Phonological rules based on "stress-terminal pattern" (the principle that a phonological phrase has one primary stress and one terminal juncture requiring a mark of punctuation) can be used to improve punctuation in composition. These rules require that the writer be able to speak sentences at a normal pace with intonation appropriate to the meaning. Thus, simple sentences normally have only one stress-terminal pattern and one mark of punctuation, and compound and complex sentences have two. However, in certain sentences (e.g., those with compound verbs) two primary stresses will occur without a terminal juncture falling between them, and thus, will require no punctuation. Three stress-terminal patterns occur, for instance, in sentences with restrictive or nonrestrictive constructions for which intonation gives the best clue to punctuation. The intonation clue can also be used for items in a series between which "fade rise terminals," rather than "level terminals," occur. Recognition of these phonological rules, together with semantic and grammatical reasons for punctuation, should allow the student to "punctuate with considerable flexibility." (JS)
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Stress-Terminal Patterns: Intonation Clues to Punctuation

Many students have difficulty determining when and how to place the internal punctuation of a sentence (the punctuation before the period, question mark, or exclamation mark), when they have to rely on conventional rules of punctuation. These rules (introductory adverb clause punctuation rules, nonrestrictive punctuation rules, etc.) are too complex and prescriptive for them. There are, however, a few phonological rules that can be very helpful to the student who has difficulty with conventional rules. These phonological rules of punctuation are either the basis of many of the conventional rules of punctuation, or they are at least compatible with them. In any case, they are not simply arbitrary, in spite of modifications they may receive because of dialectal differences among speakers.

The basis of these rules is a principle used by linguistically-trained teachers of reading, such as Donald Lloyd, that somewhere in each of the phonological phrases that come between the initial capital of the sentence and the first mark of punctuation and between the marks of punctuation themselves there is one primary stress and only one primary stress, and at the end of each of these phonological phrases there is a terminal juncture (a clearly distinguishable pause) of one sort or another. Since the teacher of reading is able to improve reading patterns by pointing out to the student that every mark of punctuation indicates a terminal juncture preceded by a single primary stress in the phonological phrase before the comma, it would seem as though the teacher of writing could use the reverse side of this coin to improve punctuation in composition by pointing out to the student that a mark of punctuation should be put at the point of each terminal juncture following the primary stress of each phonological phrase.

Although it is not quite that simple in application, this combination of stress and terminal juncture, which we will call a stress-terminal pattern in this discussion, can provide valuable clues about how to punctuate a sentence. The terminal junctures themselves give several clues about the form of the phonological phrases they terminate. Terminal junctures before the end of the sentence will sometimes be fade-rise terminals, /↗/, signaling items in a series, but more often they are level terminals, /→/, signaling incompleteness (more to follow in the sentence). Less frequently they will be fade-fall, /↘/, between items joined without a coordinating conjunction by a semicolon or a colon, or between long clauses joined by a coordinating conjunction. Terminal junctures at the end of the sentence will be fade-rise terminals, /↗/, signaling a question calling for a “yes” or “no” answer, or fade-fall terminals, /↘/, signaling completeness at the end of a statement, a command, or a question introduced by a question word—*who, what, why, when, where, how*. These signals, combined with the primary stress which precedes each one, will indicate where most punctuation should occur.

Punctuation by stress-terminal patterns, however, requires that the writer be able to say the sentence he wishes to punctuate with the intonation that indicates its semantic meaning, and that he be able to recognize the primary stresses and terminal junctures when he says the sentence that way. Most high school students do the former intuitively, and if they can’t do the latter intuitively, they can usually learn to do it with a little training and practice.

