Interlanguage Prosody of Japanese Students in English and Its Role in ‘Foreigner Talk’

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Abstract

This paper looks at prosodic features in Wh and yes/no questions recorded by nineteen Japanese women university students, and analysed using computer software, “Onsei Rokubunken” (Imagawa & Kiritani, 1989). The recordings are compared with those of eight women Southern British English speakers and with both the classroom and the conversational English of two native-speaking English teachers in Japan. Many of the students’ interlanguage prosodic features can be heard in the classroom English of the teachers. This imitation of the students’ prosody is considered to be a form of foreigner talk termed “matching” by Hatch (1983).

Introduction

This study started out as an examination only of Japanese students’ interlanguage prosody in English questions. However, while trying to obtain native models, using recordings made by native-speaking English teachers in Japan, it was found, when analysing their prosody using computer software (“Onsei Rokubunken,” Imagawa & Kiritani, 1989), that some teachers had used Japanese interlanguage prosody in making their recordings. A video tape was also obtained of a first-year junior high school class, team-taught by a British and a Japanese teacher, and features of interlanguage prosody were found in the British teacher’s speech.

Studies of “foreigner talk” pronunciation have described both conscious and unconscious modifications in pronunciation made by the native-speaker aiming at greater clarity for the learner (Ferguson, 1975; Kazazis, 1969). These modifications did not necessarily match the
interlanguage of the interlocutor, but were prompted by the native-speaker's idea of what makes speech easy for the learner to understand. Giles (1979), a founder of Speech Accommodation Theory, has reported research on the tendency, termed "convergence," to shift behaviour, including speech styles, to become more like the person one is interacting with. "Matching," is a form of "foreigner talk" described by Hatch (1983), where native speakers imitate learners' speech, the significance of which she was sceptical about, because of the difficulty involved for the native speaker in measuring phonology and other aspects of speech accurately enough to adjust his/her language to the language of the learner. She believes that the native speaker simplifies and clarifies in accordance with the feedback s/he obtains from the learner.

However, there was evidence in the data obtained for this study that some native-speaking English teachers in Japan unconsciously match their prosody to that of their students. In other words, the teachers in this study were not just pronouncing more slowly and clearly, as they themselves thought they were doing, and as the foreigners in most "foreigner talk" studies have done; they were unconsciously matching their prosody to that of the students with a remarkable degree of accuracy. Computer analysis of recordings of native-speaking English teachers showed matching of pitch movements and timing which was so close to the interlanguage patterns of Japanese students that differences in these features between the students and the teachers, shown by the computer analysis, were barely detectable by ear. When the teachers were informed of the results of the analysis, it was found that they had only been aware of speaking more clearly, and were unaware that their prosody had matched that of the students.

In order to show that the prosody used by the teachers was really matched to the students' interlanguage prosody, and was not, for example, merely imitated Japanese prosody superimposed on their speech, the prosodic features of students' recordings were examined and the reasons for those features were looked for. They had several different
sources apart from first language transfer, including teaching-induced errors, over-generalization, strategies of second language learning, as well as first language transfer. Most of these features were closely matched in the speech of the native-speaking teachers. Sources of teaching-induced error were found in Japanese English textbooks, and also by interviewing a first-year junior high school student, and an adult Japanese who had learnt English in the Japanese education system. Since these characteristics of English education in Japan may be an important source of error in Japanese students' prosody, they will be described in some detail.

Method

This study consists broadly of two parts: an examination of the prosody of Japanese students, and an examination of the prosody of native-speaking English teachers.

The intonation contours of nineteen Japanese women university students in eleven Wh and yes/no questions were recorded in English and examined for their shape, placement of prominence and relative speed of different parts of the contour. The students were all volunteers. Their prosody in English was compared with their own prosody in Japanese and with that of eight women Southern British English speakers living in Britain, ranging in age from twenties to sixties. The English sentences and their Japanese translations are listed below:

1. How old are you? Nansai desuka.
2. How many brothers and sisters do you have? Kyoodai wa nannin desuka.
3. Do you like Japan? Nihon ga suki desuka.
4. How long have you been in Japan? Dono gurai Nihon ni imasuka.
5. Didn't you do your homework? Shukudai o yaranakatta no desuka.
6. Why can't she come? Naze kanojo korarenai no desuka.

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7. What should I wear to the party? Party ni nani o kite ittara ii desuka.


