Prosody and turn-taking in Malay broadcast interviews

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Abstract

The paper aims to examine the role that prosody plays in constructing the context in which utterances become interpretable. The realisations of some prosodic features at particular loci of occurrence can serve as signalling cues in the management of conversational interaction and in the interpretation of different activity types in conversation. The concern here is to find out exactly how prosody and what prosodic features contribute to this process of contextualisation. In order to identify the contextual function of prosody, we examined the realisations of prosody at turn transitions and within certain types of speaker activity such as turn-holding or turn-yielding and turn-competitive incomings. Examination of the data shows that the completion of turn-constructional units is usually associated with a drop in pitch, and non-completion with rising or sustained pitch. The prosodic features involved in signalling the status of the speaker’s overlap as competitive or non-competitive are pitch height and loudness. The giving away of turn is marked by decreased pitch height and diminuendo loudness, gradually reaching the point of unintelligibility; a return competition is signalled by a step-up in pitch and increased loudness, and at times tempo speed-up which usually occurs around the beginning of the return competition.

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1. Introduction

Research on prosody can broadly be divided into two types. Traditional ‘structural’ research, going back to the work of Kingdon (1958) and Pike (1945) and beyond, is concerned with the description of prosody as a language subsystem parallel to phonemics or morphology. A more
recent tradition is concerned with the role of prosody in interaction. A dichotomy of this kind is unfortunate, as it defeats the purpose of analysing prosody if interaction is ignored; and interaction cannot be examined precisely or consistently without an understanding of the basic prosodic units involved, and of their properties. Much work has concentrated on English, which is a difficult language to work on, as patterns at discourse level interact with the stress system, both at the level of word stress and accentuation at higher levels. Malay is an ideal language for research on prosody, as it has no stress system, so that interactional phenomena can be observed more directly. The present work has from the beginning been concerned with recurring prosodic patterns in interactive Malay texts.

Most linguistics research in prosody tends to concentrate on sentence level analyses and is concerned with the grammatical function of prosody. In spite of the long tradition in prosodic research, the descriptive categories are more appropriate for laboratory than natural data, and although some have sought to examine discourse data. Such studies still relied heavily on traditional structuralist methodology (cf. Brazil, 1975, 1981). To handle genuine interactional data we need new descriptive categories that will enable us to study prosody within and across turns of speaking. According to Gumperz (1996:x) it is “Only through prosody that sentences become turns at speaking and come to be seen as actions performed by living actors.” The work of Local (1992), Auer (1996), and Couper-Kuhlen and Selting (1996) is of particular relevance here. Situated firmly within the framework of Conversation Analysis, these authors examined prosody empirically, based on conversational data. Their work rests on the assumption that understanding of talk depends on context-bound inferences, and that prosody plays a key role in discourse-level interpretation. Couper-Kuhlen and Selting bring to light some of the fundamental problems that have plagued the study of prosody, particularly when dealing with real data, and propose an approach that draws together “insights and methodological practices from contextualisation theory and conversation analysis.” (1996:3). They use recent insights in phonology and phonetics in their work on conversation. They use a detailed approach to data analysis that is similar to that of conversational analysis but focus in particular on the contribution made by prosody. Their work brings to light how prosody is involved in facilitating the process of understanding utterances in discourse.

2. Conversation analysis and prosody

The present work takes for granted that prosody plays a central role in the negotiation of interactional meaning, but this is not the position taken in the early work of conversation analysts. For example, Sacks et al. (1974) claimed that the way participants manage turns at talk is almost exclusively a matter of negotiation between them on the basis of local management systems such as turn-taking, adjacency pair sequencing and repair. Prosody, according to this view, is simply “a methodological addition” to the conversational analyst’s array of analytical tools. If this claim can be made of English, a language that typically uses a wide pitch range and has well defined tones following trajectories shaped like sine waves, then it seems hopeless to find a role for prosody in Malay, a language that typically uses a narrow range, within which the pitch just slides from one target to the next.

The balance was later redressed, and Wells and Peppe (1996) saw a distinct theoretical advantage in determining the role of prosody in the delimitation of turns. Once turn transitions have been identified, we can then determine the recurrent linguistic cues which accompany them and show the relevance these cues have for participants in conversation. Research based on contextualisation theory (e.g. Cook-Gumperz, 1976; Gumperz, 1982, 1992a, 1992b) has shown
that the process of understanding utterances in discourse is facilitated by certain verbal and non-verbal cues that construe the context in which utterances become interpretable (cf. Auer, 1992); “some of these cues are prosodic in nature, involving auditory parameters such as pitch, loudness and duration . . .” (Gumperz, 1996:1). In support of the incorporation of prosody in the study of conversation, Gumperz (1996) stresses that examining the manner in which prosody is used in conversation “is more than simply a methodological addition”; prosody is central to our understanding of how context and the participants’ background knowledge affect interpretation.

The work that is most relevant to the issues being investigated here is the research initiated by Sacks and his colleagues (e.g. Jefferson, 1974; Schegloff, 1990), which sought to determine the components that make up a speaker’s turn at talk. Studies of conversation show that typically one speaker speaks at a time, and that there is an orderly change of speaker with little or no gap. For this to happen smoothly, listeners must be monitoring the talk for suitable places to start speaking. According to Ford and Thompson (1996:150), the low fall or high rise in pitch at the end of a turn makes it “interpretable as a complete conversational action within its specific sequential context”, and these “transition relevant places” (henceforth TRPs) are locations of potential speaker change. However, conversation analysis requires evidence for claims about conversational structure to be based on the behaviour of the interactants themselves. For example, if the pitch movement indicates that the speaker wishes to end his turn, this is confirmed if the current speaker actually does relinquish his turn and if the interlocutor comes in at that point. Couper-Kuhlen and Selting (1996:24) argue that “. . . participants’ own handling of prosodic cues within this context . . . enables empirical proof procedures for the validation of analytic categories.” This means that theory is determined by the way prosody is actually used in real interaction.

