–25) states that prominence is used as a means of distinguishing those words which are situationally informative. Importantly, in this conceptual framework, the assigning of prominence is not fixed on the basis of grammar or word-accent/stress, it is a choice made by the speaker in context. For Brazil (1997: 23), speakers have available to them two paradigms: existential and general. The existential paradigm is the set of possibilities that a speaker can choose from in a given situation. The general paradigm is the set of possibilities that is inherent in the language system. Brazil (1997: 22–23) exemplifies the two paradigms with his well-known *queen of hearts* said in response to *which card did you play*. In this utterance, *of* is a product of the general paradigm because the speaker is limited in this context to this word by the language system. Conversely, *queen* and *hearts* are choices limited by the contents of the pack of cards rather than the language system and are thus part of an existential paradigm as opposed to a general paradigm. The choice of prominence in naturally-occurring spoken discourse is made when the speaker chooses from the existential paradigm that is available at that point in the discourse. It needs to be added that not every syllable in a word has to be made prominent for the word to have the status of prominence in a tone unit.

Speaker decisions within the prominence system are made on the basis of the speaker considering the status of individual words (Brazil 1997: 39). The other three systems in discourse intonation, tone, key and termination, are not attributes of individual words but of the tonic segment (i.e. that section of the tone unit that falls between the first and the last prominent syllable).

### **5.2 *Tone***

In discourse intonation, there are five tones that speakers may choose from. Four of these are used to distinguish between information that is common ground (referring tones, i.e. fall-rise and rise) and information that is new (proclaiming tones, i.e. rise-fall and fall). Once this basic choice has been made, the speaker has a further choice between two kinds of referring tones and two kinds of proclaiming tones. The distinction between the two referring tones is that the fall-rise indicates that this part of the discourse will not enlarge the common ground assumed to exist between the participants, and the rise tone reactivates something which is part of the common ground (Brazil 1997: 82–96). In terms of the two proclaiming tones, the fall tone shows that the area of speaker-hearer convergence is being enlarged while the rise-fall tone indicates addition to the common ground and to the speaker's own knowledge at one and the same time (Brazil 1997: 97–98). The fifth tone is level tone, which is associated with tone units which precede an encoding pause or otherwise truncated tone units (Brazil 1997: 140). The level tone is also chosen when the speaker does not intend to either proclaim or refer and, in so doing, disengages from the immediate interactive context as when saying something as if it is already known in the sense of a precoded well-established and highly practised procedure (Brazil 1997: 36 and 136), or it can be chosen for rhetorical effect (Brazil 1997: 170).

### **5.3 *Key and termination***

The last two systems concern pitch level choices available to speakers and are best looked at in combination. According to Brazil (1997: 40–66), speakers can choose from a three tier system (high, mid and low) in terms of the relative 'key' at the onset of a tone unit which is the first prominent syllable in a tone unit. The choice of key is made on the first prominent syllable, and whether the speaker selects high, mid or low will affect the meaning of what is said. High key selection has contrastive value, mid key has additive value, and the selection of low key has equative value, that is with the meaning 'as to be expected' (Brazil 1985: 75–84).



Lastly, Brazil states the speaker also chooses pitch level again at the end of the tonic segment on the tonic syllable (i.e. the last prominent syllable in the tone unit which is underlined in the transcripts), and Brazil terms this system ‘termination’ (1997: 11). Again, this is a three tier system of high, mid and low. By means of this choice, the speaker can seek to constrain the next speaker to respond if s/he selects high or mid termination, and, due to the seeming preference for ‘pitch concord’ (1985: 86) found in spoken discourse across turn boundaries, the next speaker frequently ‘echoes’ the termination choice of the previous speaker in her/his choice of key. If the speaker chooses low termination, no attempt to elicit a response is made by the current speaker, and thus leaving the next speaker to initiate a new topic or for the discourse to come to a close.

The local meaning of selecting high or mid termination varies according to the functional value of what is being said, and can be briefly summarized based on three broad scenarios. In the case of yes/no questions (Brazil 1997: 54–55), the choice of high termination carries the meaning that adjudication is invited from the hearer while mid termination seeks concurrence. In *wh*-type questions (Brazil 1997: 56), high termination carries the meaning that ‘an improbable answer is expected’ and mid termination is a ‘straightforward request for information’, while in declaratives, the choice of high termination denotes the meaning ‘this will surprise you’ and mid-termination the meaning ‘this will not surprise you’ (Brazil 1997: 58).