9. When did you graduate from highschool? Itsu kookoo sotsugyoo shimashi-taka.

10. What’s on television tonight? Konban donna bangumi ga arimasuka.

11. Did you enjoy the movie? Eiga wa yokatta desuka.

Similar features were examined in the prosody of the same questions recorded for a pilot study by an American teacher who had taught in Japan for more than ten years. The video tape of the class of the British teacher, who had been in Japan for a year, was also examined and both teachers were asked to re-record their tapes, the British teacher from a transcript of his class, after they had been told that there were Japanese features in their intonation, but not what they were. They were asked to speak at normal speed and as if to a friend rather than as if to a class.

The Parts of the Contour

In order to compare Japanese speakers' intonation in English with that of native speakers, the divisions of the contour, or intonation group, used by O'Connor and Arnold (1973), into pre-head, head, nucleus and tail, were used as a framework to examine the intonation of the subjects of this study. An intonation group always has a nucleus. It may have none, any, or all of the other parts, but always in the order above. The pre-head consists of any syllables before the first stressed syllable. The syllables in this part of the contour are spoken faster than in any other parts of the contour. The head includes the first stressed syllable of the contour and any syllables following it before the syllable which receives the main stress, the nucleus. In a “normally stressed” utterance, the nucleus will tend to be on the last content word, but with a preference for nouns over the verbs they accompany (Chafe, 1974). (See below for a discussion of the problem of “normal stress.”) The nucleus carries the
main pitch movement of the contour. The tail is any syllables following
the nucleus. They are unstressed or weakly stressed. Where there is a
fall on the nucleus which takes the voice to the bottom of the speaker's
normal range, as in all the questions in this study, the syllables of the
tail will either be level along the bottom of the speaker's range, or rise
from the bottom of the range, but no change in pitch direction is
initiated in the tail. A typical pattern for a question in this study,
consisting of all the parts, can be stylized like this:

![Diagram of intonation contour](image)

Figure 1. Stylization of question intonation contour.

**Results**

*Whole Contours*

*British Subjects* (See Appendix B) The longer questions of the
native speakers generally had a secondary prominence on the question
word or words, or on the first stressed word of a yes/no question, and a
main prominence later in the question. The voice started high on the
first stress and stayed level or moved down gradually until the stress
which took the main pitch movement—all falls in the questions in this
study. There were sometimes slight troughs between the first and the
main stresses, but no deep valleys like the students had, giving an
appearance to the contours of downsteps rather than peaks and valleys.

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The contours of yes/no questions, and short Wh questions, when pronounced with a rise at the end, looked like a peak followed by a valley, but this is just an effect of their shortness. There were no successions of peaks and valleys in the native speakers' questions.

*Japanese Subjects* The longer questions of the Japanese students in English (Appendix A) typically showed a pattern of gradually descending peaks and valleys, with no identifiable main pitch movement (Appendix A–2). Both the English questions recorded by the native speakers (Appendix B), and the Japanese translations (Appendix D) had one or two prominences, a main and a secondary one, with about a quarter of the Japanese questions having one more than the English questions recorded by the native speakers. About one in four of the English questions recorded by the Japanese students had one more prominence than their Japanese translations, the longer questions often having three prominences, and a few even having four.

*Native-speaking English Teachers* The intonation contours of the American teacher (Appendix C) in his first recording where remarkably similar to those of the Japanese students, with successions of descending peaks and valleys with no main pitch movement (Appendix C–7). In his re-recording, the speed of his questions and the shape of the contours were comparable to those of the native speakers.

The British teacher was teaching questions like "Whose flowers are these?" His contours were high and level, with a high fall on the last word (Figure 2–B). The shape of his contours was very similar to the shape of the contours of the Japanese teacher he was team teaching with (2–A).

In the classroom, the British teacher's overall speed was very slow, and closely matched that of the Japanese teacher (2–A). In his re-recording, he shifted his main pitch movement back from the last word in the sentence to the last content word, and said the questions in about two-thirds the time he had said them in class (2–C).
2-A Japanese teacher  2-B British teacher 1st recording  2-C BT 2nd recording

Figure 2. Intonation contours of the British teacher and the Japanese teacher he was team-teaching with.