3. Prosodic structures in interaction

The structure of written language is much better understood than speech, and so prosody is traditionally approached through written texts. This is true of comments on prosody in grammars such as Quirk et al. (1985), the work of an earlier generation of phoneticians such as O’Connor and Arnold (1973), and even work on interaction (e.g. Brazil, 1981). Corresponding to the sentence is a large prosodic structure which divides into smaller structures at most punctuation marks and some other syntactic boundaries. These large and small structures are defined in many different ways in the literature, and go under several names, including major and minor tone units (Knowles et al., 1996). In the case of texts read aloud or otherwise produced from a prepared script, it is perfectly legitimate to proceed from the sentence to prosodic structure. But more generally, sentences should be seen as highly stylised written structures based on the spoken structures marked off by prosody. When dealing with spontaneous interactive data, a legitimate methodology has to start with the prosody.

Since relatively little work has been carried out on Malay, we are in the unusual position of investigating the grammar and the prosody at the same time (Zuraiyah, 1996; Knowles and Zuraiyah, 2005, in press-a, in press-b). Malay has major and minor prosodic structures corresponding to those of English, and while there are significant differences in the detail, these structures are broadly similar at the phonetic level. Patterns which mark the end of a major structure (“final” position) generally fall in pitch except in the case of questions, and those which end minor structures (“non-final” position) typically involve sustained pitch or perhaps a slight rise in pitch.
4. Aims and data

This work builds on a previous investigation of prosodic structures in Malay (Zuraidah, 1996), and focuses on turn-taking. Texts in which speakers take turns are at the farthest remove from conventional written texts. Our aim is to determine the prosodic features that Malay speakers rely on in ongoing interaction for successful turn-taking. We will focus on continuities and breaks across turns of speaking and study how prosody and syntax facilitate the coordination of conversational moves. Attempts will be made to identify possible turn-transition points and the prosodic cues that occur in certain types of speaker activity such as turn-holding or turn-yielding and turn-competitive incomings. The study takes into account not only the prosodic realisation of talk along with its lexico-syntactic constitution, but also the sequential development of talk within its locus of occurrence. We shall demonstrate that the participants use specific prosodic cues to contextualise their utterances in particular sequential positions as turn-competitive or non-competitive for turns and as turn-holding or turn-yielding.

The data for this study is taken from an informal corpus of audio broadcast interviews amounting to approximately 7 h. The total number of participants is nine, and they are all educated native speakers of Malay between the ages of 45 and 53. In order to ensure reasonable linguistic homogeneity, the speakers whose utterances were analysed were speakers of a single dialect, referred to here as standard spoken Malay; it is the kind of geographically unmarked Malay used by the mass media and in schools. The subject matter raised during the interview is related to the interviewee’s line of work, field of specialisation, or area of interest; the interviews were undertaken for the benefit of the audience listening in. The data is limited in style, and consists of cooperative adult speech in a particular setting (i.e. a recording studio), and it is for the most part directed towards a goal.

5. The representation of the data

The broadcast interview is a kind of social talk in which participant roles are pre-determined, and the asymmetrical power relationship between interviewer and interviewee is reflected in turn-taking procedures. Hirsch (1989:153) gives a list of the interview participants’ rights and obligation, some of the more relevant ones being as follows:

1. an interviewer has the right and obligation to select an interviewee as next speaker and with that selection he must stop speaking,
2. an interviewee has the obligation to take next turn as speaker upon being selected by an interviewer,
3. an interviewee has the right to self select,
4. an interviewer has the right and sometimes the obligation to pre-empt the turn of an interviewee, i.e. he has the right and sometimes the obligation of interrupting an interviewee.

Given (1) and (2), we can expect at least some changes of speaker to be smooth as the interviewee begins to speak when the interviewer finishes a question. It is important for the interviewee to be able to recognise as early as possible that the interviewer is about to finish or has finished in order to take over the turn at the appropriate moment without undue hesitation. In view of (3) and (4), we can expect interviewer and interviewee to interrupt each other on occasion, or to compete for the floor. The aim of the data representation will be to illustrate these different kinds of turn-taking behaviour.
5.1. Prosodic annotations

The data consists of sequentially numbered selected fragments of the corpus, and is presented in the form of orthographic transcriptions, enriched with annotations for prosody, including tempo, loudness, pitch and pause. Additional annotations which cannot be included in line without crowding the transcription or making it unreadable are included on additional tiers below. The data for each exchange is immediately followed line by line by its English translation.

The transcriptions generally follow the conventions established in the conversation analysis literature. Angle brackets are used to annotate the properties of syllables or sequences of syllables, and annotations which cannot fit inside the brackets are placed to the right. The relevant conventions adopted are as follows:

Word:
Recognisable “words” are transcribed according to the conventional spelling, regardless of the pronunciation. A phonetic transcription is thus avoided. Some liberty is taken in transcribing certain brief responses in the data which are in the form of noises such as mhm, oh, ah, a, etc.

... three dots indicate an incomplete utterance

Pause and change of speaker:
numbers in parenthesis e.g. (0.56) are used for pauses measured in seconds
= the equal sign indicates latching, i.e. the second speaker begins to speak without leaving an audible gap (i.e. in practice within 0.5 seconds)
[] square brackets indicate overlapping talk; the opening bracket marks the beginning, the closing bracket marks the end.

Duration:
< > (0.56) placed below a given syllable or sequence of syllables indicates its duration:
a colon indicates a lengthening of the sound just preceding it, proportional to the number of colons

Tempo:
< al > ‘allegro’ placed below a given sequence of syllables indicates that it is pronounced more quickly than the surrounding syllables
< l > ‘lento’ placed below a given sequence of syllables indicates that it is pronounced more slowly than the surrounding syllables

Pitch features
\[ \text{in the text} \] indicates a final drop to low pitch
\[ \text{in the text} \] indicates that the pitch rises finally or at least remains high
< H > ‘high’ placed below a given sequence of syllables indicates that it is uttered with a higher pitch than the surrounding syllables
< L > ‘low’ placed below a given sequence of syllables indicates that it is uttered with a lower pitch than the surrounding syllables.

Loudness
< f > ‘forte’ placed below a given syllable or sequence of syllables indicates that it is produced louder than the neighbouring syllables.
< p > ‘piano’ placed below a given syllable or sequence of syllable indicates that it is produced softer than the neighbouring syllables
< CRES > ‘crescendo’ placed below a given sequence of syllables indicates that it is produced with increasing loudness
‘decrescendo’ placed below a given sequence of syllables indicates that it is produced with decreasing loudness

6. Analysis of the data

6.1. Pause

In view of the careful management of the interaction in the interview situation, changes of speaker generally take place without a gap, as shown in Table 1.

