

**P S K Conference on  
English Phonetics in Pusan, Korea**

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**School Phonetics and  
How to Teach Prosody of English in Japan**

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






**Abstract:**

This presentation will focus on building basic English Prosodic Skills which are very useful and helpful for Japanese learners of English.

The focus first will be on recognizing the seven basic nuclear tones, analysing intonation structures, distinguishing intonation patterns and then on the way of improving speaking ability using sufficient verbal contexts of intonation (mini-dialogue). My presentation deals mainly with some difficulties which Japanese learners of English have in the field of RP intonation. It is chiefly concerned with identifying, describing and analysing tone-group sequences.

It sometimes happens that Japanese learners of English can pronounce isolated sounds correctly and read phonetic symbols sufficiently, but have difficult problems in carrying out accurate prosodic features. The use of wrong intonation is sometimes the cause of misunderstanding of speaker's attitude, connotation and shades of meaning, etc.. However accurately students can pronounce the nuclear tone or tone-group of English, they have to learn how to connect tone-groups properly for suitable sequences in respect to meaning or implication.

We are faced with the complicated theory of RP intonation on the one hand and difficult realization of it on the other. Japanese learners of English have special difficulties in employing "rising tune" and "falling + rising tune". If students are taught pitch movements by indicating dots graphically between two horizontal lines, they can easily understand the whole shape of pitch movements.

In this presentation, I illuminate several tone-group sequences which are very useful for Japanese learning English intonation. Among them, four similar pitch patterns, such as, (1) [  ]- type, (2) [  ] + [  ] - type, (3) [  ] | + [  ] - type and (4) (Rising Head)[  ] + [  ] + [  ]- type are clarified and other important tone-group sequences are also highlighted from the point of view of teaching English as a foreign language.

The intonation theory, tone marks and technical terms are, in all essentials, those of *Intonation of Colloquial English* by O'Connor, J. D. and Arnold, G. F., Longman, 2nd ed., 1982. The changes of tone are shown graphically between two horizontal lines representing the ordinary high and low zones of the utterance.

A.C.Gimson (1981:314):

The intonation of English has been studied in greater detail and for longer than that of any other language. No definitive analysis, classifying the features of RP intonation, has yet appeared (though that presented by O'Connor and Arnold (1973) provides the most comprehensive and useful account from the foreign learner's point of view).

## 1. Theoretical Phonetics & Educational Phonetics or School Phonetics

### 1.1. Theoretical Phonetics

Phonetics can be defined as "the scientific and systematic study of speech sounds of languages". Phonetics are concerned with the actual physical sounds. When the primary concern and approach of the scholar are theory of the sounds, it is called Theoretical Phonetics.

### 1.2. Educational Phonetics or School Phonetics

Applied Phonetics is a branch of Phonetics where the primary concern is the application of phonetic theories, methods and discoveries to the educational problems. The most well-developed branch of applied phonetics is the teaching and learning foreign languages. It is Educational Phonetics or School Phonetics in the field of Applied Phonetics.

## 2. The attitude

Regarding the attitude of the study, speech sounds are clarified by sense impression of auditory impression and articulatory feeling, and physical evidence. That is, the phonetic study should be based on the following approaches:

### (1) Sense impression of

#### (a) Auditory impression

e.g. clear [l]                      dark [ɫ]

#### (b) Articulatory feeling

e.g. advanced [k̟]                      retracted [k̠]

### (2) Physical evidence of

#### (a) Acoustic Analysis                      (by using voice)

Sound spectrographic Analysis

Visi-Pitch Analysis  
 Flow-Nasalitygraphic Analysis  
 (b) Palatographic Analysis (by using articulators)  
 Electro-palatographic Analysis

### 3. The importance of prosodic features

It is easily understood that the prosodic features are more important than phonetic segments.

A.C.Gimson (1981:314):

Similarly, a listener may misinterpret a speaker's attitude because his (the listener's) intonation habits are somewhat difficult, although the two segmental systems do not differ.

R.. Kingdon (1965:xiii):

A foreigner who speaks a language with correct stressing and intonation but with incorrect sounds (within reasonable limits) will be better understood by natives than one whose sounds are correct but whose stressing and intonation are poor. -----  
 Intonation is the soul of a language while the pronunciation of its sounds is its body, and the recording of it in writing and printing gives a very imperfect picture of the body and hardly hints at the existence of a soul.