#### 5.4 An example of discourse intonation

The best way to present the discourse intonation system is to briefly describe it at work in an example drawn from the HKCSE (prosodic). In the following example, speakers a and B are engaged in a service encounter at Hong Kong airport. Speaker B is purchasing a plane ticket and the extract begins after a brief pause in the discourse while speaker a went to get the change for speaker B after he paid for the ticket.

##### Example (service encounter)

- |   |  |                     |
|---|--|---------------------|
|   | a: airline employee  | B: customer         |
| 1 | a <sup>1</sup> : // ↘ so mister <u>FXXX</u> // ↗ the [FOUR hundred HONG kong dollars |                     |
| 2 | B:   | [// ↘ <u>YES</u> // |
| 3 | [CHANGE for <u>YOU</u> //  |                     |
| 4 | B: [// ↗ <u>THANK</u> you //   |                     |

(HKCSE)

On lines 1 and 3, the utterance spoken by speaker a comprises two tone units. Speaker a chooses to make *FXXX*, *four*, *Hong*, *change* and *you* prominent because, in this context of interaction, it is at these points in her utterance that existential paradigms occur. The speaker begins by getting the attention of speaker B, and so it is his name as opposed to the names of others queuing at the ticketing counter that is chosen to be prominent. Similarly, *four* is made prominent here rather than any other possible number, and *Hong* in Hong Kong is made prominent as opposed to other currency denominations, such as *US*, *Canadian*, etc. Later in the second tone unit, *change* is chosen to be prominent as opposed to, for example, *refund*, and then *you* is made prominent rather than any other possible proform. In the case of speaker B, his first utterance on line 2 consists of a one word tone unit *yes*, said in response to speaker a's *so mister FXXX*. Here there is no choice in terms of prominence for speaker B as at least one syllable/word is prominent in every tone unit. On line 4, speaker B chooses prominence on *thanks* as the speaker perceives this to be more situationally informative than *you* in this context.

In terms of tone choice, speaker a uses a fall tone to get the attention of the customer, as she judges this to be new for the hearer, and she selects rise tone to state the amount of change she is giving to speaker B because she perceives this to be reactivation of shared knowledge between her and the hearer. Speaker B's choice of fall tone on line 2 carries the communicative value that this is enlarging the common ground, but he chooses rise tone when he thanks speaker a, which he perceives to be the reactivation of shared knowledge between the participants.

Regarding key and termination, speaker a chooses mid key in the second tone unit in her utterance, which denotes an additive communicative meaning (Brazil 1985: 75–84) and is the 'default' choice. Both speakers choose mid-termination throughout, which is the 'default' choice, carrying the communicative meaning of 'this will not surprise you' (Brazil 1997: 58) in the case of the statements. These intonation choices are to be expected in such a routine and unmarked service encounter.

## **6 Computer readable prosodic transcription conventions**

As mentioned above, it was necessary to devise a new notation system for the systems of discourse intonation that could be read by the corpus linguistics software (iConc<sup>2</sup>) designed to interrogate the HKCSE (prosodic). The prosodic notation system is described below:

- Tone group boundaries are marked with ‘{ }’ brackets.
- The referring and proclaiming tones are shown using combinations of forward and back slashes: rise ‘/’, fall-rise ‘\’’, fall ‘\’, and rise-fall ‘/’.
- Level tones are marked ‘=’ and unclassifiable tones ‘?’.
- Prominence is shown by means of UPPER CASE letters.
- Key is marked with ‘[ ]’ brackets, high key and low key are indicated with ‘^’ and ‘\_’ respectively, while mid key is not marked (i.e. it is the default).
- Termination is marked with ‘<>’ brackets with high, mid, and low termination, using the same forms of notation used for key choices.

In addition, we have found it necessary to include symbols to clearly distinguish what is happening in situations where simultaneous talk takes place in order to facilitate computer searches. Points in the discourses where simultaneous talk occurs are marked with a single \* in the utterance of the current speaker, and \*\* in the utterance of the ‘interrupter’. Similarly, a minus sign, -, is added to the speaker’s identification in the case of the current speaker; and a plus sign, +, is added to speaker’s identification in the case of the ‘interrupter’. All extraneous information is enclosed in double brackets.