The precise timing of the vast majority of changes of turn confirms that the speakers must be making use of signals that indicate the completion of a turn. The next task is to investigate ways in which prosodic cues enter into the inferential process by providing information on possible turn-construction units. How the speakers deploy prosody as a resource to indicate the completion of his turn and how the recipient uses the cues to project turn completion will be examined below.

The fact that the interviewer has the right to interrupt a turn while it is still in progress accounts for the small proportion of overlapping speech. However, as will be argued below, although an overlap is necessarily interruptive, in the case of an interviewer the intention is not necessarily to take away the turn. An overlap can be directly turn-competitive in the sense of speaker wanting the turn immediately and not waiting for the completion of the current speaker’s turn, or it can be non-competitive in the sense of speaker having no intention of taking over.

6.2. Turn completion

The findings that the exchange of turns occurs with no gap or minimal gap and minimal overlap have given rise to the notion of turn-projectability. It is postulated that hearers can predict turn-relevance points (TRP), i.e. locations at which speaker change occurs, from the linguistic features of the prior talk. The role of syntax in this predictive process has been established in earlier studies. More recent research in the management of talk highlights the contribution of prosody in projecting turn-completion (Levinson, 1983; Gumperz, 1992b; Auer, 1996; Selting, 1998). Sacks et al. (1974), for example, note the significant role prosody plays in turn-taking organisation, particularly in characterising the syntactical unit produced, i.e. whether the unit is a one word question or is the beginning of a sentential construction. Levinson takes into account both syntactic and prosodic factors in defining turn-units such that they are

<table>
<thead>
<tr>
<th>Topic</th>
<th>Minimal gap &lt;0.5 s (%)</th>
<th>Long pause &gt;0.5 s (%)</th>
<th>Overlaps (%)</th>
<th>Total no. of turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sirim</td>
<td>902 (90)</td>
<td>16 (1.6)</td>
<td>86 (8.6)</td>
<td>1001</td>
</tr>
<tr>
<td>Fasting month</td>
<td>1201 (92)</td>
<td>10 (0.9)</td>
<td>96 (9.3)</td>
<td>1301</td>
</tr>
<tr>
<td>Cancer</td>
<td>1013 (94)</td>
<td>8 (0.7)</td>
<td>57 (5.0)</td>
<td>1073</td>
</tr>
<tr>
<td>Education</td>
<td>568 (96)</td>
<td>5 (0.8)</td>
<td>35 (4.0)</td>
<td>899</td>
</tr>
<tr>
<td>Business dealings</td>
<td>450 (96)</td>
<td>5 (1.2)</td>
<td>20 (5.0)</td>
<td>470</td>
</tr>
<tr>
<td>Shares</td>
<td>863 (95)</td>
<td>9 (1.0)</td>
<td>35 (4.0)</td>
<td>899</td>
</tr>
<tr>
<td>Youngsters</td>
<td>724 (95)</td>
<td>8 (1.0)</td>
<td>40 (5.0)</td>
<td>764</td>
</tr>
<tr>
<td>Election</td>
<td>679 (94)</td>
<td>4 (0.6)</td>
<td>8 (1.0)</td>
<td>724</td>
</tr>
</tbody>
</table>
regarded as “syntactic units (sentences, clauses, noun phrases, and so on)” whose boundaries are determined “in part by prosody, and especially intonational means” (1983:297). It appears that the projection of a turn’s possible completion is a highly interpretative issue involving various contextualisation cues such as syntax and prosody, whose meaning must be established in the local environment, i.e. at turn transitional points. In order to co-participate in an appropriate fashion at an appropriate moment, the recipient is assumed to be closely monitoring the unfolding of the speaker’s talk, paying close attention to not only the projective possibilities made available by its emerging syntactic structure (e.g. the type of unit that is about to occur) but also to those made available by its prosody.

The first four extracts below illustrate sequentially appropriate starts after turns consisting of a single word, a single phrase, or a single clause, with no gap or just a slight gap:

Extract 1
1. B: DIRANTAI↓=
   <H H>
   <f f>
2. A: =dibelenggu
B: is chained
A: is restrained

Extract 2
3 A: bukan PENYAKIT↓=
   <f f>
4 B: =BUKAN↓penyakit YA↓=
   <f f>
5 A: =mhm
   < L >
   A: Not an illness
   B: It’s not an illness yes
   A: mhm

Extract 3
6 A: bermakna ha: sudah hampirlah pilihanraya
   NAMPAKNYA↓
   <f f>
   <H H>
7 B: (0.12) mhm itu tidak boleh tentu jugak
A: Meaning that the election is going to be held soon.
B: That can’t be determined too.

Extract 4
8 A: Ini ada mak bapak datok yang ada nak hantar anak ke luar negri TU:
   Macamana pulak DATOK↓
   <f f>
   <H H>
Each turn-unit labelled “A” ends with a drop to low pitch, which coincides with dirantai ‘is chained’ in extract 1, penyakit ‘disease’ in extract 2, and nampaknya ‘it appears’ in extract 3. The prosodic signal used here would appear to be a combination of three independent signals. The basic pattern is pre-final lengthening, which simply marks the end of speaking or some other prosodic break; it typically begins on the penultimate vowel, and involves a slowing down in tempo resulting in a marked lengthening of segments. Superimposed on this is a cadence which is regularly heard at the end of sentences when Malay texts are read aloud, and which involves a drop to low pitch, accompanied by a fall in loudness. The cadence is highlighted by boosting the pitch and loudness and thus increasing their rate of change. We take the highlighted cadence\(^2\) to constitute a signal to the listener that the speaker is relinquishing his or her turn.

In each case, the new speaker starts speaking leaving at most a short gap. In extracts 1 and 2 the responses are immediately latched to the prior utterance (as marked with the equals sign “=”), while the response in extract 3 begins after a brief pause. The measured duration of this pause is 0.12 s, which may not necessarily be audible and is unlikely to be of any significance. Syntactically, the turn units are made up in different ways, 1B consisting of a lexical item, 3A a phrase and 6A a clause; yet prosodically the speaker characterises these varying syntactic units as complete turn units by giving them a highlighted cadence, and they are consequently regarded as completed turns by the recipients.