THERE are four recognizable speeds at which an utterance can be spoken. Donald Lloyd illustrates them with numbers being read in a series:

<table>
<thead>
<tr>
<th>Speed</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very fast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast</td>
<td>one</td>
<td>+two</td>
<td>+three</td>
<td>+four</td>
<td>+five</td>
</tr>
<tr>
<td>Normal</td>
<td>/↗</td>
<td>/↗</td>
<td>/↗</td>
<td>/↗</td>
<td>/↘</td>
</tr>
<tr>
<td>Deliberate</td>
<td>/↘</td>
<td>/↘</td>
<td>/↘</td>
<td>/↘</td>
<td>/↘</td>
</tr>
</tbody>
</table>

It will be noted that the speed at which one makes an utterance determines whether or not there will be terminal junctures (and even recognizable plus junctures in many instances), the length of the terminal junctures when they do appear, and the direction of the pitch change as the sound fades out, although an internal terminal juncture (one which appears within the sentence, as opposed to a final terminal juncture at the end of the sentence) would probably rarely be a fade-fall. For example, let’s consider a single uncomplicated utterance at three speeds. The utterance includes both an introductory element and a series of elements.

When I have my breakfast, it will include eggs, toast, and coffee.

Spoken fast it might well read like this in phonemic transcription:

\[\text{wenayəvmaybrəkfastitwilinkluwdeyz}→\text{tos}→\text{tænkafiy}\]

---

Spoken slowly, a la Senator Dirksen, it might read like this in phonemic transcription:

```
3  2→2  3  3→2  2→3  3→3  3→2  3  1→1
wen  ay+hav+may+brekfast  it+wil+inkluwd  egz  tost  sen+kafiy
```

But spoken at what would be a normal conversational speed for most people, the speed of the utterance would fall somewhere between the two foregoing extremes:

```
2  2→2  3  3→3  3→2  3  1→1
wen+ay+hav+may+brekfast  it+wil+inkluwd+eygz  tost  sen+kafiy
```

Thus, a person seeking to determine punctuation by stress-terminal patterns must not speak too fast or too slow. At a normal, unhurried pace, most of the stress-terminal patterns should come naturally.

For the less complicated sentence constructions, counting the stress-terminal patterns and placing the punctuation at the point in the sentence where the terminal junctures fall are all that is required. If there is only one stress-terminal pattern, there is no internal punctuation in the sentence, because the only terminal juncture is the final terminal juncture.

```
stress  terminal
\  \(or)?(or)!
```

Mr. Jones went home for lunch  (answers "Where did Mr. Jones go?")

Is it that late  (answers "Hurry up! It's 7:30!")

I did not take your piece of cake! (Junior's reply to his sister's accusation)

Sentences with two stress-terminal patterns are either compound sentences, sentences with introductory elements, or sentences with cumulative constructions added on.

```
stress  terminal  stress  terminal
\  \  \  \(?!
```

He knocked at the door  and I let him in

If I knocked at the door  would you let me in

Sitting on the veranda  I could see the traffic go by

However  I didn't see you go by

```
stress  terminal  stress  terminal
\  \  \  \(?!
```

We had hoped to leave early; we did not expect to be invited to stay.
Some people will put a falling terminal between two main clauses, particularly when the clauses are long ones.

He knocked at the door of the house at the end of the street to make a sale.

and the man in the upstairs apartment came down to answer the door.

This may well be why many students tend to break compound sentences made up of long clauses into two sentences, beginning the second sentence with a coordinating conjunction.

He knocked at the door of the house at the end of the street to make a sale.

And the man in the upstairs apartment came down to answer the door.

It should be noted that there are times when two primary stresses will occur without a terminal juncture falling between them. One occurrence is with the compound predicate of a short simple sentence. Even though most speakers tend to say such sentences without a terminal juncture before the coordinating conjunction, they will still put the primary stresses on the syllables they would have stressed if they had included the terminal juncture. Another example is the sentence which makes a comparison or a contrast. Here the two ideas will each be given a primary stress, but there will be no terminal juncture between them.

He talked and talked.
Take it or leave it.
He ran and jumped.
He ran (.) and he jumped.

*The parentheses indicate that the enclosed element of the stress-terminal pattern may or may not occur when the sentence is spoken.*
Mary is a better debater than George is.

The new janitor sweeps cleaner than the old one did.

This stress-stress-terminal pattern, should, however, give the writer punctuating by stress-terminal patterns no trouble. Instead, it should be a help to him. Since there is no internal terminal between the two stresses, he will not get a complete stress-terminal pattern and therefore no signal to put a comma somewhere between the two primary stresses.

