

1971

# Rhythm and Music in Language: a Help and Training Device for Teachers and Students


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## Recommended Citation

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RHYTHM AND MUSIC IN LANGUAGE

A Help and Training Device for Teachers and Students

Ronald W. Bradley  
Mary-Ellen Everhart  
School for International Training


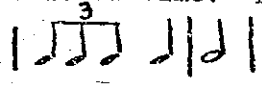
June 1971



## INTRODUCTION

Intonation, Rhythm, Stress! What are they? One who has given any thought to language knows that every language is made up of a string of individual sounds which combine into words, phrases, and finally sentences. These could be called segments. We might liken these segments to individual notes and phrases on a musical score, if we will think of each note as a sound which could also be a word and which combines into phrases and finally into what we might call a musical sentence. If we would picture what we have so far on our musical score there would be nothing more than a string of quarter notes on perhaps the note G. Now we all know that there is a lot more to music than that. Of course, language would have more variety and meaning than the quarter notes on G which would all have the same quality of sound. But if each note were to be played by a different instrument, then we would have a change in quality as we do in the sounds of a language. I think we are all agreed that there is more to music than just a string of notes all on the same pitch (the highness or lowness of a sound) and all the same duration (the length of a sound). As we have said, music has words, or meaningful units of sound or sounds, phrases, or strings of words ending with pauses which have the feeling of wanting to continue, and sentences, which end with a feeling of finality. These are the basic frameworks within which language and music are fit. Within this framework, there is a great deal more. If we think of what we like best about the Chopin Etudes or some of our favorite Beatle tunes the first thing that might come to us is their beautiful melodies. Now we all know what a melody is; where the sound doesn't just stay

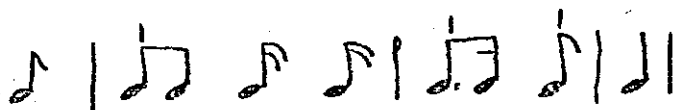
on the note G, but where there are a great variety of pitches, adding beauty and variety and even meaning. Well, it's the same in language. It has a melody too. And this melody in language is called intonation. It also carries with it beauty, interest and variety, and it is different for every language. But most of all, intonation carries meaning, the difference between a statement, a question, and a command, as well as differences in mood - surprise, interest, anger, curiosity. And in English, as we will see later, even the same sentence could have different meanings depending on the intonation used. Most of the languages of the world have intonation as a very important and meaningful part of its system. But there are also many languages in which pitch variation plays even a more important role. If we have ever heard Chinese, we know that there is something rather strange about it, unless you're Chinese, of course, and that strangeness is due to where the changes in pitch take place. In what we will call an intonation language, such as English and French, the pitch variation takes place over the phrase and sentence. But in Chinese the significant or meaningful pitch change takes place within a single word, so that two words which have the same segment of sound would be distinguished in meaning by pitch and pitch contour (pitch contour being a variation in pitch on a single segment). For instance, the word "ma" in Chinese has four distinct meanings, that is, it is four different words, depending on the pitch, previously defined, that is used. These defined pitches which are meaningful are called "tones", hence languages which employ them in their system are called tone languages, of which Thai is another example.<sup>1</sup>

Now let us return to our musical example. Now, we no longer have merely a string of notes on G. We have now used several different notes. However, we still have only quarter notes, and that's not very interesting. If we will consider what we like best about our favorite Spanish, Russian, African music and rock and roll, we might think, why certainly, the rhythm. Yes, that is the missing element in the complete musical score. Just as all music has rhythm, so all human speech has rhythm. And rhythm can be defined as "the recurrence of movement". It is what happens within a series of pulses which reoccur at equal intervals of time. For example, in music two rhythms, such as  and  take place within an equal interval of time. But within those two points in language somewhat the same thing is true. In many languages of the world, French and Hindi, for instance, it is the syllables that recur at equal intervals of time, giving a very even effect to the rhythm. This is called syllable-timed rhythm, whereas in languages such as English and Arabic it is the stressed syllables, or syllables with the most emphasis which recur at equal intervals of time. This gives the rhythm a more syncopated or jerky feeling. This is called stressed-timed rhythm.

For example, here is a sentence in English:

I'm <sup>1</sup>going to the <sup>1</sup>beach tom<sup>1</sup>orrow.

Since English is stress-timed, it is those points that have the most emphasis, marked (1), which occur at equal intervals. The rhythm written in musical notation would look like this:



Notice that the rhythm is quite syncopated. Now if we were to take this same sentence and impose French rhythm on it, the rhythm would perhaps look like this:



(The double (||) signifies the main stress of the sentence - this distinction will become clearer as you read about French intonation.)

It is also rather interesting how this whole idea of rhythm and accent of a country's language is so closely linked with its folk music. Leonard Bernstein in a paper on the subject says, "...folk songs reflect the rhythms and accents and speeds of the way a particular people talk. In other words, their language - especially the language of their poetry - grows into musical notes. And these speaking-rhythms and accents finally pass from folk music into art, music or opera, or concert music of a people; and that is what makes Tschaikovsky sound Russian, and Verdi sound Italian, and Gershwin sound American." 2

Let us look at some of his examples. For instance, here is a Hungarian folk song.



Why does it sound Hungarian? It is, according to Bernstein, because almost all Hungarian words are accented on the first syllable. Now let us look at an example of a French folk song.

*Simply and sweetly*

Il é-tait un pe-tit na-vi-re, Il é-tait  
un pe-tit na-vi-re, Qui n'a-vait ja-ja-ja-mais

In examining this folk song, think of our above discussion of rhythm and you will discover that almost all the syllables are equal, not so much in length as in accent. So this is a good example of syllable-timed rhythm coming to expression in French folk music. This evenness and smoothness of the French language can also be seen in another example which Bernstein offers; Satie's Gymnopédies for piano:

*Slow*

*pp* etc.

(Other examples can be seen in the attached paper.)

The other element of music which we have already touched upon is that of "accent". I'm sure we have all heard Haydn's Surprise Symphony, where he lulls his audience to sleep only to startle them with a sudden burst of sound. Well, that's an extreme example of accent, or, also used in language, stress. Stress gives some words or some parts of a word prominence. And as seen above it gives an "accentual" pattern. To the listener, stress is perceived at volume, that is,



loudness, and duration, or length. To the speaker it is perceived as energy. It is important to note here that stress in some languages carries meaning, that is, it is phonemic. English affords the clearest example: for instance, the words permit - permit and reject - reject are distinguished as nouns and verbs virtually by the different placement of the stress. Furthermore, a sequence of two words such as "white house" could have as many as three meanings depending on any variety of stresses. (This will be discussed in detail in the section on English intonation.)

In our earlier parallel with music we said that both music and language have individual sounds, words, phrases, and sentences. Well, in language these phrases are very important because they are a definite part of the rhythm. If we will think about it, we will realize that at the ends of these phrases and sentences there are pauses. These pauses result from the need for a breath or are some indication of meaning. The phrases themselves are called breath groups, or in French, stress groups where no breath is taken. The importance of all this will become clearer as we delve more deeply into the intonation and rhythm of both French and English.

Now that we know what intonation is, we may ask ourselves the following questions: Why study it? Is it that essential to language learning? How can intonation be taught in a language course?

It was for the purpose of answering these questions that we undertook our study of the intonation of languages, with concentration on English and French. To ascertain the importance of intonation to a language, and the part it plays, particularly as related to meaning, it is helpful to examine how infants perceive intonation.

Several studies have indicated that infants relay meaning by use of intonational patterns long before they learn the sound system of a language, by mimicking the adults around them. This occurs during what Lieberman calls "the babbling stage", from the first few weeks of life up to around 11 to 13 months.<sup>3</sup> During this time, children use meaningful intonational signals, using only limited sounds and vocabulary.