As seen in the above extracts, the projectability of unit-types is accomplished with “no gap” or “slight gap” starts by next speakers with the help of prosodic cues, particularly pitch features. Such a precise timing of turns start suggests that speaker and listener are cooperating, so that the listener is closely monitoring for the ending of the current turn and the speaker gives a clear ending signal. The use of the cadence as a cue to turn-completion is clearly illustrated in 8A (extract 4) in which there are two possible completion points, i.e. after tu ‘this’ and after datok (a term of address). However, the speaker signals the wish to continue after tu by using lengthening and highlighting, but not using the cadence.

6.3. Turn transitions with minimal overlap

The other type of speaker start which is interesting to examine in this context is entry at a possible turn-completion place, resulting in a minimal overlap with the current speaker’s ongoing discourse. This overlap occurs at a place where the current speaker seems to “fade out” prosodically, i.e. by a marked drop in pitch and loudness. This kind of talk which is termed as “tail away” can on occasion have a pitch reaching the bottom of a speaker’s range and

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\(^{2}\) The pattern described here is not to be confused with what in English prosody is called the “nucleus” (Knowles et al., 1996). First, to form a nucleus the three types of signal interact with the accentuation system, and secondly, nuclei in texts are associated with a number of prototypes classified according to their “tone”. Nuclei in texts resemble their prototypes more or less closely.
loudness, so as to reach the level of inaudibility. Support for this is evident in the illustrations below:

Extract 5

10 A: (0.61) Jadi ya: kalau (0.12) orang biasa nak berurus (0.23) dengan kumpulan teknologi logam ni a:
   MACAMANA↓ doktor?
   <H H>  <L L>
   <f f>  < >DEC
   < >creaky

11 B:  BIASANYA↓ orang biasa yang akan datang
   <f f>
   <H H>  <L L>

A:  so yes if ordinary people want to deal with the metal technology group. How do they go about it, doctor?
B:  Usually, it’s the ordinary people who will come to us.

Extract 6

12 A:  jadi a: kalau kita jadi pengusaha takut nanti mhm mhm satu hari ini akan habis LOGAM↓ ni
   <f f>  ◻p
   ◻L

13 B:  KEHABISAN↓ logam
   <H H>
   < CRES >

A:  So if we become entrepreneurs, there is a fear that iron ore will run out.
B:  Depletion of iron ore supply.

The new speaker starts in extracts 5 and 6 without waiting for the previous turn to be completed, resulting in a slight overlap. In extract 5, the overlap occurs on doktor ‘doctor’, a term of address, and in extract 6 the overlap occurs on ni ‘this’, a determiner. In each case, the overlap occurs at a place which suggests itself as proximal to a likely completion point. According to Sacks et al. (1974), this kind of overlap is caused by “projectability of possible completion points or transition-relevance places” (i.e. places where current speaker can or should exit). This over- anticipation of turn-end could be accounted for partly by the presence of some prosodic cues, which signal that the current speaker is approaching the end of his turn; partly it occurs where a turn transitional place has been misprojected for systematic reasons, e.g. where an address term or tag has been appended (Levinson, 1983).

In both cases, the first speaker uses a highlighted cadence, but does so before the end. In extract 5, the final item is a vocative. In English, a final vocative is likely to be unaccented in the tail of the tone unit, but it can be accented, e.g. when speakers nominate their turn successors. Something very similar seems to be happening in 8A, where the vocative is given a highlighted cadence, and in 10A, where the vocative is left to its own devices in the trailing
away after the highlighted cadence. In extract 6, the final item is *ni* ‘this’, which patterns differently according to the nature of the phoric reference. If it refers exophorically it is likely to take the highlighted cadence, but if it, as here, refers anaphorically, it is more likely to be ignored by the prosody.³

As the initiator of talk, the interviewer selects the interviewee as next speaker by addressing him with questions or assertions that require some kind of response, and the interviewee is obliged to supply the relevant response; this results in an adjacency pair consisting of question and answer or assertion and response. Once questions are posed or assertions made, the interviewee will relinquish his turn. As can be seen in extracts 1–6, this giving away of turn is communicated with the deployment of prosodic cues like pitch features and loudness in cooccurrence with the syntactic unit to signal turn-unit completion. Fully aware of the obligation put upon him, the interviewee will usually respond without undue hesitation. The prosodic signal sent by the interviewer to mark the end of his turn and the interviewee’s receipt of these signals as such are crucial to the smooth transition of turn from the interviewer to the interviewee. According to Levinson, “the recurrent marvels of split-second speaker transition” (1983:297) can be accounted for by the final shape of a turn which he regards as the determining criterion for predicting turn-unit end.

6.4. Yielding and holding turns

The significant role played by prosody in projecting talk is also seen in the context in which the deployment of prosodic cues helps in characterising speaker activity as turn-yielding or turn-holding. The speaker can signal the wish to hold the turn by extending his talk beyond possible turn-transition points and ignore a potential speaker’s attempt to take over the turn. Extracts 7 and 8 provide good examples of how the speaker uses prosody to secure his turn at a possible transition point:

Extract 7

14 A: Dia akan lama makin lama kurang ke MACAMANΑ ↓
    <H H >
    <f f>
15 B: (0.34) a:: la ???) <laugh>
    <>L
    <>f
    [  
16 A: JADI: ↓ supply demand ni … (0.32)
    <HH>
    <f f>
    A: It will decrease over the years? How?
    B: <laugh>
    A: So this supply and demand …

³ Interestingly enough, as in English, common sense tells us to explain the prosody by examining the highlighted items, but in fact the generalisations are to be discovered by examining items which are unhighlighted.
In both cases the first speaker uses a highlighted cadence at a point at which the syntax is complete, and this is followed by a long pause. In itself this amounts to a clear signal that he is finishing his turn. But before the listener can take over, the first speaker resumes his turn with the word *jadi* uttered loudly and on high pitch. In the second case, (19A), the subsequent words are uttered quickly as the speaker secures the turn. Once he has done so, he pauses briefly to allow himself time to reformulate what he wants to say. This signal seems similar to the highlighting of the cadence but without the drop in pitch and loudness or reduction in tempo. At the beginning of a sentence read aloud, the pitch frequently rises from mid to a peak at the end of the first word, a pattern known as the ‘onset’. In extracts 7 and 8, the pitch seems to jump immediately to the peak on *jadi*, and this can be regarded as a highlighted onset. The word *jadi* can be translated as ‘so’, but one of its important functions seems to involve taking over the turn in interactive discourse in association with a highlighted onset. The word *dan* ‘and’ is used in a similar way.