O'Connor & Arnold (1982:98):

For the first purpose a teacher is almost certainly needed; there are some gifted people who can acquire the tunes of English by simply imitating what they hear around them, but most foreign students cannot do this and would be unwise to think that they can. For these it is essential, particularly in the early stages, to have a teacher to serve as a model and to correct them meticulously whenever they go wrong. It is worse than useless to drill the *wrong* tunes; the teacher must see to it that the tunes are right and stay right.

J.D.O'Connor (1971:1-2): (language acquisition frame )

It is well known that a child of ten years or less can learn *any* language perfectly, if it is brought up surrounded by that language, no matter where it was born or who its parents were. But after this age the ability to imitate perfectly becomes less, and we all know only too well that adults have great difficulty in mastering the pronunciation (as well as other parts) of foreign languages.

A.C.Gimson (1981:315):

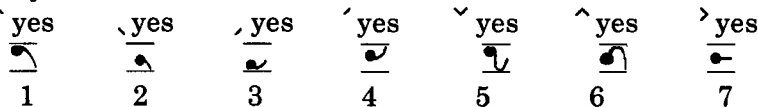
He should be skilled, for instance, in the use of the falling-rising pattern, occurring both on a single word and spread over two or more words. This pattern is extremely common in RP and is important for conveying many nuances of doubt, encouragement, unspoken implications, etc., which in other languages might require more explicit lexical or syntactic cues. The learner should also note the frequent use of emphatic falls on pre-nuclear accented syllables (.....) which are a common feature of natural discourse --- as opposed to much reading aloud.

4. Nuclear tones

4.1. Seven Nuclear tones based on O'Connor & Arnold

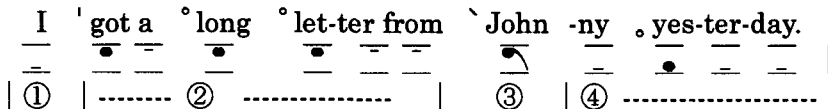
It is useful for us to define the seven nuclear tones which occur in a single syllable or monosyllabic word. These different tones can express different meanings and the attitude of speakers.

<1 syllable-word>



The description of the meaning which are conveyed by the seven nuclear tones is a difficult subject to deal with. (D.Jones;1960,1978:277-278)

4.2. The structure of Intonation

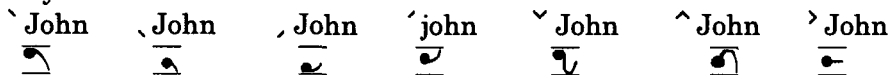


- ① pre- head      introductory contour      (pre-nucleus)
- ② head            antecedent contour      (pre-nucleus)
- ③ nucleus        nuclear-tone contour
- ④ tail            post-cedent contour      (post-nucleus)

4.3. Variations

Intonation structure are variable according to the types of pre-head, head, nucleus and tail.