The Pre-head

British Subjects  In the question above, the pre-head is "Do you," and the native-speakers placed the nucleus on "like" (3-A). The possible reasons for this placement of the nucleus will be explained in the section on "normal stress" below. The syllables in the pre-head are pronounced at greater speed than other unstressed syllables in the contour (Crutten-
The average time taken by the native speakers to pronounce “Do you” as a proportion of the time taken for the whole question, “Do you like Japan?” was 16% on average, and the native speakers contracted “Do you” to “D’you.”

**Japanese Subjects** It is in the pre-head that some of the most striking features of Japanese students’ prosody can be found. I first became interested in the intonation of my students when I noticed a pattern which comes up all the time in all my classes, a pattern which teachers in Japan will probably find familiar. It looked, at first sight, like a low-high pattern of intonation on the first two words in yes/no questions, and high-low on the first two words of statements, but it seemed unlikely that whether an utterance was a question or statement would affect the intonation at the beginning of the utterance.

In Question 3, the “Do you like” in “Do you like Japan?” of many of the students sounds as if each word is spoken on a different level, with the “you” prominent because it stands out from the adjacent words with its higher pitch (See (a) below). The corresponding statement (b), “I like Japan,” would have the prominence on the first word “I”:

(a)  

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you     n?
like    p
Do      Ja
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(b)  

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I       p
like    a
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Other factors, apart from the prominence in pitch of the subject pronouns, which combined to give an impression of low-high “steps” on the words in the pre-head, were a change in the direction of the pitch line between “Do” and “you,” slowness, and not contracting “Do you” (Figure 3-B). The time spent by the students on “Do you” as a proportion of the whole question was 23% on average.

**The Native-Speaking Teachers** The American teacher’s first recording of “Do you like” in “Do you like Japan?” gave a marked impression of “steps” (Figure 4-A). He did not contract the pre-head “Do you,” and the duration of the pre-head was 23% of the whole question—exactly
the same as the students' average, and far above the average of 16% of the native speakers. When he re-recorded, he contracted "Do you" to "D'you", and the duration was 11% of the whole question (4-B).

In the American teacher's first recording of "Are you married?" the
pre-head "Are you" was slow, and "you" was at the peak of the intonation line (5–B). His prosody in this question was very similar to that of many of the students (5–A). In his second recording, the pre-head was greatly speeded up, and "ma" was at the peak of the intonation line instead of "you" (5–C).

There was only one occasion when the British teacher used inter-language prosody in pre-heads. It was the last day for him to teach this class and at the end of the lesson a pupil said to him, "You are a good teacher" and gave him a present (Figure 6–A). He answered with natural timing and intonation, "You're a very good class" (6–B). Then he repeated, intending to speak more slowly and clearly, "You are a good class" (6–C), but in fact he did more than just that, matching his pitch and speed to the boy's with remarkable accuracy:

Pupil 6–A
You are a very good teacher.
You–293 Hz are–220 Hz
You are–.5 secs

Teacher 6–B

Teacher 6–C
You are a very good class. You are a good class.
You–243 Hz are–237 Hz You–293 Hz are–225 Hz
You are–nearly .3 secs You are–.56 secs
The difference between 220 Hz and 225 Hz is barely distinguishable by ear, but a gap of around 70 Hz is very clear.

The pattern of prominence on “you,” not only in the pre-head, was striking in most of the students’ recordings and also in the American teacher’s first recording. Only Questions 6 and 7 had other subject pronouns, “she” and “I” respectively, but these and classroom experience suggest that the pattern is the same for other pronouns in subject position. The fact that the low-high, high-low pattern is often heard in yes/no questions and statements is just a coincidence, because in statements like “If we go to the movies…” the pattern is low-high with the prominence on the subject pronoun:

we
If go....

The Head

*Question words*  A pattern which seems to have been transferred directly from Japanese by some of the students is to put the main stress on the question word in Wh questions. In English Wh questions with “normal stress,” there is a secondary stress on the question word, and the main stress comes later in the question. In Japanese, the main prominence is on the question word. In Question 6, “Why can’t she come?” (Appendix A–7) many of the students put a big fall on “Why,” and this intonation sounded like a “marked” pattern, indicating frustration, anger, or petulance. A few of the native speakers also imagined this kind of context and put a big fall on “Why.” In Japanese, since a normal stress pattern has the main prominence on the question word, putting a big fall on the question word does not indicate a marked pattern. In English, contexts for both marked and unmarked patterns are possible for this question, but discussions with the students showed that they had not intended to produce these strong patterns, and were surprised
that they might be considered angry or petulant if they used this intonation. None of the native speakers, except the American teacher, put the heaviest stress on “What” in “What’s on television tonight?” (Appendix C–8), but many of the students did. It is certainly hard to think of an emotional context for this question!