Below are ‘before and after’ examples of the prosodic transcription conventions adopted to notate the corpus:

(Orthographic transcription)

1. B: no
2. a: ((laugh)) come on
3. B: no you you can actually make it more objective ((inaudible)) purely
4. ((inaudible)) I mean it it and then they make it clear than so many
5. achievements by results but don’t you know there is a bit more to the
6. situation you’ve got a task but you cannot only tell the case for so long (.)
7. [bonuses have gone down taxes have gone up er I heard from HR even our
8. a: [yea
9. er our vacation pay is no longer tax deductible
10. a: ah really
11. B: yea
12. a: bad

(Prosodic transcription)

1. B: { \ < NO > }
2. a: ((laugh)) { = < COME > on }
3. -B: { \ < NO > } { ? you } { ? you can [ ACTually ] make it more < objEctive
4. > ((inaudible)) purely ((inaudible)) } { = < I > mean } { ? it } { ? it } { \
5. and [ THEN ] they make it < CLEAR > than } { = < ^ SO > } { \ many
6. [ aCHIEVEments ] by < \_ reSULTS > } { = < BUT > } { \ [ DON'T ] you
7. KNOW there is a BIT more to the < \_ situAtion > } { = you've [ GOT ] a
8. < TASK > but } { \ you cannot only < ^ TELL > the case for so long } (.)
9. \* { \ [ BONuses ] have gone < DOWN > } { \ [ TAXes ] have < GONE >
10. +a:\*\* { \ < \_ YEA > }
11. up } { = < ER > } { = i [ HEARD ] heard from H r < ^ Even > our er } { ? our }
12. { \ < ^ vaCAtion > pay } { \ is [ NO ] longer tax < deDUCTible > }
13. a: { \ < AH > } { \ < REally > }
14. B: { \ < YEA > }
15. a: { \ < BAD > }

## 7 *HKCSE (prosodic) search engine: The iConc Programme*

iConc is a customised concordance search programme written specially for the HKCSE (prosodic). The programme searches the corpus for tags which mark the prosodic features of tone unit, tones, prominence, termination and key, as described above. The figures which follow show the output from some of these searches, and describe some of the features of this programme.

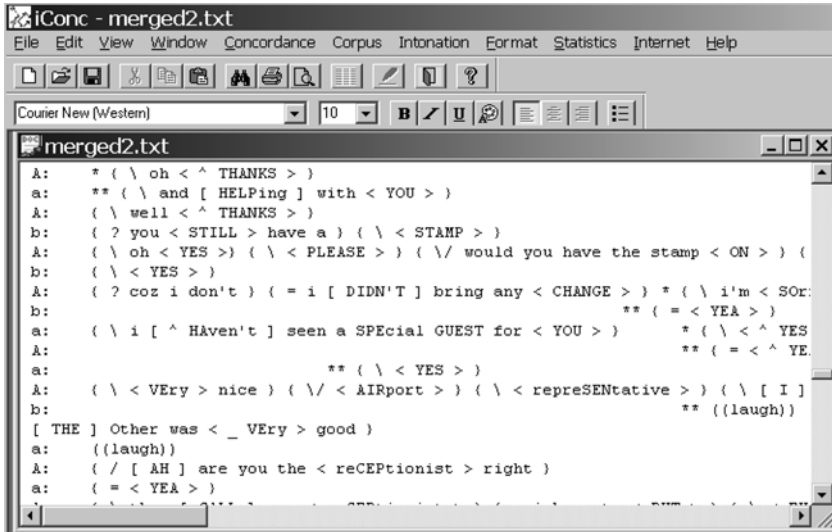


Figure 1: An example of a merged corpus

Figure 1 shows a part of the full corpus for business discourses, featuring a native English speaker female (speaker A) and both a Hong Kong Chinese male (speaker b) and a Hong Kong Chinese female (speaker a) as the participants. This corpus was created first as documents in MS Word, exported as text files, and merged in a single text file by typing COPY \*.TXT MERGED.TXT in the appropriate directory on the command line. This copies all the text files into a single file named MERGED.TXT.

We can see the tagging which has been inserted in the corpus, and each speaker is identified at the start of the line. Prominences are indicated by using upper case letters.