Brown reports an incident where a child was asked a question in German, Wo ist das Fenster? (Where is the window?).<sup>4</sup> The child seemed to understand, because he promptly pointed to the window. The child was then asked the same question in French (using the same intonational pattern) and the child again pointed to the window. He also correctly responded to the same question in English. When the child was asked Wo ist die Tür? and still indicated the window, the evidence seemed pretty strong that he was reacting to the intonational contour common to all four questions, rather than to the phonetic differences in each language.

It is thus interesting to note that children perceive intonation patterns for both conveying and receiving meaning before their vocabulary and sound system develop to any significant extent. However, intonation plays an important role even when the adult has acquired other features of his language. This was clearly brought out to us quite accidentally last fall, while trying to communicate with a Mexican student of English. Maria Theresa's knowledge of English was very limited at the time and communicating with her was often accomplished by body language as well as speech. At this particular time, we had used a fairly long sentence and had lost her. She asked us to repeat more slowly. Unconsciously, one of us imposed Spanish intonation (that is, a more even rhythm with less stress on the syllables) on the English sentence. There was no decrease in speed, nor change in vocabulary. The amazing outcome was that she immediately understood what was said!

If we seriously consider how we communicate meaning from day to day, we quickly realize that the lexical content of our speech is minimal in importance. As a matter of fact, how many times do we consider the intonational connotation of a phrase to be more significant than the actual lexical content? This may be more simply referred to as "tone of voice". Johnny knows to what degree he'd better heed his mother's cry when she says

Johnny come here now

as opposed to

Johnny come here now.

This phenomenon, of course, is most common in English, but it serves to illustrate to what extent intonation can be essential in carrying specific meaning of an utterance.

It is also interesting to note here that within a given language system, intonation is redundant, so that even Austrian and Swiss German are merely an accentuation of the basic German pattern. Therefore, within any language's intonation system anything from a near monotone to a most accentuated pattern is redundant. But as soon as we impose French intonation on German, for example, the change immediately affects meaning because now we are dealing with two different systems.

Now that we have considered the importance of intonation as related to our native language, let us once more examine its place in the foreign language classroom. Anyone who has heard a foreigner speaking English and who has stopped to consider why he sounds "different" has come to the conclusion that no pronunciation of a language sounds natural unless the intonation is at least fairly acceptable. Even when individual sounds (vowels and consonants) are correct, sentences carrying incorrect melody seem foreign and the speaker is labelled "a foreigner with a bad accent". 5

The foreign language teacher who considers rhythm and intonation to be more important than clear pronunciation will be less likely to enunciate "slowly and clearly" and will instead attempt to keep rhythm and speed normal, perhaps adding more frequent pauses at the ends of intonational contours, but maintaining native rhythm at all times. It is our belief that this approach to teaching a spoken language is the most efficacious for achieving fluency and meaning.

Hopefully, this report and the tapes which accompany it will provide a more acute awareness of:

- 1) The need for teaching intonation in the foreign language classroom;
- 2) The problems involved in teaching correct intonation;
- 3) The characteristics of English and French intonation.

We have recorded short conversations in 23 different languages.\* For the teacher of English as a second language, these recordings can be useful for picking out possible problems a native speaker of any of these languages may have while learning English intonation. The tapes also include numerous exercises and games which could be used both in English and French classes, for ear-training as well as specific work on French and English rhythm and intonation. Attached to this report is an appendix where all the games are written out, as well as directions for using them in the classroom.

Finally, this study, particularly the tapes, should help to develop good listening skills for both the student and the teacher.

\* Included in these conversations, are two statements, two questions, (one WH-type, and one yes-no type) and two commands, so as to ascertain the intonation patterns for these types of sentences.

Characteristics of English Intonation

Before dealing with the subject of English intonation, it is important to note the complexity of the subject. As we have already said, English stress and intonation is phonemic, that is, it is meaningful rather than mechanical - mechanical in the sense that there are predetermined pitch contours which are untouched by emotional contexts (Pike cites, as an example, an Indian language in Oklahoma). English, on the other hand, as Pike points out, can ask the English question "Where are you going?" in a great variety of ways, including those of curiosity, surprise, disdain, and by emphasizing various words. I'm sure we have all heard our mothers say "It's not what you say, but how you say it". We have already seen an example of this in the rationale. Pike also points out that there is not just one contour for a question and one for a statement, but that there are many contours that can be used for questions and that for any contour used on a question the same contour could be used on a statement. All this is merely to show the overwhelming complexity of English intonation. For the most part, then, this paper will not be dealing with the emotional content of intonation, but rather with those elements necessary for the teacher of English as a second language to have a grasp on the subject and the problems involved for the foreign student learning English.

In dealing with the subject of English intonation and rhythm we will be concentrating on the elements of stress, pitch, and juncture and rhythm.

As we have already seen, stress in English is phonemic. This was illustrated by contrasting pairs of words such as subject - subject, contrast - contrast, produce - produce, and re-write - re-write. The different placement of stress in these pairs of words actually changes the meaning of the two words - the first being a noun and the second a verb. But now consider the word "animate" in the following sentences. "He will animate his character". "His character is animate." You will notice that both words have the greatest accent on the first syllable. This is called a "primary stress". Every word has at least one primary stress when considered in isolation. What is it that distinguishes the two words and makes their meanings clear? You will notice that in the adjective form that the last two syllables have equal stress, but that in the verb form the third syllable has a little weaker stress than the first syllable but is stronger than the second syllable. Thus we have at least three phonemic, or meaningful, stresses in English, and linguists have postulated four phonemic stresses in English. They are called: (1) primary /1/ (2) secondary /V/ (3) tertiary /N/ and (4) weak /u/, primary stress being the loudest and weak stress the softest. It is important to note here that these stresses are really very relative as far as absolute loudness is concerned. No two people speak exactly at the same general volume, or loudness, but within any one string of sounds pronounced loudly or softly the stress relationship within that string remains the same. Thus, the adjective "separate" spoken loudly or softly still retains the same stress. Now if we will consider a string of words - a phrase, or breath group, or sentence - we can superimpose these four stresses upon the lexical items themselves showing the stress relationship of words in a string

rather than merely the syllables of a word. Consider the following string.  
"John is going to the market." We have a primary stress on the first syllable of "market", a secondary stress on "John", a tertiary stress on "is" and weak stresses everywhere else.

We have already seen that stress is phonemic in words. How about sentences? Any native speaker of English would agree that the following sentences, even though lexically the same, have different meanings or at least a different focus:

That is my book. (not the other thing)

That is my book. (there is no doubt)

That is my book. (not his or hers)

That is my book. (not my pen)

So the importance of the placement of stress in a sentence is a worthy thing to note.

One other use of stress, also phonemic, is that it signals the relationship between two words. The classic example is "black bird". How do you perceive it? If we place a primary accent over "black", and a tertiary stress over "bird", then we have a species, which may or may not be black. But if we put a primary stress on "black" and a secondary stress on "bird", then we have a bird which is black. There are a great variety of such examples: White House - white house, play house - playhouse, orderly-room - orderly room, etc.

Pitch is the next element we will consider. Linguists also postulate four phonemic pitch levels. Just as the four stresses are relative to one another, so it is with the four pitches. Most linguistic texts signify the highest pitch with the number /4/ and the lowest with the number /1/. (It is important to



realize that this system is not universally employed and sometimes /1/ is the highest, or a different system altogether is used.) One system which corresponds to the number system but which facilitates matters is the use of lines. For example, "Where are you?" would look like, "Where are you?" And pitch 4, not shown here, would be a line well above the word. Now, if we will think about what happens when a word is stressed, you will see that it is pushed out of the intonation line, therefore, stress and the intonation contour are closely linked. We have already seen this in the previous example - "That is my book." The stressed word actually changed the intonation contour. Let us look at an example that Roberts gives:

Where are you going?

might be a mother fearful of where her child is headed for.