The American teacher put the main prominence on question words in many of his Wh questions, but reduced this prominence in his re-recording (Appendix C–9).

**Two-word question expressions** Both native English speakers and Japanese speakers seem to think of two-word question expressions like “How old/How many” and “Nansai/nannin” (Questions 1 & 2) as one unit of meaning, with similar curved intonation lines in English and Japanese for these two-word question expressions. The intonation lines for the “How old are you?” of one of the native speakers, and the “Nansai desuka?” of one of the students looked remarkably alike (Figures 7–A & 7–B).

This was the only case where there was such a striking resemblance between the shapes of the native-English and the Japanese contours, but the general direction of the lines was the same for the other students.

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**Figure 7.** Similar pitch lines of Question 1 in English and Japanese.
However, in the students' "How long" and "How old," the two words in each expression have their own pitch lines with a change of direction between them, some students even pausing between the two words (Figure 7-C). The first two words of "How old are you?" sound like two separate steps with more prominence on the second word "old," because of its greater length and higher pitch. The pitch lines in Figure 7-B and 7-C are of the same student saying the same question in English and Japanese. The student's intonation line in English looks very different from the English native-speakers' line and from her own Japanese intonation line.

The American teacher, in his first recording of "How old are you?" had a break between "How" and "old," (Appendix C–1), but in his second recording, he had a smooth curve for the two words (Appendix C–2).

As mentioned in the section on the parts of the contour, the head starts with the first stressed syllable of the contour and includes all the syllables which follow it, up to but not including the nucleus. Two more interlanguage prosodic features were found in the part of the head after the first stress, in the students' questions. One of these features was also found in the American teacher's tape.

In Question 7, the last content word is the noun "party," and it normally takes the nucleus. Most of the students placed a bigger prominence on "wear" than on "party" (Appendix A–10), as did the American teacher (Appendix C–7), but none of the native speakers in Britain did. This verb was not prominent in the Japanese translations either (see Appendix D–5).

The other interlanguage feature in the head after the question words was a durational feature, not a pitch feature. In Question 2, the last content word is the verb "have." Since it is a verb and it has an accompanying noun phrase, "brothers and sisters," it is this noun phrase which takes the main pitch movement. In a phrase with conjoined nouns, the nucleus falls on the last stressable syllable of the last noun, which is "sis" in this question (Chafe, 1974). Unstressed syllables are pronounced faster than stressed syllables by native speakers, and the
slowing at the end of the contour starts from the nucleus. The native speakers pronounced the three syllables, “brothers and” in slightly less time than they pronounced “sisters.” The time spent on “brothers and” was 87%, on average, of the time spent on “sisters.” The equivalent figure for the students was 118%, a difference which was easy to hear. The American teacher’s timing was native in this part of this question.

The Tail

In the native speakers’ Question 2, the syllables following the nucleus on “sis,” were unstressed and on the same low level as the ending point of the fall on “sis.” Most of the students had a series of peaks and valleys over the whole question, the last one formed by a rise on “you” followed by a high fall on “have.” Some students did not have a rise on “you,” but ended with a high fall on “have.” Few had the main fall on “sis.”

Final Syllable Lengthening In Question 1, all the native speakers pronounced “How old” in less time than “are you?” except the American teacher in his first recording. Half the students took more time over the first two than the other two words, showing less final syllable lengthening than the native speakers in Britain. It is possible that all languages have final syllable lengthening before the end boundaries of intonation contours, and Japanese does appear to have it, too, but English probably has greater final syllable lengthening than other languages (Cruttenden, 1986).

Discussion

Intonation and Speed of Whole Contours

The shape of the contours of the Japanese students suggested that few of them had a good grasp of English intonation patterns and most of them showed little acquisition of English prosody. Prominences were often placed on every stressable word and on some not usually stressed, producing more prominences than even the Japanese questions, which themselves had more than the English questions. It seemed that the
students either did not know that they needed one main pitch movement in the contour, or if they did, that they did not know where it should be placed.