Different sub-corpora can be created from the main merged corpus files. The sub-corpora include: native speaker females, native speaker males, Hong Kong Chinese females, Hong Kong Chinese males, all females regardless of mother tongue, all native speakers (females and males), all males regardless of mother tongue, and all Hong Kong Chinese speakers. The menu for this is shown in Figure 2:

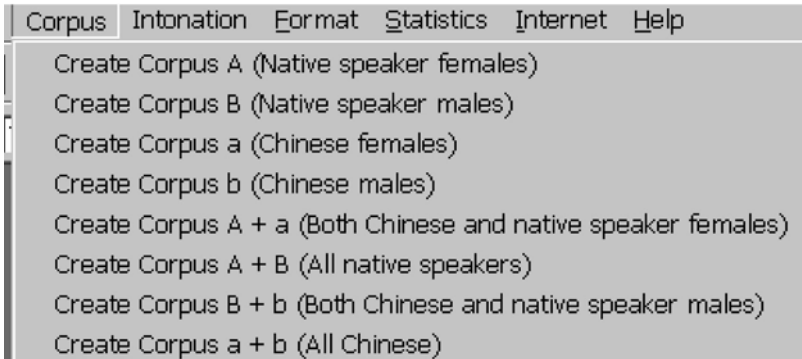


Figure 2: The menu for creating the sub-corpora

The programme works by opening the full text first and removing everything except what is spoken by the respective speakers. Figure 3 below shows the output after creating Corpus B + b – all male speakers, both native English speakers and Hong Kong Chinese speakers.

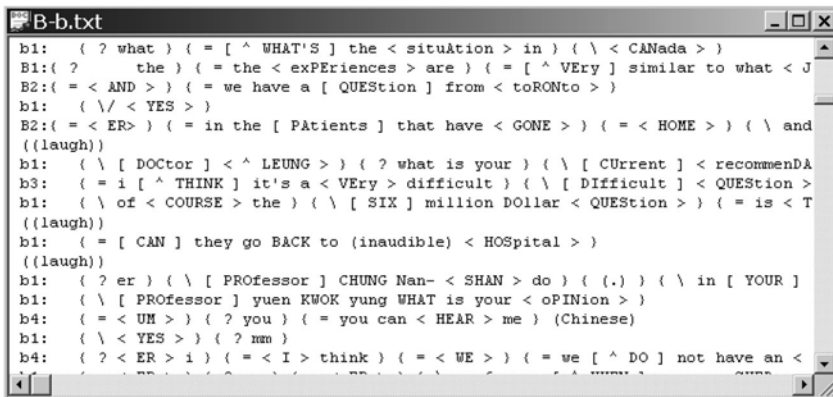


Figure 3: The B-b.txt corpus file

Figure 4 shows a menu customised specifically for searches relating to the tagging:

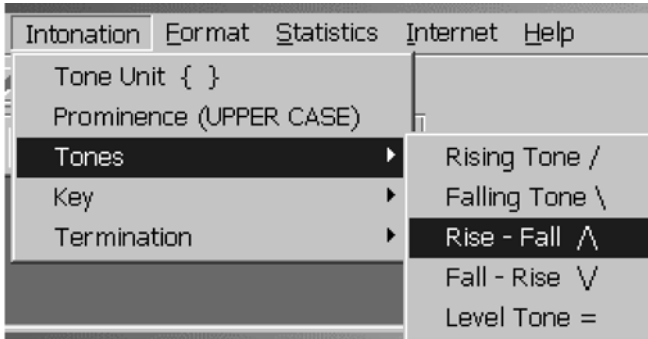


Figure 4: The INTONATION menu

As well as providing a search for prominences, searches can be conducted for any of the tone, key or termination choices in the discourse intonation systems. Individual searches can also be carried out by typing in the characters or words to search for. Figure 5 below shows the search progress dialog monitor for a search for tone units.