Where are you going?

would be the feeling of exasperation.

Where are you going?

Here, is the importance of wanting to know where. And

Where are you going?

has the feeling of persistent questioning. All of these illustrate, of course, the great variety of meanings that can be derived from a single sentence by means of various pitch levels. Of course, the connection of these four levels is not always abrupt, but many times tends to raise or fall to the next level, as shown by the slanted lines in the above examples. This is especially true

of what are called clause terminals, or the falling or rising pitch at the ends of sentences. It is a broad general rule that a falling terminal at the end of a sentence signifies a statement, a command, and a WH-type question which usually falls but may rise with a feeling of curiosity. And the terminal ending which rises usually signifies a yes-no type. Of course, a yes-no question is also usually signified by the reversal of the subject and verb. It is also true that a yes-no question can have a falling terminal but with a slight change in meaning, for example, "Are you going?"<sup>↗</sup> is merely an inquiry, but in, "Are you going?"<sup>↘</sup> the facts are wanted. In tag questions, such as "You like English, don't you?"<sup>↗</sup> and "You like English, don't you?"<sup>↘</sup> the first is a yes-no question but the second is really not a question, but is only an asking for agreement. One final interesting thing that happens is that the pitch rises at the end when a question is repeated by the listener and also when the listener is surprised at a statement such as, "You're writing a book."<sup>↗</sup>

Another point we must consider in our discussion of English intonation is a phenomenon which occurs in English but not in French, which is perhaps due to the differences between stress-timed and syllable-timed rhythm. For example, in English the series of two words "gray train" and "great rain" are very similar in pronunciation. Phonetically, they are almost the same. I say almost because something happens to the /t/ and /r/ in the second series of words. Now if we write these phonemically, there is a meaningful element we must add. It is called "plus-juncture". Here are the two series written phonemically: /grey + treyn/ and /greyt + reyn/. This is exactly the point; /t/ and /r/ are pronounced differently in different environments. The (+) indicates the environment of the two sounds. Other examples are: ice cream - I scream,

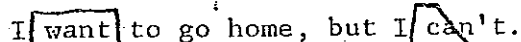
night rate - nirate, dope ad -dough pad, etc.

We have already mentioned that a sentence has various stresses including at least one primary stress. The primary stresses in English are important because around them everything else revolves, and this is what makes English stress-timed. However, more important than the primary stress, for the teacher of English, is that he be familiar with what happens on either side of that stress. Here it will be helpful if we define some terminology. Consider the sentence, "I have to go to school". Where does the primary stress fall? On "school". According to Pike, all the syllables that lead up to the primary stress, the primary stress itself, and those syllables which come after, until there is finally a pause, is called the total contour. The primary stress he calls the primary contour, and those syllables which come before the primary stress, he calls the precontour. So in the above example, the whole sentence is the total contour, "school" is the primary contour, and "I have to go to" is the precontour. Now it is possible for a sentence to have more than one primary contour, such as the sentence "The books in the library are good" which has primary stresses on "books" and "good", and therefore there are also two primary contours.

Now, in considering the problem of rhythm it is important to know that English is spoken with "recurrent bursts of speed, with long or short pauses. . ."  
"A sentence or part of a sentence spoken with a single rush of syllables uninterrupted by a pause (such as, "I want to go") is a rhythm unit."<sup>6</sup> But a sentence like "He likes school, but he doesn't like to study" has a break, and therefore two rhythm units. A simple rhythm unit is one which contains only one primary contour. This is extremely important because it is the basis for stress-timed

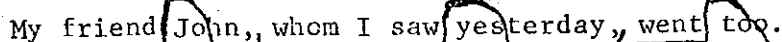
rhythm of English (remember, in stress-timed rhythm the primary stresses come at equal intervals of time). Again this is why English has the syncopated, jerky effect that it has, because all of the unstressed syllables are jammed in between the primary stresses. Many times, when two or more of these simple rhythm units come together with no pause between them they form a larger rhythm unit called a complex rhythm unit. The sentence, "The books in the library are good" actually has two simple rhythm units, because, as we've seen, it has two primary stresses, and therefore two primary contours. But if we were to pronounce this sentence without a pause between "library" and "good" we would have a complex rhythm unit. Why is all this so important? Because, it is what happens within these rhythm units that gives the foreign student of English so much trouble. What does happen, then? Namely this: the precontour is pronounced rapidly with a "single burst of speed".<sup>7</sup> And the syllables which come after the primary contour are pronounced more slowly than the following precontour, and at the same time, if followed by a short pause tend to level out, often dropping in pitch. For example,

I want to go home, but I can't.



"To go home" is pronounced more slowly than "but I", the new precontour. Also the pause between "home" and "but" is short, so the same pitch is maintained. However, if the pause is long, there is a slight rise in pitch before the pause, as in the sentence,

My friend John, whom I saw yesterday, went too.



In the following, Pike gives us a few ideas on how the foreign student can improve his use of stress-timed rhythm:

In reading material marked for intonation, one of the most important rules for the foreigner is that he carefully maintain rhythm by observing these facts. That is, a simple rhythm unit should be pronounced with a single burst of speed; in such a unit, the stressed syllable should be relatively long, and the unstressed ones short; the precontour should be extra rapid. In a series of complex rhythm units, the proper effect for normal English can only be obtained (1) by keeping the stresses fairly evenly spaced, (2) by retaining the internal unity of each total contour through pronouncing each one of them with a single burst of speed, making the stressed syllable long, the following stressed ones short, and the precontour extremely rapid, and (3) by separating within a complex rhythm unit, the various total contours (a) by maintaining the speed division indicated, in which the precontour of the second total contour is more rapid than the end of the preceding total contour, and (b) by a slight weakening of the strength of the sound at that point.

The Characteristics of French Intonation

Of all the commonly taught languages (French, German, Spanish), French is probably the most different from English, from the standpoint of intonation. Where English is syncopated rhythmically and full of unevenly placed stress, French is just the opposite - an even, smooth-flowing language with stress occurring almost without exception at the ends of phrases.

The "French accent" which is so commonly talked about, is, in reality, a question of intonation and rhythm. Indeed, it has been said that an American speaking French is far more easily detected by his mistakes in intonation than his faults in pronunciation; rare is the American who can perfectly reproduce French intonation. The reason most Frenchmen shudder to hear an American asking for directions in Paris is that the American is undoubtedly imposing his English intonation on French, while he may be reproducing perfectly the French sounds.

The purpose of this short paper is two-fold: one, to explain, in the simplest terms, just what the characteristics of French intonation are; and secondly, to point out the problems an American learning French would most probably have, considering the differences between the two languages. English intonation has been previously explained; therefore this will not be repeated, except to point out major differences.

The first and most important thing for the French teacher to know is that stress is not phonemic in French, as it is in English. By and large, (with very few exceptions, which will be pointed out later) all syllables in a French utterance receive the same amount of stress, thus giving it that even rhythm for which it is so well-known. A regular beat occurs with each syllable, and

every syllable in French has the same length except for the syllables which occur before a pause - these syllables are longer. The only syllable which has any kind of accent (or lengthening, which is really what happens, rather than increase in volume) is the last syllable of a given phrase.

The major task for the English speaker learning French is to unlearn English stressing habits. Avoiding English stress patterns is a necessary prerequisite for achieving good French intonation.

The second biggest problem English speakers face concerns syllable boundaries. In English, the boundaries between words are well-marked in speech but in French, the syllable boundaries do not necessarily (and rarely do) coincide with word boundaries. The general tendency in French is for syllables to end in a vowel. This is known as open syllabification and is one of the most outstanding characteristics of French, because it shows that French is spoken in syllables, not in words. This is why it is known as a syllable-timed language, previously defined.