Few students' prosody showed acquisition of relative speeds of the different parts of the contour. The syllables in the pre-head in the natives' speech were pronounced faster than other unstressed syllables in the contour, but the students produced them proportionally more slowly. There was less speeding up of unstressed syllables between the head and the nucleus, and less slowing down from the nucleus through the final syllables. The lack of native-like variation of speed over the parts of the contour could be an effect of native language influence, Japanese being a syllable-timed and English being a stress-timed language. It could also be that the less proficient students were thinking one word at a time as they pronounced the questions.

*The Problem of "Normal Stress"

Throughout this study, I have assumed that there is such a thing as "normal stress." In the case of native speakers, the notion of "normal stress" is problematic because it is based on context-free utterances, when in fact native speakers rarely make utterances out of context and have difficulty choosing a stress pattern without reference to context (Schmerling, 1974). The native speakers in this study sometimes chose different stress patterns from "normal patterns" because it seemed that they could not read the sentences without imagining some context which might or might not change it. For example, a "normal stress" pattern for "Do you like Japan?" would have the nucleus on "Japan," but all the native speakers stressed "like." Chafe (1974) says that 'new' information will tend to have high pitch, and therefore prominence, and 'given' information, low pitch. This question would probably be asked of someone living in Japan, so "Japan" would be 'given' information and asking for an opinion would be a new situation. The native speakers, not surprisingly, also took "Japan" to be 'given' in the next question, "How long have you been in Japan?" since the previous question had
helped to provide a context, and they stressed either "long" or "been" instead of "Japan." Only one of the students' prosody showed this sensitivity to context, most of the others not being able to choose any main stress, let alone showing sensitivity to context. Choices for placement of the main pitch movement are virtually unlimited, given the right context, but I needed a "standard" pattern on which to base my analysis of students' and native speakers' prosody. The American teacher's first recording of "How long have you been in Japan?" (Appendix C-11) had no main pitch movement, but his second recording (Appendix C-12) had the main pitch movement on "been," probably in response to the context provided by the previous question, "Do you like Japan?" It seems that in his first recording, like the students, he read the question as an isolated utterance, not reacting to the context provided by the previous question, and not imposing a context of his own. When I listened to the students' Japanese translations of Questions 3 and 4 (Appendix D-2, D-3), I could not hear any linking of the two by means of intonation, leading me to believe that intonation may not perform this function in Japanese. There has been little research into Japanese intonation beyond the sentence level. It is probably a good idea to use the "normal stress" pattern as a starting point in teaching intonation at elementary levels. It has the advantage of serving as a counterbalance to the Japanese tendency to put the main stress near the beginning of the contour. Sensitivity to context may be later acquired.

Pre-heads and Subject Pronouns

One of the most striking features of Japanese students' inter-language prosody in English is prominent subject pronouns. This feature is also the one which can most easily be detected in the speech of native-speakers teaching English in Japan. English lessons on TV and radio provide a wealth of examples daily. Lack of speed and contractions in the prehead, and misplacement of prominence contribute to the effect of "steps" in the early part of contours. It has been suggested to me that the slowness of the speech of learners at elementary levels may
make it difficult for them to keep two adjacent one-syllable words at the same pitch. Difficulty in keeping the same pitch on two slow syllables may be one cause of the "steps" in the pre-head, but it does not explain the choice of direction of the low-high, high-low pattern. I believe a possible explanation for this choice of direction is to be found in the way subject pronouns in English are taught in the Japanese English education system.

When junior high school students start studying English, they have to learn to express subject pronouns in English where they would be ommitted in Japanese. In order to stress the use of subject pronouns in English, they are emphasized even in Japanese oral translations. When I asked a first year junior high school student to translate "How old are you?" into Japanese, he answered "Anata wa (you) nansai desuka?" and when I asked an adult to translate the sentences for this study, he translated Number 8 as "Anata wa (you) kekkon shite imasuka?" Both the high school boy and the adult agreed, on reflection, that the use of the pronoun was stilted, and they would not normally use it. It seemed that they switched to an English-learning "mode" even in Japanese, and stressed the pronoun just by expressing it, since when it is not stressed, in Japanese, it is implicit and equivalent to an explicit, but unstressed pronoun in English. Subject pronouns also appear in English textbooks at an abnormal frequency of use for Japanese. In fact, in many textbooks, all of the subject pronouns in the English sentences are translated into Japanese (Hidai, 1994; Ishii, Kaji & Hamura, 1994; Takatori, 1994).