Sentences with three stress-terminal patterns sometimes result when modifier constructions, noun constructions, and parenthetical constructions are added to the beginning or the end of a sentence already having two stress-terminal patterns. For instance, to these sentences having two stress-terminal patterns—

If I'm not coming, I'll let you know.
It's been a long day, and I'm very tired.
As the janitor arrived, the heat went on.

we might add, respectively to the beginning or end of each sentence—

however
but I will finish
warming me up

and get the following sentences with three stress-terminal patterns:

However, if I'm not coming, I'll let you know.
It's been a long day, and I'm very tired, but I will finish.
As the janitor arrived, the heat went on, warming me up.

Often sentences with three stress-terminal patterns are the result of breaking a sentence into two parts and inserting an element between the two parts. For instance, to these sentences—

Mr. Boswell handles the fruit.
The house on the corner is for sale
He had a gray, wool sweater.
Old Mr. Curtis is a wealthy man.
I got a book for my birthday.

we might insert

the new grocer
which nobody lives in
cable stitched
I think that's his name
Salinger's Catcher
And get the following sentences with three stress-terminal patterns:

<table>
<thead>
<tr>
<th>stress terminal</th>
<th>stress terminal</th>
<th>stress terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

Mr. Boswell, the new grocer, handles the fruit.

The house on the corner, which has been empty since last fall, is for sale.

He had a gray, cable-stitched, wool sweater.

Old Mr. Curtis – I think that’s his name – is a wealthy man.

I got a book, Salinger’s Catcher, for my birthday.

Because the inserted element comes between the two parts of the original sentence, it is called an *intervening structure* in this discussion. It could as easily be described in the language of the transformational grammarian as an imbedded sentence. Many students find it impossible to consistently determine when intervening structures should be punctuated and when they should not. The conventional rules that govern whether or not to punctuate these constructions—commonly described as restrictive and nonrestrictive in most composition handbooks—are particularly mystifying to this kind of student. But if he can hear the primary stresses and the terminal junctures, and if he can read the sentence aloud with the intonation that gives it its intended meaning, he should be able to punctuate most if not all intervening structures accurately by means of the stress-terminal patterns in his speech.

The point is that he must start with what he says, not with the written passage, and he muststart with his intended meaning as the way he says it reveals his intention in speech. Sometimes, as in the following sentences, there are two possible semantic meanings, and only the speaker’s stress-terminal patterns (and the writer’s concomitant punctuation or lack of it) will determine the meaning of the sentence. Therefore the writer must be careful to make his spoken intonation appropriate to his meaning. If he means “The only uncle I have is rich, and he just happens to live down the street,” he would speak the sentence with three stress-terminal patterns.

/ → / → /

My uncle who lives down the street is rich.

Removing the phonological phrase between the first two stress-terminal patterns would reveal the original sentence that was broken into two parts to insert the intervening structure.

/ ×

My uncle is rich.

In removing the phonological phrase one also removes the two stress-terminal patterns that marked it off. Since they clearly indicated a structure that
interrupted the flow of "My uncle is rich," when the sentence was spoken, these stress-terminal patterns suggest that commas should appear where they appear to set off the intervening structure when the sentence is written.

```
| / | → | / | → | / | → |
|------------------|------------------|------------------|
| My uncle, who lives down the street, is rich. |
```

If, however, the speaker as he utters this same string of words means "Of all my uncles, and I have more than one, the one who has a house down the street is wealthy," he would convey the idea through an intervening structure inserted into "My uncle is rich" which would have one or the other of these two stress-terminal patterns:

```
| / | → |
|------------------|
| My uncle who lives down the street is rich. |
```

```
| / | → |
|------------------|
| My uncle who lives down the street is rich. |
```

Since in either case the sentence would not have three stress-terminal patterns, there would be no indication of an intervening structure that interrupts the flow of the sentence, and the stress-terminal pattern before the verb would not be significant to punctuation.