In the few cases where a syllable does end in a consonant, it's more likely that the consonant will be pronounced at the beginning of the next syllable. For example in this sentence:

Nous avons une jolie chambre.

the Frenchman would pronounce it thus:

/nu za vo zün zo li šäbr/

rather than /nuz av öz ün zol i šäbr/ which would be a mistake an American would commonly make, since many English syllables end in consonants.

Thus, it is obvious that syllable boundaries in French have no relation whatsoever to word boundaries.

Now, these syllables are combined in two different kinds of groups: stress groups (groupes rythmiques) and breath groups.

A stress group occurs when a series of syllables (one or several words) are run together to form a "phonetic word" (mot phonétique). The last syllable in a stress group receives a slight stress or lengthening.

A breath group is any sequence of speech that can be pronounced in one breath. A noticeable pause occurs at the end of a breath group, (although it is not always the end of a sentence) and a breath group may contain more than one stress group.

In French, there are three major intonation patterns:

- 1) Rising-falling (declarative sentences)
- 2) Rising (yes-no questions)
- 3) Falling (questions beginning with interrogative pronouns or adverbs; some exclamations; some commands.)

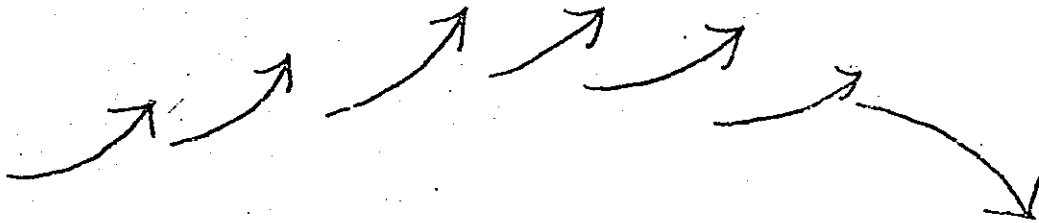
Here, we will concentrate on the pattern of declarative sentences; a short declarative sentence has a simple rising-falling pattern:

J'ai vu mon ami hier soir. (I saw my friend yesterday evening)

It may be said that the rising part of the sentence is a kind of question, because our curiosity is aroused. When did you see your friend? or where? or how? The rising intonation denotes a continuing thought and only when our curiosity is satisfied, does the intonation fall, thus forming a complete declarative sentence.



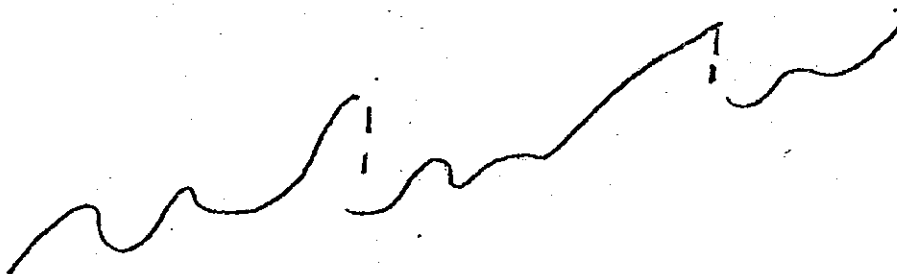
A longer declarative sentence is more complex. It too consists of a rising-falling pattern, but the statement is broken up in a series of ascending groups; each stress group begins at a higher point than the preceding group, but lower than the last syllable of the preceding group. When the "high point" of the sentence is reached, each group begins at a lower point than the preceding one. It may look something like this:



A frequent error Americans make is to try to imitate this pattern, falling back on the same pitch level at the beginning of each stress group, without making any progress towards the "high point" of the sentence. Some English speakers manage to rise to the proper pitches, but drop down too far at the beginning of the following stress group, like this:

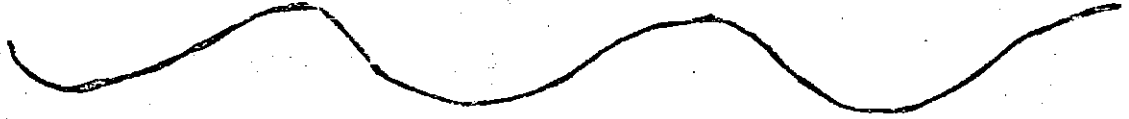


instead of:



etc.

Thus, a monotonous, up-and-down pattern is produced:



Many people mistakenly think that the above pattern is French intonation.

Another common mistake connected with this problem is putting heavy stress on the points of high pitch. This is a carry-over, of course, from English where high pitch and stress are usually correlated.

Up until now, this paper has only dealt with one kind of stress found in the French language -- that is, terminal stress. There is one other kind of stress which should perhaps be mentioned: emphatic stress. This type of stress expresses emotion or is used to emphasize an idea. It usually occurs on the first or second syllable of a noun or adjective and is produced by lengthening the consonant of that syllable. The sound is thus lengthened and the pitch is usually raised. Examples:

Imbécile! (Idiot!)

\*Quelle surprise! (What a surprise!)

\*Incroyable! (Incredible!)

It is important to note, however, that emphatic stress is far less common in French than in English. The French language is more likely to change the construction of a sentence in order to place the word to be stressed at the end of a stress group, the normal place for stress in French, than to stress any given word in a sentence as English does.

For instance:

I want to go

Instead of saying Je veux y aller, a Frenchman would say:

C'est moi qui veut y aller. (It is I who want to go)

The word moi occurs at the end of a stress group, thus being stressed.

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FOOTNOTES

<sup>1</sup> "In a tone language the pitch of each syllable is basic to the word. Pitch contours are located on single syllables, not on groups of syllables. Every syllable has a pitch which is determined by the innate nature of the word itself. . . Further, the tones of tone languages, with the consonants and vowels, form the actual words themselves so that no word exists unless its phonemic tone exists along with its sounds." (Pike, p. 25)

<sup>2</sup> The source of this paper is unknown; a copy of it may be found in the appendix.

<sup>3</sup> Philip Lieberman, Intonation, Perception and Language, MIT Research Monograph No. 38, Cambridge, Mass., 1967, p. 45.

<sup>4</sup> Roger Brown, Words and Things, An Introduction to Language, The Free Press, New York, 1958, p. 202.

<sup>5</sup> Kenneth Pike, The Intonation of American English, University of Michigan Press, Ann Arbor, Mich., 1945, p. 20.

<sup>6</sup> Ibid., p. 34.

<sup>7</sup> Ibid., p. 187.

<sup>8</sup> Ibid., p. 187.

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APPENDIX

LIST OF LANGUAGES RECORDED

Spanish  
French  
Greek  
Portuguese  
Tagalog  
Persian  
Hindi  
Arabic  
Korean  
Japanese  
Indonesian  
English  
Swedish  
German (Austrian)  
Swiss German  
German  
Dutch  
Norwegian  
Russian  
Amharic  
Swahili  
Thai  
Chinese

## GAMES AND EXERCISES

### English as a second language

I. You will hear two groups with four sentences in each group. Listen carefully to these sentences, trying to hear what the sentences in each group have in common.

- I.
1. Are you going downtown?
  2. Do you like to play cards?
  3. I like ice cream don't you?
  4. Do you study English?

- II.
1. I am going downtown.
  2. I like to play the flute.
  3. You are doing your homework, aren't you?
  4. We are eating our lunch.

In the sentences in the first group, the voice rises at the end of each sentence. In the second group, we hear four sentences where the voice falls at the end. Now listen to the sentences again.