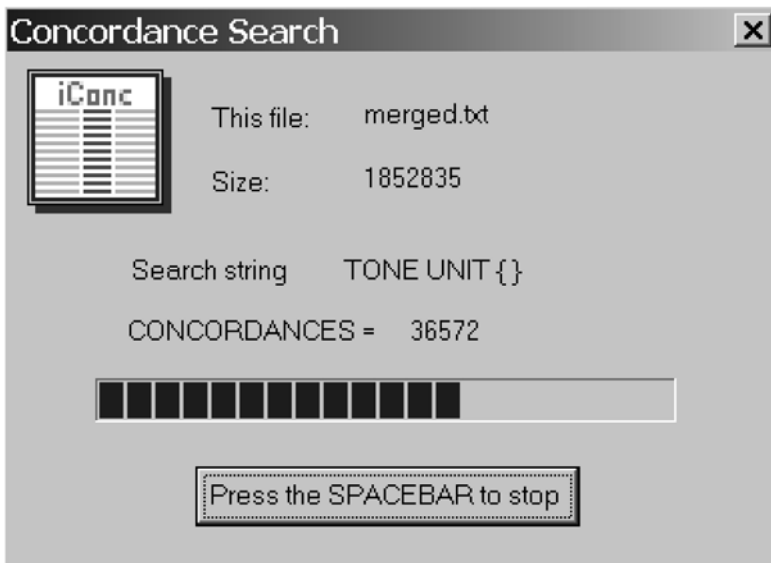


Figure 5: The progress monitor of a search for tone units

The output of this search is shown in Figure 6, which shows that, when the search based on the sub-corpus of public discourses is completed, the number of matches is displayed in the bottom right hand message bar (2,825), together with the type of search performed.

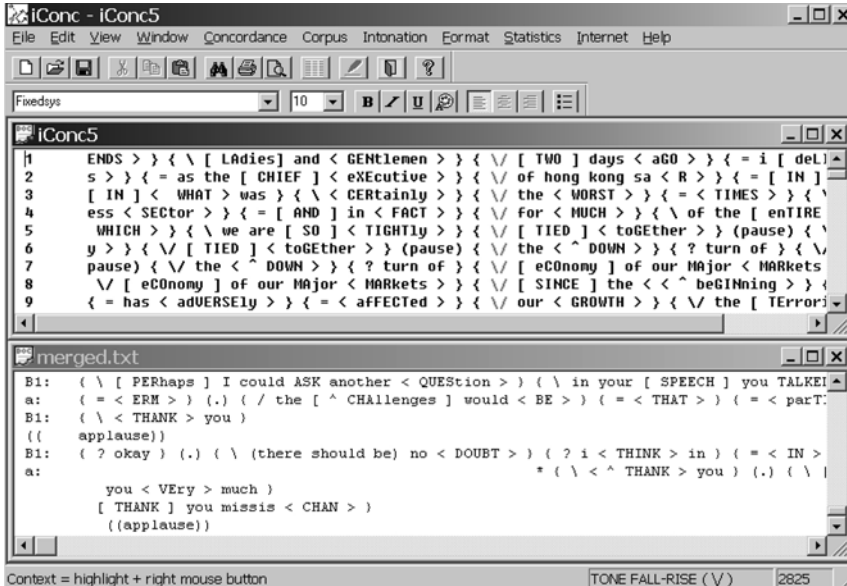


Figure 6: Output of a search for fall-rise tones

Figure 7 below shows that in contrast with the search for fall-rise tones, the search for rise-fall tones produces only the following output.



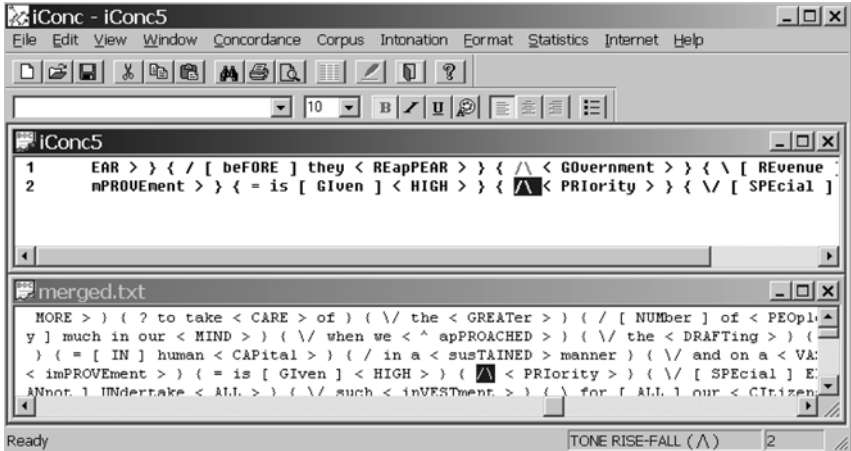


Figure 7: Output of a search for rise-fall tones

Only two examples of speakers choosing the rise-fall tone are found, as contrasted with 2,825 examples for the fall-rise tone. This bears out Brazil’s observations about the rarity of this tone in English (Brazil 1997: 86).