It seems that subject pronouns are over-emphasized in the teaching of English to compensate for the fact that they are not normally used in Japanese. The practice of translating subject pronouns into Japanese may be inevitable in the early stages of teaching, but it may contribute to the tendency of Japanese students to put too much prominence on them. Speeding up the pre-head in relation to the rest of the contour together with the use of contractions, and correct placement of the nucleus would help to correct the impression of "steps" in the pre-head.
and prominence on "you."

The Head

The intonation contours of two-word question expressions in the English of the native speakers and in Japanese were found to be quite similar to each other, but were quite different in the English of many of the Japanese students, from both their own intonation lines in Japanese, and from the native-speakers' intonation lines. It is quite clear that something other than first language transfer was operating here, because if the Japanese pattern had been transferred by the students to their English, they would have achieved a much more native-like prosody. Too much prominence was placed on the second word, perhaps because the two words are considered too much as separate words rather than one unit, and also possibly because the second word is the one which varies and therefore carries the greater semantic load. As noted before, the American teacher closely followed the students' pattern on "How old" in his first recording.

The Tail

There were many problems in the tails of the students' questions. As explained above, the tail is the end part of the contour after the main pitch movement. The syllables in the tail are unstressed or weakly stressed and none of them initiate a major pitch movement. Many of the students' questions did not have main pitch movements, so they inevitably had no tails. Some of the students' questions, which did have a main pitch movement, also had prominent subject pronouns in the tails (Questions 1 & 2), and/or a big fall inappropriately placed on the last content word (Question 2). It will be remembered that in Question 2, "How many brothers and sisters do you have?" the nucleus should be on "sis" but was placed on "have." This error could be due to overgeneralization by the students of the tendency to put the nucleus on the last content word in English, or it could be a teaching-induced error caused by an over-generalized instruction to put main falls and rises at
the end of sentences. Both misleading and wrong instructions can be found in well-known textbooks (Hidai, 1994; Ishii et al., 1994).

Students are taught that yes/no questions rise and Wh questions fall at the end. "High Top," an English workbook (Ishii et al., 1994) explains that in Wh questions, the fall goes at the end, but that if the last word is unstressed, the nearest stressed word takes the fall. The stressed words are indicated in the text by printing their "katakana" pronunciation in bold print, but the arrow for the direction of the fall is always printed after the end of the question, whether or not the fall is on the last word, like this: "Who is she? \(\searrow\)" The instruction is fine in this case, but it could be misleading in questions where the main pitch movement is not on the last word.

In a question like this: "How many bags do you have? \(\searrow\)" the last verb is marked in "High Top," (Ishii, et al., 1994), as being stressed (See Figure 7). It is, in fact, weakly stressed, but it is in the tail, and so it should not take a major pitch movement. Although it is explained several pages earlier that nouns may take priority over verbs for the fall, the way in which a question like the one above is illustrated, with the last verb stressed, and an arrow after it, will tend to mislead students into putting the main fall on the verb at the end of the question instead.

![Figure 8. Misplacement of high fall in a tail.](image-url)
How many bags do you have?
(あなたはバックをいくつ持っていますか)

Figure 9. Example of misleading prosodic markings found in many textbooks.

of the noun before it, in the same way that some of the students in this study placed the fall on "have" in Question 2. The student in Figure 8 had very good prosody generally, but here, seemed to have either over-generalized the rule for stress on the last content word, or followed closely the kind of instructions that many English textbooks seems to be giving.

The "Eiken" Grade 5 textbook (Hidai, 1994), explains that statements and Wh questions take a fall before or at the end of the sentence, without additional explanation, and uses the same graphics to indicate the direction of the fall as "High Top." The following are similar to examples given:

I go to bed at nine. \( \downarrow \)

Look at the chalkboard. \( \downarrow \)

Whose book is this? \( \downarrow \)

It is not clear when the fall is not at the end, let alone which syllable takes the fall. Because of the way the fall is illustrated, it may tend to be misplaced at the end, and students will not have tails in their questions or statements.

The last example question above is the same kind of question which was taught by the British teacher (see Figure 3). His intonation, in these questions did not have the ups and downs of the Japanese students in this study, nor was it like his intonation when he was speaking naturally, but it was like the Japanese teacher's intonation. The Japanese teacher might have been following the kind of markings for prosody illustrated above to produce the high, level contour ending in a high fall which was heard in his classroom speech.