II. Now you will play a game to see how well you can distinguish between rising and falling. The voice on the tape will say some of the sentences you had in the last exercise, only this time on a "la". On your paper, number from one to eight. After each number, put either an arrow going up (rising) or going down (falling).

1. Are you going downtown?
2. Do you study English?
3. You are doing your homework, aren't you?
4. I like ice cream, don't you?
5. We are eating our lunch.
6. I am going downtown.
7. I like to play the flute.
8. Do you like to play cards?

III. On the paper which you have before you, mark with a heavy line the syllable in each sentence which has the most emphasis. Each sentence will be read twice. Here's an example: On your paper you will notice that pen is marked with a heavy line. Pen has the most emphasis.



Example: It's a pen.

1. This is a desk.
2. That's a window.
3. What's this?
4. Where are you going?
5. Give me your pen.
6. Is this yours?
7. Are you a teacher?
8. What time is it?
9. How are you?
10. What are you doing now?
11. I like milk very much.
12. When are you coming back?
13. Don't do that!
14. Open the door, please.
15. Yes, I do.

- IV. On your paper, you have 10 sentences. Listen to the voice on the tape; as each sentence is pronounced, draw a line through the sentence, indicating the pitch level and the rising and falling pattern for the entire sentence. Each sentence will be read twice. Let's look at an example:

I study English.

1. You are studying hard.
2. You study French, don't you?
3. I want to go.
4. Where's your pen?
5. Yes, I do.
6. Is this a pen?
7. I want to go, but I can't.
8. I can swim, dance, and sing.
9. I like the color red, don't you?
10. What's your name?

- V. Now you will hear 10 sentences, first in English, followed by "la". Repeat each sentence yourself, saying "la".

1. You are studying hard.
2. You study French, don't you?
3. I want to go.
4. Where is your pen?
5. Yes, I do.
6. Is this a pen?
7. I want to go, but I can't.
8. I can swim, dance, and sing.
9. I like the color red, don't you?
10. What's your name?

VI. Now you will hear those ten English sentences repeated once more; this time, repeat each sentence on the "la".

French

I. In this exercise you will hear several English sentences pronounced in a chant-like way. What do these sentences have in common? Where do the stresses occur?

1. Tommy isn't here!
2. Susie is a tattle-tale!
3. You are wrong!
4. I won't tell!
5. I've got a lollipop!
6. Tommy, come here!
7. Mommy, I want a drink of water!
8. You're going to get it!
9. We're going home!
10. You can't see it!

Now listen to these sentences again as they are repeated using regular English intonation.

Now listen to these sentences again, as they are repeated both ways, on "1". What do you think are the differences between the two?

II. Repeat the following English and French words. These are cognates, that is, the words are spelled the same or similarly, but the pronunciation is different. See if you can make a generalization about the pronunciation of the French words and the English words. How are they different in terms of stress and rhythm?

3-syllable words:

|            |            |
|------------|------------|
| animal     | animal     |
| impossible | impossible |
| capital    | capital    |
| liberty    | liberté    |
| accident   | accident   |

4-syllable words:

|             |              |
|-------------|--------------|
| academy     | académie     |
| institution | institution  |
| animation   | animation    |
| photography | photographie |
| explication | explication  |
| Alabama     | Alabama      |
| electorate  | électorat    |
| philosophy  | philosophie  |
| psychology  | psychologie  |

5-syllable words:

|                  |                  |
|------------------|------------------|
| capability       | capabilite       |
| international    | international    |
| determination    | determination    |
| incomprehensible | incomprehensible |
| electricity      | electricite      |
| constitutional   | constitutionnel  |

Did you notice the differences in stress and rhythm patterns? In English words, there may be more than one stress and on any syllable; but in French, the stress is always on the last syllable. Notice the rather jerky rhythm of English and the even rhythm of French.

Now count in English: 1-2-3

Notice, you stressed 3, the last syllable of the sequence.

Now pronounce 1-2-3 capital

The next exercise will give you some more practice in pronouncing French words. First, count, then repeat the word, using the same stress pattern as when you count.

1-2-3- animal            etc. for all the words

III. Listen to the next two groups of sentences and try to hear what the sentences in each group have in common:

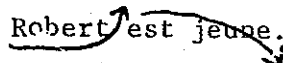
- I. 1. Charles est intelligent.  
2. Robert travaille beaucoup.  
3. Marie est fatiguée.  
4. Je suis bête.

II. 1. same sentences, but (interrogative)

You have noticed that in the first group, the sentences seemed to rise towards the middle and fall at the end. In the second group, however, the sentences rise throughout.

Listen to them again.

- IV. Next you will hear ten sentences. These 10 sentences are also written on your paper. You are to listen to each sentence and draw arrows underneath each sentence, indicating where it rises and/or falls. Example:

Robert  est jeune.

1. Je m'appelle Marie.
2. Etes-vous marié?
3. Il a 20 ans.
4. Je vais en ville maintenant.
5. Nous sommes fatigués.
6. Elle étudie français.
7. Où est ton stylo?
8. Tu fais tes devoirs, n'est-ce pas?
9. Aimez-vous jouer aux cartes?
10. Nous allons manger à midi.

- V. The next exercise is called expansion or sentence building. Repeat each phrase as you hear it, being careful to keep the sentence intonation the same, no matter what the length of the sentence.

1. Nous avons dîné || ensemble || au restaurant grec || qui se trouve en ville || près du théâtre.
2. Il est arrivé || avec lui || hier soir || à trois heures || de l'après-midi.
3. Marie et Claude se promènent || dans le bois || avec leurs amis || qui viennent d'arriver || de la France.
4. Chaque matin je me lève || de bonne heure || afin de lire || et de faire ma toilette.
5. Tu as vu le film || qui s'agit d'une femme || qui est morte pendant la guerre || en sauvant un soldat || qui essayait de voler du pain.
6. J'ai rencontré ma soeur || ce matin || en ville || où elle faisait des achats || pour son mari || qui voyage maintenant.

Ear-training

I. This exercise is for the purpose of recognizing different languages. The exercise starts out with excerpts of conversational French, German, Chinese, Portuguese, and Arabic. The excerpts become shorter and shorter, forcing the listener to recognize more quickly and spontaneously the language. Also, as the exercise progresses, new languages are inserted, and the listener must recognize this, too. The new languages which are introduced throughout the tape are: Korean, Hindi, Thai, Greek and Tagalog.

This exercise can also be a game, using a peg board. Each of the ten languages can represent a color of a peg. As the student hears a language, he advances the peg which represents that language.

II. In this game we hear a conversation in four different languages: Portuguese, Korean, English, and Greek. (See attached sheet for conversation, made up of questions and answers.) The object of this game is to match the questions and answers of each language; if you will look at the attached sheet, showing the sequence of languages, you will notice that the exercise becomes progressively more difficult, since the questions and answers of each language become more spread apart. This game can also be played using a peg board, where each language represents a color of a peg.

III. In this game, the student will listen to groups of three languages. In each group, there is one language which is unlike the two others, from the point of view of intonation. The student must choose which one is different. Here are the languages represented on this tape:

Persian  
Chinese  
Spanish

French  
English  
Spanish

Korean  
Greek  
Thai

Chinese  
Thai  
Japanese

Indonesian  
Greek  
Swahili

Korean  
Thai  
Russian

English  
Norwegian  
Greek

Amharic  
Arabic  
Hindi

Swedish  
English  
French

Tagalog  
Swiss German  
Norwegian

Swedish  
Norwegian  
Korean

Persian  
Dutch  
English

- IV. Here, you will hear a series of languages followed by a pattern sung on "la". You are to indicate whether the "la" pattern is similar to or different from the intonation and rhythm pattern of the language.

(this is followed by a group of sentences in German, French, English, Greek and Swiss German followed by "la".)