The result of searching for whole tone units is shown in Figure 8 below, which is done by searching for all the instances of a ‘{’ followed by a ‘}’. The start of each tone unit is indicated by a ‘{’ and the end of the tone unit is marked by a ‘}’, and the concordances are aligned with the ‘{’. The figure given for tone units displayed in the output window is 57,843 (bottom right hand corner).

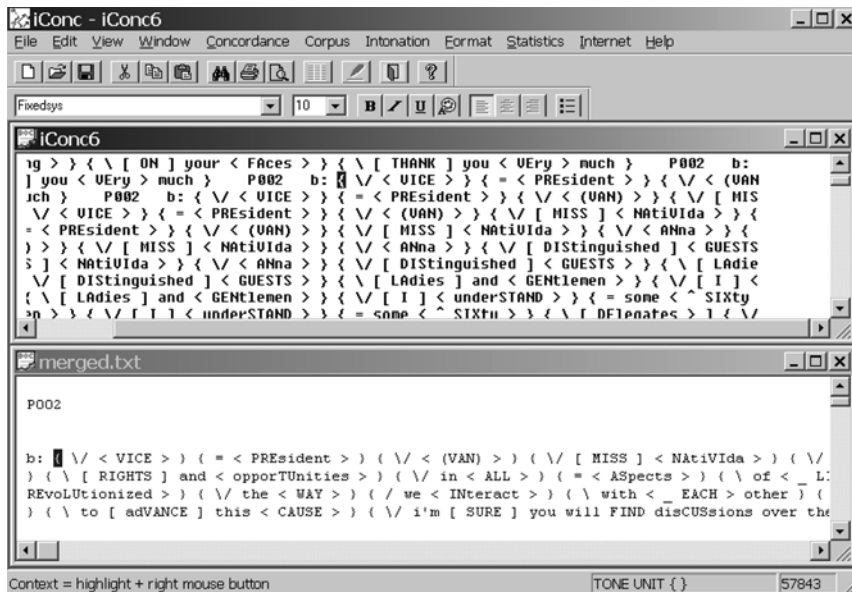


Figure 8: The output from a search for tone units using the INTONATION menu

Figures 7 and 8 also show another feature of the programme which is important, and that is the ability to see the larger context for any example, which is made easier by arranging the corpus and search windows tiled as shown in the illustration. The context is found by right-clicking the mouse on the example in the search window, so that the larger context is viewed in the corpus window with the tag highlighted.

### 8 Applications and future developments

The combination of an intercultural corpus which is also prosodically transcribed means that the HKCSE (prosodic) is a potentially rich resource. The corpus has already yielded a number of studies in the areas of discourse analysis, intercultural pragmatics, pragmatics and intercultural communication, all with an additional focus on the communicative role of discourse intonation. The possibility of exploiting the corpus in English language materials is currently being explored in a funded research project entitled ‘A Description of Spoken English in Hong Kong’ (PolyU 5270/00H). This project aims to compare the contents of

learning and teaching materials used in upper secondary schools in Hong Kong with the reality of spoken English usage found in the HKCSE and reference corpora, such as the Bank of English, to better inform the learning and teaching of spoken English (and the learning and teaching of listening to spoken English). Both undergraduate and postgraduate students use the HKCSE in 'data-driven learning' activities (Johns 1991) and in their larger-scale research projects and theses. Examples drawn from the HKCSE pepper materials developed for the learning and teaching of a wide range of academic subjects across all of the academic programmes offered by our department. Finally, and most importantly, the corpus is to be made available on CD-ROM in 2005 to others in the wider research community who might find the corpus of value.

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### ***Notes***

1. Throughout the HKCSE, Hong Kong Chinese (HKC) speakers are identified by lower case letters and native speakers of English (NSE) by upper case letters. Females are denoted by the letters 'a' (HKC) and 'A' (NSE), and males by the letters 'b' (HKC) and 'B' (NSE). Speakers of languages other than Cantonese but who are not native speakers of English are denoted by 'x' (male) and 'y' (female).
2. iCONC has been specifically designed, written and implemented by Chris Greaves to interrogate HKCSE (prosodic).

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