It would be less misleading to put the arrow showing the position
and direction of the main pitch movement through the syllable which carries the nucleus. The pitch movement is illustrated in this way in an English textbook for first-year junior high school students issued in 1994 (Togo et al., 1994).

Rules for placement of the nucleus on other than the last content word are very complicated (Chafe, 1974), so that even the most accurate instructions are unlikely to prevent error caused by over-generalization of the rule for stress on the last content word.

*Foreigner Talk*

Foreigner talk studies have concentrated far more on grammatical than pronunciation adjustments that native speakers make when talking to non-native speakers, but Ferguson (1975) listed, “slow, loud distinct, or exaggerated pronunciation...additional pauses and more emphatic stress and intonation” (Ferguson, 1975, p. 4). It would seem that many of these adjustments are conscious, but Kazazis (1969) described pronunciation adjustments by Greek speakers to classes, which they angrily denied making when informed of them later. The adjustments are difficult to describe since their equivalents do not exist in English, but they involved something like hyper-correcting in trying to avoid “sloppy” forms, resulting in “phonological distortions.” All of the above adjustments, either conscious or unconscious, seem to have been aimed at simplification, rather than imitation of the learner’s speech.

Hatch (1983) reproduced a dialogue between a teacher and a learner which showed “matching” of the learner’s grammatical errors by the teacher. It is not clear whether the matching was conscious or not. Hatch (1983) seems to dismiss matching as a minor and perhaps freak variety of foreigner talk, considering it unlikely that a native-speaker would, be able to acquire a detailed enough knowledge of a learner’s language system. She sees “negotiation” as the main form of foreigner talk, where the native speaker “constantly repair(s) and rerun(s) messages to make them comprehensible” (Hatch, 1983, p. 71) in response to
feedback from the learner. I agree that this is probably the main form of foreigner talk, particularly among teachers, who are practiced in providing simplified input to facilitate learning.

Accommodation Theory research (Giles, 1979) suggests that it is far from impossible for “matching” to be a part of foreigner talk, and that it is, in fact, a universal tendency, termed “convergence,” for speakers to shift their speech styles and other behaviour to become more like those of the people they are interacting with, in order to gain their approval or increase intelligibility. Giles (1979) reported research in the field of social psychology, not second language acquisition, showing that speakers adjust their speech rates, pause and utterance lengths, intensity and pitch levels to accommodate to their interlocutors, and he believes that foreigner talk is one kind of “accommodation” or “convergence.”

The “matching” by the native-speaking teachers, in this study, of their prosody to that of their students, presumably increases their intelligibility to their students and most second language researchers and teachers would probably agree that simplified input is helpful and perhaps essential in classroom language learning. But does the matching by these teachers help the students to acquire English prosody? I believe, along with Hatch (1983), that matching is not beneficial for learning. If it is true that input, in order to be optimally beneficial, should be a little beyond the students’ level (Krashen’s i + 1, 1979, in Hatch, 1983), then neither of the teachers’ prosodies met this requirement. The American teacher’s matched that of the average students, and the British teacher’s speed was probably much slower than the students needed for comprehension.

Accommodation Theory may explain a problem inherent in the team-teaching situation. In order to work successfully as a team in front of the students, the British and the Japanese teacher might need to accommodate various aspects of their behaviour, including pronunciation, and this might account for the similarity between their intonation contours.

The native-speaking teachers were not aware of using their
students’ interlanguage prosody, and were therefore not making conscious decisions about the minimum amount of slowing, and even distortion, that might be necessary to provide the most efficient input. If teachers unconsciously “match” prosodic features in their students’ interlanguage, they may lose their effectiveness as models for native prosody. The fact that the teachers readily corrected their intonation on re-recording suggests that the problem is not difficult to solve once teachers are aware of it.

References

Appendix A  Students' pitch lines in English
Appendix B  Native speaker's pitch lines

(1) 

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(3) 

(4) 

(5) 

(6) 

(7) 

(8) 

(9) 

(10) 

(11)
Appendix C  American teacher's pitch lines
AT1 = American Teacher 1st recording, AT2 = American Teacher 2nd recording
Appendix D  Students's pitch lines in Japanese