- V. You will hear a series of two languages which we will call A and B. These will be followed by the intonation and rhythm patterns sung on "la". You are to listen to the two languages, and indicate in which order the "la" patterns come: A-B or B-A.

Example: English  
German  
English "la"  
German "la"

Answer: A-B

DIALOGUE (Ear-training game II)

1 Q Hello. What's your name?

A. My name is \_\_\_\_\_.

2 Q Are you married?

A Yes, I am.

3 Q Is your wife with you now?

A No, she isn't, but she will be joining me soon.

4 Q Do you think she will enjoy university life?

A I hope so, but I'm not sure because she is rather quiet.

5 Q I think she will enjoy the academic atmosphere, though, don't you?

A Yes, I think so.

6 Q What are you going to study next year at the university?

A I'm going to study several things which I need for my profession.

7 Q When do you think you will complete the university requirements?

A Oh, I should be able to finish them in 3½ years if I attend summer school as well as the regular sessions.

8 Q What do you want to do after you finish studying?

A I would like to have a business of my own, if possible.

9 Q Where would you like to start your business?

A It would be nice to have it in a big city in order to take advantage of the opportunities.

10 Q That sounds logical. But don't you think there will be a lot of competition?

A No, not really, in this particular business there is a lot of room for individual inventiveness.

11 Q How long do you think it will take you to be successful?

A It will probably take at least 3 or 4 years.



1 Q Portuguese  
A Portuguese  
2 Q Portuguese  
A Portuguese  
3 Q Portuguese  
A Portuguese

1 Q Korean  
A Korean  
2 Q Korean  
A Korean  
3 Q Korean  
A Korean

1 Q English  
A English  
2 Q English  
A English  
3 Q English  
A English

1 Q Greek  
A Greek  
2 Q Greek  
A Greek  
3 Q Greek  
A Greek

4 Q Korean  
A Korean

4 Q Portuguese  
A "

4 Q Greek  
A "

4 Q English  
A "

5 Q Korean  
Q Greek  
A Greek  
A Korean

6 Q Greek  
5 Q Portuguese  
A Portuguese  
A Greek

5 Q English  
6 Q Korean  
A Korean  
A English

6 Q Portuguese  
6 Q English  
A English  
A Portuguese

7 Q Korean  
7 Q Greek  
A Korean  
A Greek

7 Q Portuguese  
7 Q English  
A Portuguese  
A English

8 Q Portuguese  
8 Q English  
8 Q Greek  
8 Q Korean  
A Greek  
A Korean  
A English  
A Portuguese

9 Q Korean  
9 Q Greek  
9 Q English  
9 Q Portuguese  
A English  
A Portuguese  
A Korean  
A Greek

10 Q English  
10 Q Greek  
10 Q Portuguese  
10 Q Korean  
A Greek  
A English  
A Korean  
A Portuguese

11 Q Greek  
11 Q English  
11 Q Korean  
11 Q Portuguese  
A English  
A Korean  
A Greek  
A Portuguese

## LEONARD BERNSTEIN'S Young People's Concerts

simple and natural, not like the kind of complicated and grand music we usually think of as being in a symphony. But that's just what I mean: almost all symphonic music has folk music in it, in one way or another.

What is folk music, anyway? Folk music expresses the nature of a particular people or nation or race. You can almost always tell something about them by simply listening to their folk songs. Most people like to think that this kind of music just grew, like Topsy, naturally, without any composer. That's a wrong idea, because a folk song or folk dance was always written by *somebody*, only we don't usually know who it was. Somebody *did* write it; at least, he made it up, and it was passed on from fathers to sons and mothers to daughters for hundreds of years, without necessarily being written down.

Most of the folk songs we know belong to the past, when the different peoples of the earth were more separate from one another, and their characters and different natures were easier to tell apart. Sometimes these songs reflect the *climate* of a certain country; or they tell us something about its geography; or even tell us something about what the people do, like being shepherds, or cowboys, or miners, or whatever.

But most important of all, folk songs reflect the rhythms and accents and speeds of the way a particular people *talk*. In other words, their language—especially the language of their poetry—grows into musical notes. And these speaking-rhythms and accents finally pass from folk music into the art music, or opera, or concert music of a people; and that is what makes Tchaikovsky sound Russian, and Verdi sound Italian, and Gershwin sound American.



It all comes from the folk music, which in turn comes first of all from the way we speak. And that's the important thing we have to learn. First of all, take a Hungarian folk song that begins like this:

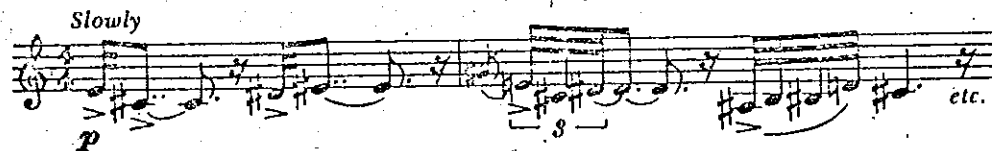


Why do we know immediately that that's a Hungarian tune? (I mean, *besides* the fact that it's got Hungarian words.) It's because the Hungarian language has a strange thing about it: almost all the words in it are accented on the first syllable. JÖjjön HAZa Edes ANYam. That's how you can almost always tell a Hungarian speaking English. He'll say, "I don't UNDERstand, BEcause I am HUNGarian." And that same accent naturally pops up in the music:



—all the stresses BELong at the BBeginning.

And so it's just as natural, when a great Hungarian composer like Béla Bartók writes his music, that he should compose in that same accent. Just look at this phrase from Bartók's beautiful *Music for Strings, Percussion and Celesta*:



Do you see how that tune is like a string of words in

LEONARD BERNSTEIN'S Young People's Concerts

a sentence, each one with a big accent (>) at the BEginning? And that's not even folk music any more; it's already moved into the concert hall.

The same thing is true of all music. It grows out of a people's folk music, which grows out of their language. Look at French, for instance. French is a language that has almost no strong accents at all. Almost every syllable is equal—not in length, but in accent. A Frenchman might introduce me like this, "Permettez-moi de vous présenter Monsieur Bernstein," with every syllable getting the same, even stress. But the minute you hear someone saying, "PerMETtez-MOI de vous PREsenTER MonSIEUR BERNstein," then you know he's not a Frenchman.

And these equal stresses show up just as clearly in French folk music. Do you know this charming French folk song?

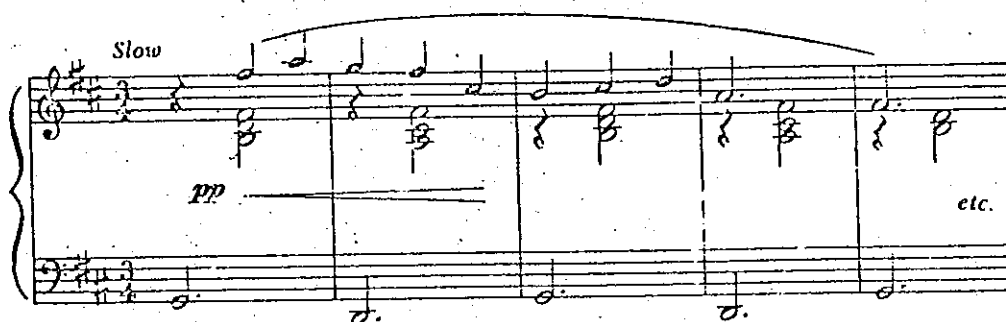
Simply and sweetly

Il é - tait un pe - tit na - vi - re, Il é - tait  
un pe - tit na - vi - re, Qui n'a - vait ja - ja - ja - mais  
na - vi - gué, qui n'a - vait ja - ja - ja - mais  
na - vi - gué, o - hé - o - hê!

