Syllable Structure

- Words are composed of one or more syllables, which are phonological units composed of one or more phonemes.
  - Every syllable has a nucleus, and the nucleus may be preceded and/or followed by one or more phonemes called the onset and the coda.
  - The rime is the nucleus + the coda.
Word Stress

• In English and many other languages one or more syllables in every word has stress.
  – In English stress can be contrastive and helps to distinguish nouns from verbs:

<table>
<thead>
<tr>
<th>Word</th>
<th>Type</th>
<th>Pronunciation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>pêrvert</td>
<td>noun</td>
<td>as in</td>
<td>“My neighbor is a pervert.”</td>
</tr>
<tr>
<td>pêrvêrť</td>
<td>verb</td>
<td>as in</td>
<td>“Don’t pervert the idea.”</td>
</tr>
<tr>
<td>súbject</td>
<td>noun</td>
<td>as in</td>
<td>“Let’s change the subject.”</td>
</tr>
<tr>
<td>subjéct</td>
<td>verb</td>
<td>as in</td>
<td>“He’ll subject us to criticism.”</td>
</tr>
</tbody>
</table>

  – British English and American English have different stress patterns which also leads to reduction of different vowels, both of which cause differences in pronunciation.
There are two very important rules about word stress:

1. **One word, one stress.** (One word cannot have two stresses. So if you hear two stresses, you have heard two words, not one word.)
2. **The stress is always on a vowel.**

Evidently, shift of stress from one syllable to the next in polysyllabic word brings about three changes:

1- syntactic change
2- meaning change
3- slight pronunciation

### Function and meaning change through stress change

<table>
<thead>
<tr>
<th>Stress on syllable</th>
<th>Syntactic function</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>invalid</td>
<td>Noun</td>
<td>“disable person”</td>
</tr>
<tr>
<td>invalid</td>
<td>Adjective</td>
<td>“not valid”</td>
</tr>
</tbody>
</table>

### Change of syntactic function through stress change

<table>
<thead>
<tr>
<th>Noun</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>imprint / ‘imprint /</strong></td>
<td><strong>imprint / im’print/</strong></td>
</tr>
</tbody>
</table>
Sentence and Phrase Stress

- When words are combined into phrases and sentences, one syllable receives more stress than others.
- Phrasal stress can distinguish a compound noun from an adjective + noun combination.

<table>
<thead>
<tr>
<th>Compound Noun</th>
<th>Adjective + Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>tíghtrope (&quot;a rope for acrobatics&quot;)</td>
<td>tight rópe (&quot;a rope drawn taut&quot;)</td>
</tr>
<tr>
<td>Rédcoat (&quot;a British soldier&quot;)</td>
<td>red cóat (&quot;a coat that is red&quot;)</td>
</tr>
<tr>
<td>hótdog (&quot;a frankfurter&quot;)</td>
<td>hot dóg (&quot;an overheated dog&quot;)</td>
</tr>
<tr>
<td>Whíté House (&quot;the President’s house&quot;)</td>
<td>white hóuse (&quot;a house painted white&quot;)</td>
</tr>
</tbody>
</table>
Most sentences have two basic types of word:

- **content words**
  Content words are the key words of a sentence. They are the important words that carry the meaning or sense—the real content.

- **structure words**
  Structure words are not very important words. They are small, simple words that make the sentence correct grammatically.
Intonation

- Pitch is a phonemic feature in some languages, and for these languages the pitches are known as contrastive tones.

- In intonation languages pitch is important for the pitch contour or intonation.
  - In intonation languages like English, intonation can be used to distinguish questions from statements can also disambiguate sentences in some cases.
• **Falling intonation**
  - Falling intonation describes how the voice falls on the final stressed syllable of a phrase or a group of words. A falling intonation is very common in *wh*-questions.
  - *Where's the nearest post-office?*
  - *What time does the film finish?*

• **Rising intonation**
  - Rising intonation describes how the voice rises at the end of a sentence. Rising intonation is common in *yes-no* questions:
  - *I hear the Health Centre is expanding. So, is that the new doctor?*
  - *Are you thirsty?*

• **Fall-rise intonation**
  - Fall-rise intonation describes how the voice falls and then rises. We use fall-rise intonation at the end of statements when we want to say that we are not sure, or when we may have more to add:
  - *I don't support any football team at the moment.* (but I may change my mind in future).
Sequential Constraints of Phonemes

• Knowledge of phonology includes information about what sequences of phonemes are possible and which are not in a particular language.
  
  - The limitations on sequences of segments are called **phonotactic constraints**

  • Phonotactic constraints are based on syllables and vary from language to language.
Sequential constraints in phonology refer specifically to the clusters of sounds that you are allowed to use when making words happen.

In English, consider if you are given the sounds /b/ /l/ /ɪ/ and /k/.

These four sounds can be arranged in a variety of ways that can form words that sound English: /blɪk/, /klɪb/, /bɪlk/, and /kɪlb/. Of these, only "bilk" is a real word, but they all sound like they are real, and, since we're dealing with word-formation from phonetics point of view, this is all we care about. Your mental phonetic constraint is what tells your brain that /kbɪl/ and /lbɪk/ just aren't words that could possibly exist in English. English phonology tells our brains that words cannot start with /kb/ or /lb/ sounds.

In English, you are limited to three-sound consonant clusters at the beginning of words or syllables:

<table>
<thead>
<tr>
<th>First Sound</th>
<th>Second Sound</th>
<th>Third Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>s</td>
<td>p</td>
<td>l</td>
</tr>
<tr>
<td>t</td>
<td>r</td>
<td></td>
</tr>
<tr>
<td>k</td>
<td>w</td>
<td>j</td>
</tr>
</tbody>
</table>
Lexical Gaps

• Lexical gaps, or accidental gaps, are words that don’t exist in a language but could exist because they conform to the phonotactic constraints of the language.

  – For example, the words cruke [khrʊk], cruck [khrʌk], and crike [khraɪk] are not currently words in English, but they could be.

  – Advertisers make use of their knowledge of phonotactic constraints to create new product names.

• While Bic, Xerox, and Kodak are OK, we’re unlikely to see a new brand or product called Zhleet [ʒlɪt]
Why Do Phonological Rules Exist?

- Many linguists believe that phonological rules exist to ensure that the phonetic forms of words do not violate the phonotactic constraints of the language.

  - For example, English has a phonotactic constraint that prevents words from ending with two obstruents whose voicing features don’t match (walked pronounced as [wakd] is not possible).

A phonological rule such as the one that devoices the past tense marker in English changes the pronunciation so that it conforms to this constraint (the pronunciation of walked becomes (wakt)).
Why Do Phonological Rules Exist?

- **Optimality Theory**: It has been proposed that a universal set of phonological constraints exists and that this set is ordered with some constraints being more highly ranked.
  - The rankings differ from language to language.
  - The order of the rankings determines the different sound patterns shown across languages.
QUESTIONS
1-) Which word is stressed on the third syllable?

• A - /maːɡə'ziːn/

• B - /mægæ'ziːn/

• C - /mægə'ziːn/
2-) Which of the following is the most common syllable shape in the world's languages:

A - C
B - VCC
C - VC
D - CV
E - V
3 -)........ in phonology refer specifically to the clusters of sounds that you are allowed to use when making words happen.

A- Sequential constraints
B- Phonetics
C- Coda
D- Word stress
4- ) Which word is stressed on the third syllable?

A- Alphabet
B- Decision
C- Interrupt
The smallest linguistic unit within a language that is able, when combined with other units to establish word meanings and distinguish between them:

A. Phonetics
B. Articulation
C. Phoneme
D. Speech sound