The stress-terminal patterns for items in a series differ from those for intervening structures in that the terminal junctures of the items preceding the last item in the series are more likely to be fade rise terminals than level terminals.

```
<table>
<thead>
<tr>
<th>stress terminal</th>
<th>stress terminal</th>
<th>stress terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td>→</td>
<td>/</td>
</tr>
<tr>
<td>Mary, Helen, and Sue were in the hall.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>He constantly talked in class, in the cafeteria, and everywhere he went.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jack got the hot dogs, Harry got the buns, and I got the mustard.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The distinguished man at the desk, the blonde girl behind him, and the tall boy at the chalkboard are all related.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

In a series of coordinate adjectives before a noun headword, stress-terminal patterns will occur with all adjectives in the series except the one just before the noun, whether or not a conjunction appears before the last item in the series. Because the noun which they modify will get primary stress, /", the coordinate adjectives will all get secondary stress, /"/. The fact that these coordinate modifiers have coordinate stresses one step below that of the headword is the phonological signal that they are modifiers of the headword, each giving the headword separate and equal modification. The terminal junctures that follow each coordinate modifier preceding the headword except the nearest one signal the division of coordinate modifiers into single words or compound words.
Secondary stresses, /-/, and tertiary stresses, /~/, have been added to the following diagram to give a clearer picture of the pattern of stresses in a series of coordinate adjectives.

```
<table>
<thead>
<tr>
<th>art. adj.</th>
<th>adj.</th>
<th>adv.</th>
<th>adv.</th>
<th>adj.</th>
<th>noun</th>
<th>adj.</th>
<th>cmj.</th>
<th>adj.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>↑</td>
<td>↑</td>
<td>←</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>←</td>
<td>↑</td>
</tr>
<tr>
<td>a</td>
<td>cold, wet</td>
<td>gloomy night</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>short, jolly</td>
<td>chubby young man</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>bright, merry</td>
<td>freckled boy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>bright, merry, very thoroughly freckled boy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>an</td>
<td>old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>little old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>sweet little old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>kind,</td>
<td>sweet little old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>kind,</td>
<td>sweet little old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>an</td>
<td>old lady</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>lady,</td>
<td>old and sweet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Although some students may have difficulty distinguishing between the levels of stress in a series of modifiers, the terminal junctures between the coordinate elements should still provide them with clues to punctuation. Other students may have difficulty with the terminal junctures. For them the coordinate stresses should provide the clue to punctuation.

Not all the recent research in phonological punctuation is in accord with this idea that stress will serve some students and juncture will serve others. William Cantrall and Margaret Miller, fellow participants with the author of this article in the Northern Illinois University Project English Curriculum Center and to whom the author is indebted for the concept of intervening structures, constructed as a part of the project's phonology materials a system for punctuation of intervening structures that uses stress patterns alone. It is their contention that students can readily hear the stresses, but that they do not always hear the junctures accurately. In the recently published high school text, *New Directions in English* by Harold B. Allen, Verna L. Newsome, Thomas H. Wetmore, Harold J. Throckmorton, and Enola Borgh (McCormick-Mather, 1966), the authors use juncture as a clue to a much wider variety of punctuation situations, but they ignore the part that stress plays. Combining both stress and juncture into stress-terminal patterns fills in the gaps left in both of these other systems and makes intonation applicable as an aid to the punctuation of many more writing situations.
than either stress or juncture alone can explain. However, whether stress or juncture is used or both are used, the student must be able to hear and recognize accurately the characteristics of his own intonation if he is to use it as an aid to punctuation.

Some students, because of peculiarities in their own intonation, have difficulty hearing the usual intonation contours. Others seem to be insensitive to stress and/or juncture. A few seem so suggestible, so anxious to please, that they hear stress-terminal patterns everywhere in the utterance and consequently put punctuation everywhere in the sentence. If these students haven't the patience to listen to and analyze their own speech and the speech of others until they get the feel of intonation, punctuation by intonation is just not for them. They will have to rely on the conventional rules. However, they seem to be in the minority. Most students that the writer has tried this on have been able to make effective use of intonation as an aid to punctuation. It is certainly not a panacea for all problems of punctuation. Like the student insensitive to intonation, the one very sensitive to it will also need to be aware of the grammatical and semantic reasons for punctuation, or he will likely do some very strange punctuating, indeed. But because he can hear the intonation, he will understand another reason for punctuation, the phonological one, and he will be aware of how the phonological reason sometimes influences the grammatical and semantic reasons. With this threefold approach, he should be able to punctuate with considerable flexibility.