Thus given the possibility of interruption from the interviewer, the holding of turn will be more difficult for the interviewee. The development of the interviewee’s talk within a turn will be sensitive to the fact that the interviewee is not guaranteed specific time duration in turn but must contend with the possibility of being interrupted. As can be seen, it is particularly difficult to hold a turn at a possible transition end point, since it is at this point that a potential speaker will usually make his contribution. That being so, the interviewee can disregard the interruption and continue to hold his turn. Likewise the interviewee can also take the floor from the interviewer (cf. extract 9 below). This is common in cases where the interviewer grabs the turn before completion, and the interviewee makes his entry to take over the turn.

Consider the following exchange in this respect:

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**Extract 8**

17 A: (0.23) sekarang ni braknya

ASBESTOS↓

<H H>

<f f>

18 B: (0.41) a:: ki (???)

H<<

>creaky

<>f

[

19 A: JADI ↓ boleh digantikan dengan brek jugak

<H H> <al al>

<f f>

A: Now the brake is asbestos.

B: a:: ki

A: So it can be replaced with brake also.

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4 The audio channel gives no clue to why the listener is unsuccessful in these two cases. This might well be clear from the interviewer’s non-verbal behaviour, but the video recording was unfortunately not available.
In both cases, the original speaker successfully resumes his turn by the use of a highlighted onset. In extract 9, speaker B slows down at a point which potentially ends a noun phrase (lima puluh orang ‘fifty people’) and consequently his turn; but he does not highlight the onset sufficiently to prevent speaker A from coming in. 21A begins low pitched and soft, which could be taken as feedback on the back channel; this enables the original speaker (marked 22B) to resume without waiting for his interlocutor to finish speaking. In extract 10, 23A finishes with a highlighted cadence which duly elicits the feedback I see from Speaker B (latched in 24B); but Speaker A, the original speaker, does not wish to relinquish his turn at this point, and overlaps the feedback as he resumes.

Likewise in extract 10, the audibly prominent incoming of A’s contribution (25A) has secured him the next turn, despite the fact that B has already started his turn. While extract 9 presents an example of the relinquishing of turn before completion, extract 10 gives an example of the yielding of turn at a possible completion point.

The issue of turn occupant’s fading out at an unlikely turn-completion point is further illustrated in extracts 11–13.
In extract 11, the current speaker who yields his turn at an unlikely completion point (26A) gradually fades out by decreasing volume to a point of unintelligibility marked [???] in the data. The yielding of the turn is brought about by his own willingness to give up the turn rather than by being pressured to do so by the next speaker. The pitch of the preceding talk after doktor ‘doctor’, a likely completion, is noticeably lower than that of the talk preceding it. Its tempo is slower, and it is characterised by diminuendo loudness. These prosodic cues, strategically deployed as a resource to signal turn-yielding and recognised as such by the next speaker, receive a reply which is immediately latched on to ataupun ‘or’.

In extracts 12 (28A) and 13 (31B), the first speaker’s hesitation gives the interlocutor the chance to take over. Although in both cases he begins to recover, his speech is drowned out by the

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5 Bumiputra Commerce bank, a leading Malaysian banking institution.
interrupter’s highlighted onset. Both a: saya “ah I” in extract 12 and a: macam yang “ah like which” (in extract 13) are noticeably quieter than the interrupter’s MAKSUD and YANG. Whereas the highlighted cadence enables the speaker to manage the change-over, his hesitation seems to pass the initiative to the listener.

6.5. Overlaps

Researchers have shown that participants time precisely both when and how to begin their talk relative to an on-going turn (Jefferson, 1974; Sacks et al., 1974). Thus in most cases, when overlaps occur, they are usually not brought about by a failure in turn-taking organisation. Their occurrence can be motivated by reasons other than those caused by the interrupter’s misjudgement of the current speaker’s turn completion and the timing of his own turn start.

In this part of the paper we will examine how the interviewer–interviewee utilise prosodic cues in the construction of their interruptive speech. By analysing the overlapping speech, the researcher will be able to identify the contextualisation cues deployed by participants to characterise the incoming contribution as follows:

1. turn-competitive: where the interruptive speech presents itself as turn-competitive as wanting to secure the turn from the current speaker at the point of interruption;
2. non-turn competitive: where the interruptive speech does not suggest itself as turn-competitive.

The recipient whose talk is interrupted can either relinquish the turn to the competitor or continue to hold the floor. Attempts have been made to identify the factors that contribute to the realisation of overlaps as turn-competitive or non-turn competitive. Among the contributing factors are the following:

1. the location of the interruptive speech in the ongoing talk (cf. Edelsky, 1981)
2. the thematic relation of the interruptive speech to the ongoing turn (cf. Kohonen, 2004)
3. the syntactic and segmental characteristics of the interruptive speech (cf. Jefferson and Schegloff, 1975)

The examination of the broadcast interview data indicates that factors 1 and 2 do not on their own make overlaps either turn-competitive or non-turn competitive. What does appear to play a role in constituting the character of the overlapping speech as such are its prosodic characteristics (cf. French and Local, 1986).

6.5.1. Non-competitive turn-overlap

Non-competitive turn-overlaps are those which are heard as being produced in the course of another’s turn but lack the necessary prosodic characteristics to help secure the turn from the current speaker (French and Local, 1986). There is no suggestion that the interrupter wishes to say anything further or that he intends to compete for the turn.

A non-competitive overlap can be an expression of agreement with what is being said by the current speaker, e.g. ya slow ya ‘yes slow yes’ in 34B, or a self-repair, e.g. lebuhraya ‘highway’ in 37A, or a conclusion derived from what is being said, e.g. kena tahu ‘must know’ in 39B, or recycled material, e.g. ‘price earning’ in 40A:
Extract 14
33 A: ada KANSER dia [makan waktu] ah gejala dia lambat
     <H H> <L L>
     <f f>
34 B: [ya slow ya]
     <L L>
     < DEC >
     A: There is a type of cancer that takes time, ah. The symptoms appear slowly
     B: Yes slow yes

Extract 15
35 A: a: tak tak tak sesak di jalan ya
36 B: a: [biasanya] dalam sepuluh minit je
     <L L>
     < l>
37 A: [lebuhraya]
     <l l>
     < creaky
     < DEC >
     < al al> (0.15)
     A: No congestion on the road, eh?
     B: Usually in ten minutes only
     A: Highway