## Folk Music in the Concert Hall

Do you see how equal all the syllables are? There are no "accents" (>'s); only the natural ones caused by certain syllables' being *held longer* than others. But you don't *hit* any note harder than any other, as you do in the Hungarian tune we just saw. It's all smooth and even.

And that's exactly the smoothness and evenness we hear in French concert music, like this phrase from one of Satie's *Gymnopédies* for piano:



So it goes through all the languages. Italian, for instance, is famous for its long beautiful vowels, as, for example, in the familiar song "Santa Lucia":



And this lingering on the vowels is reflected in much Italian instrumental music, as in this long, singing melody line from Vivaldi's *Concerto for Strings* (R. XI, No. 2):



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Spanish, on the other hand, doesn't linger so much on the vowels; the consonants are more important. Like this song, "La Bamba," which says that "to dance the Bamba you need a bit of grace, and a bit of something else"—and so the folk music comes out crisp and rhythmic, like the language:

*Moderately*

Pa - ra bai - lar la Bam - ba se ne - ce -

si - ta un po - co de gra - cia y oi - ra co - si - ta

And so it is with Spanish concert music. Have you ever heard these sharp, exciting Spanish rhythms in Manuel De Falla's ballet, *The Three-Cornered Hat*?

*Heavy and very rhythmic*

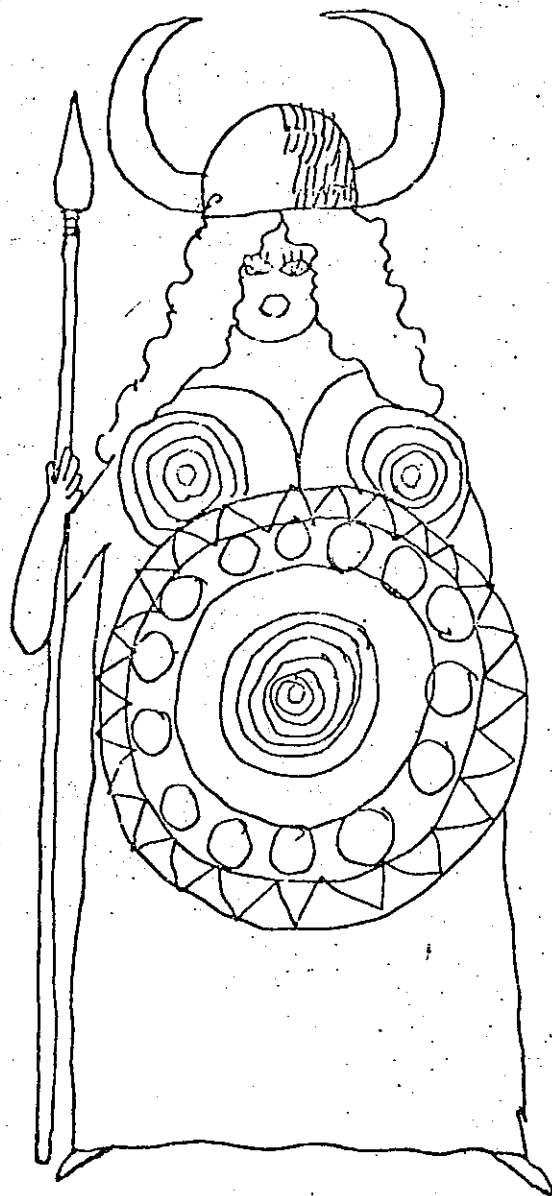
etc.

German, of course, is a very heavy language, with long words, and very long combinations of sounds: "Soll ich schlürfen, untertauchen, süß in Düften mich verhauchen?" is one of the simpler lines from Wagner's opera *Tristan und Isolde*. And so German symphonic music tends to be heavier and longer and

more—well, *important*—than, say, French or Spanish music:



BRAMMS: *Finale, Symphony No. 1*



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And as for English—that depends on what English you're talking about. *English* English is one thing; and the folk songs from England are unmistakable—tripping and light, and quick with the tongue, just as the British speak:

*Brightly*

As I was go - ing to Straw - ber - ry Fair,  
Sing - ing, sing - ing, but - ter - cups and dais - ies,

The image shows two staves of musical notation in G major and 4/4 time. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. The melody is written in a simple, rhythmic style with eighth and quarter notes. The lyrics are placed below the notes. The second staff continues the melody with similar rhythmic patterns.

But now what kind of English is this?

*Lazily*

As I was a - walk - in' one morn - in' for plea - sure

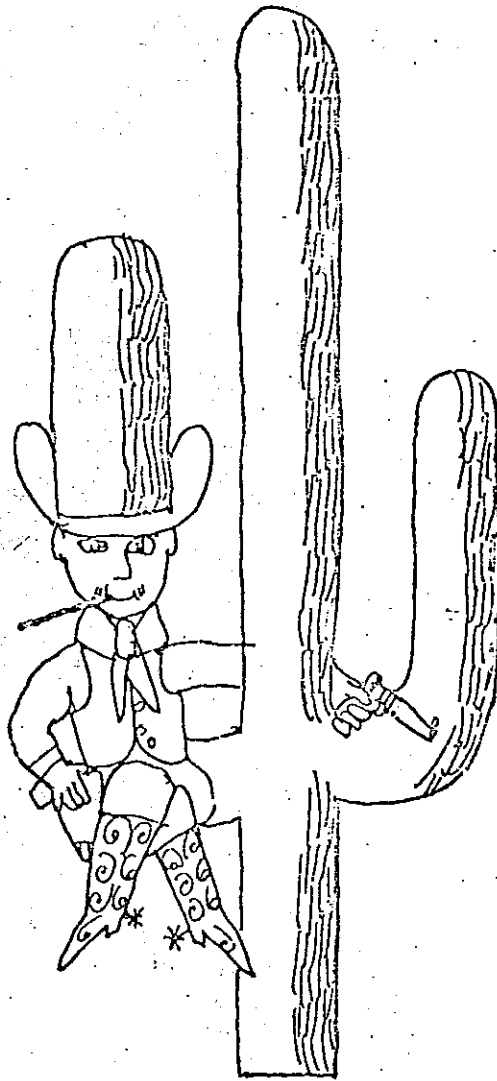
The image shows a single staff of musical notation in G major and 4/4 time. The melody is written in a slow, drawn-out style with long note values and a slur over the entire phrase. The lyrics are placed below the notes.

Of course, it's Western cowboy English. And you see how different the music is too—how lazy and drawling. And just as different is the English of New York City, with its slapdash syncopations, and its tough charm:

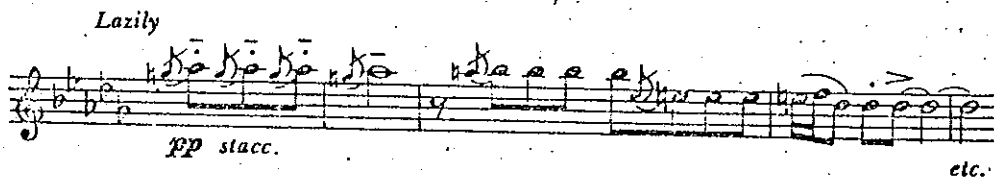
I got the horse right here—the name is  
Paul Re-vere—

The image shows two staves of musical notation in G major and 4/4 time. The melody is written in a syncopated, rhythmic style with eighth and quarter notes. The lyrics are placed below the notes. The second staff continues the melody with similar rhythmic patterns.