<1 syllable-word>



## &lt;2 syllables-word&gt;

\ Fri-day  
 ↘    -

\ Fri-day  
 ↘    -

, Fri-day  
 ↘    -

' Fri-day  
 •    -

∨ Fri-day  
 ↘    ↘

^ Fri-day  
 •    ↘

> Fri-day  
 •    -

## &lt;3 syllables-word &gt;

\ yes-ter-day  
 ↘    -    -

\ yes-ter-day  
 ↘    -    -

, yes-ter-day  
 ↘    -    -

' yes-ter-day  
 •    -    -

∨ yes-ter-day  
 ↘    -    ↘

^ yes-ter-day  
 •    ↘    -

> yes-ter-day  
 •    -    -

## &lt;in a phrase: Nucleus only &gt;

a ' postcard from \ York  
 -    -    -    -    ↘

a ' postcard from , York  
 -    -    -    -    ↘

a ' postcard from , York  
 -    -    -    -    ↘

a ' postcard from ' York  
 -    -    -    -    ↘

a ' postcard from ∨ York  
 -    -    -    -    ↘

a ' postcard from ^ York  
 -    -    -    -    ↘

a ' postcard from > York  
 -    -    -    -    •

## &lt;in a phrase: Nucleus + one syllable tail &gt;

a ' let-ter from \ Par-is  
 -    -    -    -    ↘

a ' let-ter from , Par-is  
 -    -    -    -    ↘

a ' let-ter from , Par-is  
 -    -    -    -    •

a ' let-ter from ' Par-is  
 -    -    -    -    •

a ∨ let-ter from ∨ Par-is  
 -    -    -    -    ↘

a ' let-ter from ^ Par-is  
 -    -    -    -    •

a 'let-ter from > Par-is

<in a phrase: Nucleus + two syllables tail >

a 'par-cel from `Ger-ma-ny

a 'par-cel from ,Ger-ma-ny

a 'par-cel from ,Ger-ma-ny

a 'par-cel from 'Ger-ma-ny

a >par-cel from >Ger-ma-ny

a 'par-cel from ^Ger-ma-ny

a 'par-cel from >Ger-ma-ny

<in a phrase: Nucleus + poly-syllables tail >

a `let-ter from °Man-ches-ter

a ,let-ter from °Man-ches-ter

a ,let-ter from °Man-ches-ter

a 'let-ter from °Man-ches-ter

a >let-ter from °Man-ches-ter

a ^let-ter from °Man-ches-ter

a >let-ter from °Man-ches-ter

<in a phrase: Nucleus + poly-syllables tail >

a `lug-gage from °Can-ter-bu-ry

a ,lug-gage from °Can-ter-bu-ry

a ,lug-gage from °Can-ter-bu-ry

a 'lug-gage from °Can-ter-bu-ry

a >lug-gage from °Can-ter-bu-ry

a ^lug-gage from °Can-ter-bu-ry

a >lug-gage from °Can-ter-bu-ry

## 5. Difficulties in Learning Pronunciation

### 5.1. Problems in learning pronunciation of English

Japanese students have special difficulties in learning English and face a particularly serious problem. The special difficulties which Japanese students have in learning English lie in the field of the prosodic features of English, such as, syllable division, rhythm, stress, intonation and prominence. Generally speaking, these difficulties have made Japanese students' pronunciation relatively monotonous or mora(ness).

### 5.2. Japanese Mora and English Syllable

The Japanese language has moraness or moraic syllables, that is, the rhythmic or timing features of Japanese is syllable-timed. It has been clarified that the Japanese language has a syllable-timed rhythm which consists of morae.

A mora is a sort of "bamboo joint" in the sound production. Mora is the duration or length of a syllable. In Japanese, each mora which occurs regularly has equal duration in length. Moraness or moraic means the repetitional occurrence of mora. The total length of an utterance tends to be the sum of the morae within the sentence. The division of mora in the Japanese language is not always clear.

In Japanese:

「コ ン サ ー ト」 (5 morae)  
 ■ ■ ■ □ ■ konsaato

サ ン ク ス (4 morae)  
 ■ ■ ■ ■ sankusu

「ス ト ラ イ ク」 (5 morae)  
 ■ ■ ■ □ ■ sutoraiku

「マ ク ド ナ ル ド」 (6 morae)  
 ■ ■ ■ □ ■ ■ makudonarudo

「ア イ ス ク リ ー ム」 (7 morae)  
 ■ ■ ■ □ ■ ■ ■ aisukuriimu

「コ ン タ ク ト レ ン ズ」 (8 morae)  
 ■ ■ ■ ■ □ ■ ■ ■ kontakutorenzu

In English, a phonetic syllable is a group of sounds that are pronounced together in a very close knitted utterance.

In English:

con- cert (2 syllables)



thanks (1 syllable)



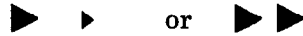
strike (1 syllable)



Mac- don- ald (3 syllables)



ice cream (2 syllables)



con-tact lens (3 syllables)



### 5.3. Isochronism or Isochrony

In English, rhythmically prominent syllable occur at approximately regular intervals of time, regardless of the number of intervening weak syllables which occur within a foot. The length of vowels differ according to numbers of the sounds within a foot. If there are several sounds within a foot, each sound tends to be short. If there are one or more sounds, each of them tends to be long. It can be said that English has isochronism or isochrony. Japanese learners of English have difficulties to utter sentences in regard to these features.

plum				pie
1				1

plum	and	app-	le	pie
1/4	1/4	1/4	1/4	1

[-- tendency for equal length --]

The vowel [ʌ] in *plum pie* is longer than [ʌ] in *plum and app-le pie*.

	[	*		*		-	-	*	]
A.	Tom		sits		on	the		grass.	