Extract 16
38 A: Kita tak tahu apa sebenarnya dalam ubat-ubat kayu tu
     Jadi akan menimbulkan MASALAH dia
tetapi] aha kena tahulah saya rasa
     <L L>
     < al al>
39 B: [kena tahu]
     <L L>
     < p p>
     < l l>
     A: We do not actually know what the herbal medicine contains.
     So it will cause problems but I feel we should know.
     B: Should know

Extract 17
40 A: Tadi Cik Halim pada mula-mulanya berceritakan tentang price
     EARNING ah erm [pe pe JADI] dia mesti cepat kira
     <F H>
     < f>
41 B: [price earning] <laugh>
     <L L>
     < p p>
     A: Just now Cik Halim at first talked about price earning
     pe pe so he must be quick at counting.
     B: Price earning
Not only do the overlaps perform different functions, they also differ as regards the place at which they enter a turn in progress. The overlap (41B) in extract 17 occurs after a filled pause, a verbal device often used to prevent interruption from the other speaker while the current speaker plans his utterance. However, in this instance the second speaker still makes his entry to correct her earlier contribution by substituting jalan ‘road’ with lebuhraya ‘highway’, thus causing an overlap at a non-completion point. In extract 14, the entry (34B) comes also at an unlikely point, i.e. during the production of makan waktu ‘takes time’. The overlaps in extract 16 and extract 17 happen at a possible completion point, i.e. after the final item in a clause, i.e. masalah ‘problem’ (marked 38A) and ‘price earning’ (marked 41B), whose falling pitch indicates utterance end.

From this examination, one can conclude that the entry point of an interrupter’s speech, that is whether the entry begins at a possible completion point or non-completion point, does not in itself contribute to its realisation as non-competitive. The first observation that can be made is that non-competitive overlaps seem to share aspects of their duration, thematic content and prosody, in particular pitch height and loudness. As can be seen in the above extracts, the non-competitive overlaps are unusually short, consisting of three words (e.g. 34B), a single word (e.g. 37A) and two words (e.g. 39B and 41B). With regards to content, they are essentially redundant and add nothing much to whatever has been said previously. They can be seen not as serious attempts to grab the turn, but rather as brief agreements, e.g. ya slow ya ‘yes slow yes’, brief repairs, e.g. lebuhraya ‘highway’, quips, asides, repetitions such as kena tahu, price earning, etc.

The overall pitch level of these overlaps is lower than that of the current turn. In 34B, the low pitched utterance is also accompanied by piano loudness and allegro tempo. In 37A, the utterance begins relatively loud and ends with diminuendo loudness, and its overall loudness is relatively quieter than the speech that it interrupts. The incoming speech in 39B is relatively quieter than the speech contained in the current turn. In 41B, the repeated utterance is uttered low and has allegro tempo. Although it has forte loudness, its low pitch makes it less audible than the in-overlap, which is defined as the portion of the current turn overlapping with an incoming interruption. In view of the lesser degree of prominence, the interruption thus does not have the effect of taking over the turn.

Summarising, we can state that the extracts analysed so far show non-turn competitive overlaps to be typically short utterances uttered softly on a low pitch, and with fast tempo.

6.5.2. Turn-competitive overlaps

An overlap is said to be turn-competitive when it enters a turn in progress with the intention of gaining the floor at the moment of interruption, rather than when the current speaker finishes his or her turn. The second speaker is thus seen as competing for the floor with the current speaker.

Most of the turn-competitive overlaps are triggered by the interviewer, who unlike the interviewee, has the right to pre-empt the interviewee’s turn. The interviewee may relinquish his turn or hold it, despite the interviewer’s interruption which may suggest itself as a return of competition. If the interviewee decides to relinquish his turn, he can reclaim it if he sees the need to do so, which may result in another turn-competitive encounter, forcing one of the interlocutors to give up the turn. Thus, although the turn taking conditions in broadcast interviews allocate the right, and sometimes the obligation, to the interviewer to pre-empt the interviewee’s turn, in practice the interviewee need not concede if he feels the need to finish off whatever he intends to say.

Consider the following exchange, which appropriately exemplifies the turn-competitive encounter between the interviewer and interviewee, resulting in one party conceding and the other party continuing and a return of competition:
Extract 18

42 A: Kalau selera kita berkurangan kita kena be (0.2) kita kena
SYAKLAH↓ [hah dok ] ←a1
43 B: [a: TAK↓] ←a2
   < f >
   < H >
   ITU↓ salah satu daripada GEJALA↓la
   < >H < l > l >
   < f > < DEC >
   [↑ saya NAK sebutkan eh] ←b1
   < H > H >
   < f > f >
   < al > al >
44 A: [ha ha OK↓ ha saya:] ah=
   H< > < p > p >
   f< > < l > l >
45 B: =BANYAK↓ lagi GEJALA[NYA↓ YA↓] ←c1
   < H > H >
   < f > f >
46 A: [ah YA ah ] itu MANUALLAH↓ ←c2
   < f > f >
   < H > H >
   < l > l >
47 B: (0.23) ya

48 A: kalau misal kata [kalau selera]
   < f > f > < L > l >
   < DEC >
49 B: [selera berat ] bada::n=
   < HH > < l > l >
   < f > f >
50 A: =ah jadi kalau berat badan kita turun=
   < f > f >
51 B: =turun=
   < p >
   < L >
52 A: =kita kena syaklah
   < l > l >
   A: If our appetite is not good we have to be suspicious, hah doctor?
   B: ah no. It’s one of the symptoms, I want to mention eh. There are
   many other symptoms.
   A: ha ha OK ha I ah
   B: There are many symptoms, yes.
   A: ah that is manual then.
   B: yes
   A: If let’s say our appetite
   B: appetite, body weight
In extract 18, there are altogether four turn-competitive encounters, marked with arrows: _a1-_a2, _b1-_b2, _c1-_c2, _d1-_d2. In 42A, the interviewer ends with a highlighted cadence on syaklah (syak ‘doubt, be suspicious’ + clitic –lah) which is followed by hah and dok ‘doc(tor)’. The interviewee corrects the suggestion made by the interviewer, and in 43B begins with a highlighted onset on tak, overlapping that part of the turn-occupant’s talk that follows the cadence. The interviewer (42A) responds by relinquishing his turn. This could be the same kind of cooperative overlap as found in extracts 5 and 6. However, we cannot be sure that the interviewer intended to end his turn at that point, and perhaps just to make sure, the interviewee signals his intention to continue by using another high onset on itu.