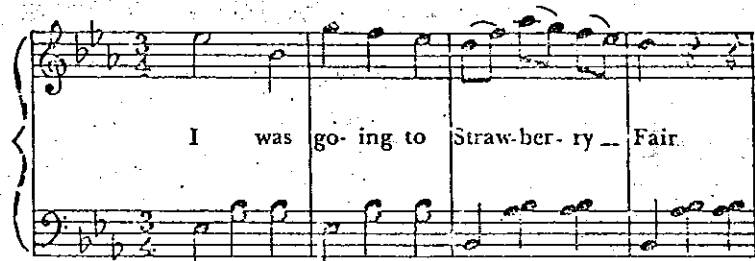
And that accent is heard in the concert hall in all kinds of American instrumental pieces, such as Gershwin's *Piano Concerto*:



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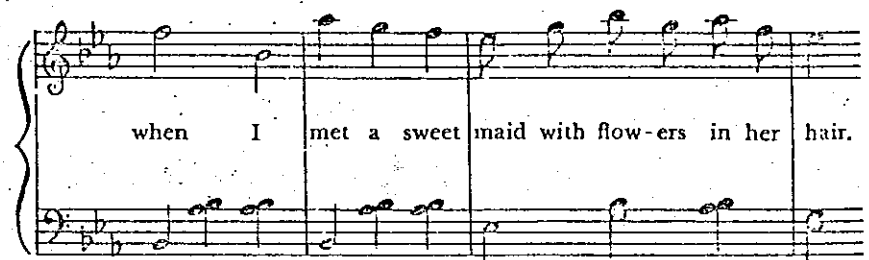
LEONARD BERNSTEIN'S Young People's Concerts

All this still doesn't explain that Mozart melody we started out with. But that's not too hard. It's the middle part of the Minuet, the third movement, of Mozart's *Symphony in E-flat*; and the thing that makes the tune so enchanting is *not* that it's a folk tune, but that it's *like* a folk tune. We could even put words to it and *call* it a folk tune:



I was go- ing to Straw-ber- ry -- Fair.

The image shows a musical score for a piano accompaniment. It consists of two staves, treble and bass clef, with a 3/4 time signature and a key signature of two flats (B-flat and E-flat). The melody is written in the treble clef. The lyrics are: "I was go- ing to Straw-ber- ry -- Fair."



when I met a sweet maid with flow-ers in her hair.

The image shows a musical score for a piano accompaniment. It consists of two staves, treble and bass clef, with a 3/4 time signature and a key signature of two flats (B-flat and E-flat). The melody is written in the treble clef. The lyrics are: "when I met a sweet maid with flow-ers in her hair."

Only this time the tune is from Austria, so the English words don't seem quite right. The melody has all the creamy sweetness of *Austrian* speech, and, what's more, it has some of those Tyrolean *hup-tsa-tsas*—in the accompaniment—that make *that* folk music so famous:

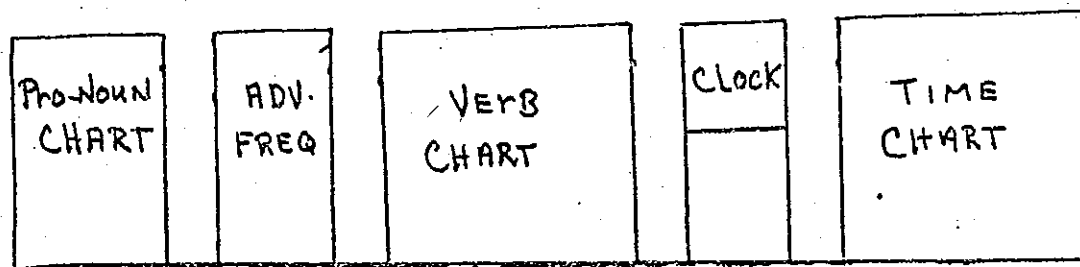


Hup - tsa - tsa, Hup - tsa - tsa, Hup - tsa - tsa, Hup - tsa - tsa.

The image shows a musical score for a piano accompaniment. It consists of a single treble clef staff with a 3/4 time signature and a key signature of two flats (B-flat and E-flat). The melody is written in the treble clef. The lyrics are: "Hup - tsa - tsa, Hup - tsa - tsa, Hup - tsa - tsa, Hup - tsa - tsa."

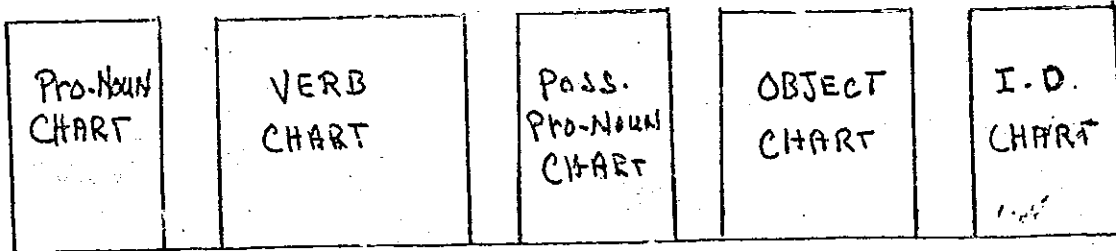
The idea behind this "visual structure device" began to germinate while teaching English to a class of Mexican students. It developed more or less by accident as new elements of a particular sentence structure were being taught. A verb chart was first used to practice newly acquired verbs visually by placing the chart on the blackboard. As new words and phrases - pronouns, adverbs of frequency, time and time phrases - were introduced, these were written on the blackboard in the order in which they appeared in the sentence. This made for easy cognition visually of the sentence structure. And since all of the elements - pronouns, verbs, time, etc. - were multiple, there was great flexibility, making it possible for multi-substitution. And since the elements were drilled ordered structurally, they could be re-ordered to form other sentences, thereby coming up with a kind of transformational device analogous to transformational grammar. Where a given phrase structure allows for various vocabulary items to be plugged in.

The machine is set up as follows:



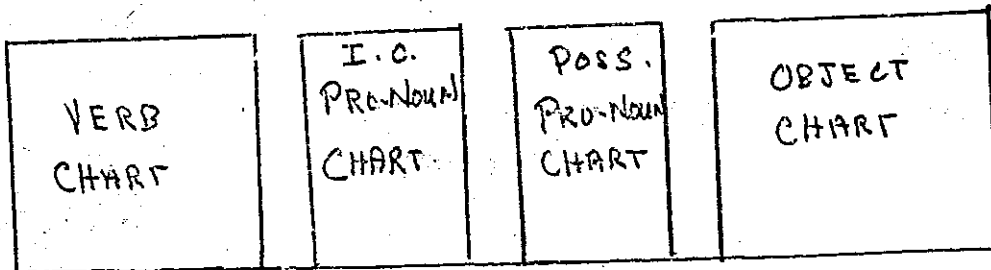
I usually get up at 7:00 every morning.

All these elements after being learned separately are then practiced in a structure.



I am giving my watch to him.

or:



Give him my watch.

Here is not only being learned variation on a structure, but also the distinction between subject, possessive, and indirect object are being distinguished and drilled.

The chart can also be used singularly to introduce the separate elements.

It soon became clear that to write it on the blackboard every time was not only impractical, but it also inhibited the desired flexibility. This was when the idea of the "visual structure device" came into existence. The resultant device by no means exhausts the possibilities.



One very important aspect of the device is the fact that it is entirely visual, and can be used to teach any number of languages.

Another interesting use is that the students can choose a verb to go with the right object. For instance, both "to wear" and the object "letter" are in the charts, but it is unintelligible to say "I am wearing a letter". But he can say "I am wearing a coat".

Also, with the device there is a "feeling chart" - happy, sad, angry, etc. - a weather chart - sunny, cloudy, rainy, etc. - and a furniture chart to practice prepositions - on, under, behind, etc. This chart produces sentences such as "The book is on the table" or "Put the book on the table". The feeling chart could produce "I was happy yesterday" when used in conjunction with the time chart. And the same idea can be used with the weather chart which could produce "It was rainy yesterday".