- [ \* - \* - - \* ]
- B. Tom is sit-ting on the grass.  
- a tendency toward isochronism -
- [ \* \* - - \* - \* ]
- C. Tom sits on the grass with John.
- [ \* - \* - - \* - - \* ]
- D. Tom is sit-ting on the grass with Mr. Smith.  
----- a tendency toward isochronism -----

## 5.4. Teaching syllables

*history*    *his-to-ry*    [ \* - - ]  
*historical*    *his-tor-i-cal*    [ - \* - - ]

*carrier*    *car-ri-er*    [ \* - - ]    What is his *car-ri-er*?  
*career*    *ca-reer*    [ - \* ]    What is his *ca-reer*?

## 5.5. Teaching sentence stress pattern

It is sometimes difficult for Japanese students to distinguish;

*eighteen* (*eight-een*) [ \* - ] and  
*eighty* (*eight-y*) [ \* - ].

e.g.

[ \* \* - \* - \* - \* ]

A: How man-y days are left in March?

[ - - \* - \* \* ]  
B-a: There are eight-een days left.

[ - - - \* \* \* ]  
B-b: There are eight- een days left.

“1430” can be pronounced as \* - \* - not \* \* \* -  
four-teen thir-ty                      four-teen thir-ty

## 6. Intonation and grammar

Intonation is important for conveying many shades of meaning, connotation, implication, shade of meaning, nuance and attitude of the speaker. Intonation often plays an important role grammatically.

A: She dressed and fed the ba-by.    (ICE P.3)  
-    •    -    •    -    ∞    -

B: She dressed, and fed the ba-by.

### 7. New information and focus

Neither prominence nor nucleus is located on the anaphoric information.

A: I 'hear you're °look-ing for a 'new . coat.

B: 'Yes, a 'win-ter . coat; a 'warm . win-ter . coat.

### 8. Content word and function word

Content words such as *what, Poland, name, capital, give, pretty* and *very* have given meanings and are usually pronounced with sentence stress. On the other hand, function words such as *a, the, will, shall, on, of* and *if* do not have certain definable meanings and are not uttered with sentence stress.

What is the name of the ca-pi-tal of Po-land?

The negative form of auxiliary verb may be pronounced with sentence stress.

My daugh-ter **did-n't** write a let-ter to Bar-ba-ra yes-ter-day.

### 9. ICE tone group

(1) A: Did you 'see that °pret-ty , girl?

B: Now 'which one d'you 'mean?

(2) A: This 'pen of °mine's 'use-less.

B: Would you 'like to °bor-row 'mine?

(3) A: The 'meet-ing at 'five.

B: , When? (I , thought it was at 'six.)

—̣ ‖ —̣ —̣ ‖ —̣ —̣ —̣ ‖ —̣ ‖

(4) A: `Tell me, °doc-tor. 'Is he , bad-ly °hurt?  
 —̣ —̣ ‖ —̣ —̣ ‖ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ ‖

B: 'No-thing at °all , se-ri-ous. 'Just a °few , bruise-es.  
 —̣ —̣ —̣ ‖ —̣ —̣ ‖ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖

(5) A: D'you 'smoke?  
 —̣ —̣ ‖ —̣ ‖

B: I 'do 'some-times. But 'ne-ver be-fore 'lunch.  
 —̣ —̣ ‖ —̣ —̣ ‖ ‖ —̣ —̣ —̣ —̣ ‖ —̣ —̣ ‖

(6) A: We 'ought to °buy a 'cou-ple.  
 —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖

A: 'Where's the 'mo-ney °com-ing °from?  
 —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖

(7) A: 'Has , Mi-chael ar- °rived yet?  
 —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ ‖

B: You were ex- 'pect-ing him?  
 —̣ —̣ —̣ ‖ —̣ —̣ ‖ —̣ ‖

(8) A: I 'thought you °did-n't 'like °spi-nach.  
 —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖

B: On the ^con-tra-ry. I ^love it.  
 —̣ —̣ ‖ —̣ —̣ ‖ ‖ —̣ —̣ ‖ —̣ ‖

(9) A: 'Look at the 'wea-ther.  
 —̣ —̣ —̣ ‖ —̣ —̣ ‖

B: 'Ah, , well! I 'thought it would , rain.  
 —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖ —̣ —̣ ‖

(10) A: 'Which is the °quick-est 'way?  
 —̣ —̣ —̣ ‖ —̣ —̣ ‖ —̣ ‖

B: Take the 'first on the 'left, 'just past the 'sta-tion.