The second encounter (_b1-_b2) is the only one of the four that does not lead to the taking over of the turn by the interrupter even though the point of entry (_b2) is at a possible completion point, since gejala ‘symptom’ is the last content word in a clause and has a fall in pitch. At the onset of the interruption, there is a significant change in the prosodic characteristics of the current speaker’s talk (_b1). There is a noticeable step up in pitch from la to sa, followed by a highlighted onset on NAK ‘want’ (possibly in response to the continuing interruption); the pitch is kept high throughout the talk, and the tempo accelerates noticeably. This tempo speed-up gets the speaker into a subsequent turn constructional unit. Taken together with the fact that the turn occupant does not relinquish the turn but continues to produce a recognisably complete talk, the speaker seems to be challenging for the turn. The prosodic features are spread over a stretch of speech instead of being associated with a single item, and include not only high pitch and loudness, but also a significant change in tempo. This pattern is rather different from the highlighting discussed so far, and can be described as a raising of the voice. The tempo can become faster or slower; perhaps faster tempo adds insistence while slower tempo adds weight or gravitas.

In the third case, the interviewer’s overlapping speech (_c2) which is characterised by a combination of high pitch and loudness and slow tempo, succeeds in securing him the turn by ensuring that the interviewee terminates his own turn (_c1). The interruption coincides with the end of the word gejala with a highlighted cadence, and with the beginning of the clitic –nya. The step-up in pitch and increased loudness follows a peremptory receipt of the interviewee’s prior talk with ah ya ah “ah yes ah”. Despite the interruption from the interviewer (_c2), the interviewee completes his turn with a highlighted cadence with no modification in prosody either upon or subsequent to the onset of the interruption, and even appends the tag YA ‘yes’ (_c1). He continues at much the same loudness, pitch and tempo as in the part of his speech prior to the interviewer’s entry.

The fourth turn-competitive encounter occurs at a non-completion point (_d1-_d2). The interviewee raises his voice to correct the interviewer without waiting for a TRP, and with the gravitas of a medical expert, speaks with slow tempo. The interviewer cannot compete and backs down, reducing his loudness, and fading out gradually, leaving his turn incomplete. The interviewee continues and has time to end his turn with a mid-level pitch with a lengthened final syllable.

The examples in extract 18 point to an interesting difference between challenging the current speaker for the turn, and merely interrupting, signalled by a longer stretch of raised voice and a highlighted onset, respectively. The speaker may ignore a minor interruption and carry on with no adjustments to the prosody. In the case of a challenge for the turn, the speaker responds in a way that indicates that this is a different kind of event. Responses include meeting the challenge with raised voice in like manner, backing down and failing to complete the turn, or even saying ‘yes’, as in 47B.
6.6. Pitch and loudness as resources for turn-competition

The results of selected data analysis illustrate that the prosodic features of high pitch and forte loudness of the interrupter’s speech make for a hearing of that speech as directly competitive for the turn itself. It is observed that when an overlap is not characterised by high pitch and forte loudness, the turn occupant proceeds to complete his turn as if he is not interrupted, i.e. with no modification to the prosodic characterisation of his speech. In Extracts 14–17, the on-going speech which is interrupted by a non-competitive turn overlap does not show a change of pitch, volume and tempo either upon or subsequent to the onset of the interruption. The turn-occupant continues to produce his speech at almost the same loudness, pitch and tempo; hence, the in-overlap is left unmarked. This prosodic non-reaction of the turn occupant to an overlap that is lacking <H+F> shows how speakers orient to <H+F> as constitutive of turn-competitive overlaps (cf. French and Local: 1986).

While overlaps without <H+F> receive no “prosodic response” from the turn-occupant, overlaps plus <H+F> are reacted to with a noticeable prosodic change in the turn-occupant’s in-overlaps, i.e.:

1. a step down in pitch and diminuendo loudness indicates the termination of current turn;
2. a step up in pitch and forte loudness and at times accompanied by deceleration indicates a return competition.

7. Discussion

What emerges from the above discussion is a remarkably simple signalling system for control of turn-taking in Malay. The basic signal is an incursion into high pitch, accompanied by an increase in loudness. If this signal coincides with a point at which the speaker is likely to end the turn anyway, it can be interpreted as ‘over to you’. If it is used when the incoming speaker starts speaking, it means ‘I am coming in’. It is likely to be used when the interlocutor stumbles or otherwise gets into difficulties, or when it is not clear whether the first speaker is relinquishing the turn or not. It tends not to be used immediately after the message ‘over to you’, no doubt because it is redundant in that situation.

The basic signal coincides with a single word or part of a word. It can be extended over a sequence of several words, in which case it means something like ‘it is my turn’. Used by the current speaker it attempts to keep the turn; used by a new speaker it attempts to take over. Unlike the basic signal, the extended signal can be used anywhere in the turn. When used by the new speaker, it can be regarded as rude, or in the case of a television interviewer as aggressive. The extended signal also explains the use of low pitch and loudness in simultaneous talk that is not intended to interrupt, but is often cooperative and seems to indicate ‘it’s ok, I am not butting in’.

Interestingly enough, these findings are consistent with, and indeed complementary to, findings of other work, not reported in detail here, in text-to-speech research. When Malay sentences are read aloud, they typically end with the cadence and associated pre-final lengthening. For synthesised speech (which is modelled on reading aloud), the cadence begins at mid pitch, and any raising of the pitch and loudness sounds inappropriate. Following this study of turn-taking, we can suggest that the reason it is inappropriate is that someone reading a text aloud does not normally hand over to another reader; alternatively, the notion of a computer handing over to a human being is somewhat bizarre. Read-aloud sentences tend to begin with a high pitch
peaking at the end of the first word. The highlighted onset is similar, except that the pitch and loudness immediately jump to a high level, making the signal less subtle but unmistakable in intention. The raising of the voice to keep or seize the turn eliminates much of the prosodic detail one would otherwise expect to find in the corresponding stretches of speech.

When compared to English, the Malay signals display superficial differences and underlying similarities. The differences stem from the interaction of prosodic signals in English with the stress and accentuation system. Signals at the beginning and end of a prosodic unit are aligned with the first and last accented syllables, respectively, creating highly complex centres of attention which are given such names as ‘high onset’ or ‘rising-falling nucleus’. Traditional methods of speech representation cram as much information as possible into a single complex symbol, and this is a very effective way of representing speech using printed paper technology. It is now possible to separate out different tiers of information, and separating stress and accentuation from other prosodic signals enables us to see the connections between the prosody of English and Malay.

At this point it is appropriate to raise the question what is proved by the data analysis outlined above. We have examined a small sample of handpicked extracts, but we have no way of knowing whether these are typical or atypical of the population from which they are drawn. The fact that the analysis reveals a simple and intuitively convincing system of signals could reflect the true situation, or it could reflect a bias in the selection of the extracts. It is important that these signals are different from, albeit related to, the signals used in reading aloud. If they were too similar, the findings would not be credible. What is perhaps more important is the apparent relationship with English prosody. If the prosody used in Malay interaction were found to be identical to that of English, the most likely explanation would be that Malay had simply taken ideas from English prosody and applied them, Procrustean fashion, to Malay. The partial similarities give us an idea of what parts of the prosodic system English shares with a completely unrelated language like Malay, and what parts reflect stress and accentuation. On balance, it seems unlikely that either by chance or by design we would be able to select a sample which would be internally consistent and which would relate in significant ways both to other speaking styles in Malay and to other languages. It is probably safe to conclude that we have indeed identified signals that are used in interactive texts in Malay.

What we do not know, of course, is whether we have discovered something rare or frequent, normal or unusual. Our system of signals therefore has to be tested by using it as an annotation scheme for a large body of interactive data. When working on a well-researched language like English, one can tackle a large corpus – whether tagging words for ‘part of speech’ or marking the prosody (Knowles et al., 1996) – reasonably confident that previously known categories will be relevant and useful. In the case of Malay, which has been relatively little studied itself and which is unrelated to languages which have been intensively studied, the researcher faces the dilemma that one needs to know the categories of the language in order to annotate texts, but at the same time has to annotate texts in order to find out what those categories are in the first place (Knowles and Zuraidah, in press-a, in press-b). The dilemma can be solved by combining old and new methods. We have used tried and tested methods in subjecting selected extracts to detailed examination, and we will be using new methods in applying the provisional findings in the annotation of a spoken corpus as part of a new project which at the time of this writing is about to begin.

Our methodology brings old and new together in yet another way. Using a modern speech package, pitch and duration can be measured with great accuracy. However, one still needs to know what to measure. Many of the rises and falls to be detected in a Malay waveform are
irrelevant, and can be replaced by a random function, while others are crucial for understanding turn-taking. Similarly, while some durational differences may appear irrelevant, others seem to count as instances of lengthening or shortening. We need a theory to tell us what to look for, and it is important to note that the signals we have provisionally identified come not from sentence-based theories of prosody, but necessarily from theories of human interaction.

8. Conclusion

The argument advanced in this paper is that prosody, together with syntax and some aspects of meaning, serves to provide information on possible turn-construction units (i.e. whether the speaker is about to complete a turn or needs more time to talk). Although these cues do not in themselves determine turn taking in interviews, they have an undeniable role in signalling the completion of turn-constructional units, and in this way contribute to the management of talk.

The completion of turn-constructional units is usually associated with falling pitch while non-completion is associated with rising or sustained pitch. It is this pitch contour that projects a syntactic unit, i.e. word, phrase or clause, as a turn-constructional unit. The other cues available to signal that a speaker is about to end his turn include a sudden downstep in pitch accompanied by reduced loudness and perhaps creaky voice. Cases have been cited to support the fact that the speaker at times indicates the wish to end his turn by trailing away and this is prosodically marked by a noticeable lowering of pitch and diminuendo loudness. Levinson’s ‘split-second transition of speaker turn’ that frequently occurs in the data suggests that participants closely monitor for the ending of current turn.

The prosodic features involved in signalling the status of the speaker’s overlap as competitive or otherwise are pitch height and loudness. The interrupter indicates the wish to take over the turn by the assignment of high pitch and forte loudness to his overlapping speech; these features may be dropped on the termination of the current speaker turn or may be retained beyond the point of dropout. In this way, the interrupter’s intention to take over the turn is made immediately clear to the turn-occupant.

While the giving away of turn is marked by a prosodic ‘phase out’, i.e. decreased pitch height and diminuendo loudness gradually reaching the point of unintelligibility, a return competition is signalled by a step-up in pitch and increased loudness, along with, at times, a tempo speed-up which usually occurs around the beginning of the return competition. A non-turn competitive overlap is marked by being relatively lower in pitch and quieter than the turn-occupant’s in-overlap. Although at times the non-competitive term is uttered with forte loudness, the low pitch which accompanies it makes it prosodically less prominent than the in-overlap. The non-prosodic cues which contribute to the realisation of overlaps as non-competitive include the latter’s content, which suggests itself as not making a substantial contribution to the on-going discourse, as well as their briefness, which identifies them as not serious attempts at turn competing. By modifying the prosodic characterisation of the in-overlap, turn occupants can make their responses recognisable as turn-yielding or turn-competing.

Like many languages other than English, Malay typically uses a narrow range of pitch, and this can make prosodic patterns difficult to identify; this may give the impression that Malay has no prosodic system at all, or at least that prosody does not play any significant role in communication. We have shown in this paper that prosody does have an important role to play, and that prosodic signals are at work in the control of turn-taking in interactive discourse. We have given a provisional description of these signals and their use. Not only does Malay have a prosodic system, but it works in a way that is remarkably similar to English.
English is the language usually studied in studies of prosody, not because of its suitability for the task but because of its global dominance. In order to understand how systems interact, it is an advantage to understand how they work independently. This point applies to the study of pitch in languages like Chinese, where word tones interact with prosody, and where it consequently is extremely difficult to tease the two apart. But it applies also to English, where several different systems contribute to the workings of such phenomena as ‘nucleus’, ‘tone unit’ and ‘tone’. Malay gives the linguist the opportunity to examine prosodic patterns without the interference of stress or word tone. In view of its lack of stress and accentuation, Malay is actually a very good language to study in order to understand prosodic systems in general. One of the spinoffs to be anticipated from the study of Malay prosody is a deeper understanding of the prosody of English, and of the role of prosody in English discourse at the pragmatic level.

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