J.D.O'Connor and G.F.Arnold; *Intonation of Colloquial English*, 1980

### 10. The use of the Fall+Rise intonation

The Fall+Rise intonation pattern is extremely common in R.P.. It is used for conveying many shades of meaning, nuance, connotation, implication and the various attitudes of the speaker as shown below:

#### 9.1. expressing concession

A: May I speak to you?

B: It de- ∨ pends.

#### 9.2. expressing contrast

On ∨ week-days I ∨ work. But on ∨ Sun-days I ∨ don't.

#### 9.3. correcting the other person's statement

A: Ju-ly is the sixth month in the year.

B: ∨ Sev-enth.

#### 9.4. expressing warning

You'll ∨ miss your ∨ coach.

#### 9.5. expressing tentative suggestion

A: I am short of money.

B: You could ∨ ask ∨ John.

#### 9.6. expressing strong astonishment in Echo-Question

A: It's cold.

B: ∨ Cold? (You're joking! It's very hot!)

#### 9.7. attracting attention in Vocative

∨ Charles! ∨ Char-lie! ∨ Chris-ti-na! Miss ∨ An-der-son!

#### 9.8. non-final

∨ Walk-ing in the ∨ zoo, I ' met ∨ Kate.

I <sup>˘</sup>wish I could <sup>˘</sup>go, but I <sup>ˈ</sup>re-al-ly <sup>˚</sup>can't af- <sup>˘</sup>ford it.

<sup>˘</sup>Sor-ry, but <sup>ˈ</sup>what <sup>˘</sup>num-ber are you <sup>ˌ</sup>call-ing?

## 10. How to use Fall + Rise Separate Intonation

### 10.1. Expressing some limitation of the meaning of the previous falling Intonation.

I'm <sup>ˈ</sup>go-ing to the <sup>˘</sup>cin-e-ma, to- <sup>ˌ</sup>night.

### 10.2. Expressing more politeness

Would <sup>ˈ</sup>Fri-day <sup>˘</sup>eve-ning <sup>˚</sup>suit you, <sup>ˌ</sup>An-nie?

### 10.3. Expressing a warm and sincere greeting.

<sup>ˈ</sup>How <sup>˘</sup>are you, Mr <sup>ˌ</sup>Brown?

<sup>ˈ</sup>Good <sup>˘</sup>eve-ning, Dr <sup>ˌ</sup>Green.

<sup>ˈ</sup>Have a <sup>˚</sup>nice <sup>˘</sup>week-end, <sup>ˌ</sup>Ted-dy.

I'll <sup>ˈ</sup>see you <sup>˘</sup>soon, <sup>ˌ</sup>Jim-my.

### 10.4 Clarification of the pronoun mentioned in the previous Falling Intonation.

He is a <sup>˘</sup>nice <sup>˚</sup>chap, <sup>ˌ</sup>John.  
 ( a nice chap = John)

### 10.5. Expressing the speaker's comments

Tell me when to start.  
 To- <sup>˘</sup>mor-row, I <sup>ˌ</sup>think.

### 10.6. Asking the listener's view or opinion

She is a <sup>ˈ</sup>nice <sup>˘</sup>girl, <sup>ˌ</sup>is-n't she?



B: He was               \ sor-ry, | \ ve-ry. (ICE, 273)  
                              $\nearrow$              $\nearrow$        

## Conclusion

Even in Japan, millions of books written in English are readily available, so opportunities to encounter written language are plentiful if we want to take advantage of them, but opportunities to engage in spoken live-language are far fewer. It is therefore very important for our students to make full use of opportunities to speak. Silent reading is nonsense for our students from the standpoint of spoken live-language performance.

Even though we may have much knowledge of music, we will never become a good pianist without continuing practice. Or suppose we go to art exhibitions hundreds of times, still we are unable to paint as an artist does. It is the same with English. Practice is needed for our students to handle intonation and become a good speaker. Even we have a broad knowledge of English grammar and already know hundreds of words, I would say speaking with correct prosodic features is still a matter of crucial importance.

In order to be skilled in reading or speaking English as a good model for Japanese students, we have to learn intonation theoretically, improve our intonation and develop our own personal style of English intonation by acquiring the way which suits us best.

Since the term allotted for English education is short and limited, I would like to request that our students try their utmost concentration and full participation in his or her phonetics class. It is the goal of lectures on English Phonetics to orient students toward an excellent command of English intonation.