Stress
Learning Outcomes

1. Describe general stress patterns of English words,
2. Identify stress placement of English words.
What is Stress?

- A suprasegmental feature; a property which has the syllable as a domain

- A well known theory (Stetson) states that: every syllable corresponds to a chest pulse; however, experimental work (Ladefoged et al., 1958) has thrown considerable doubt on this hypothesis.
What is Stress? (cont’d)

• Stress is associated with syllable

• From the perceptual point of view, all stressed syllables have one characteristic in common, i.e. prominence.

• Stressed syllables are recognized as stressed because they are more prominent than unstressed syllables.
What is prominence produced by?

• Prominence is produced by four main factors:
  1. pitch variation,
  2. intensity
  3. vowel quality &
  4. vowel duration

• Generally, the four factors work together in combination, though sometimes they are not equally important.
Factors that constitute stress

In other words, stressing a syllable is usually the result of the interplay of the 4 phonetic factors mentioned earlier:

1. **Pitch variation:**
   In English, pitch variation appears to be the most important single factor in determining stress.
Factors that constitute stress (cont’d)

2. **Intensity:**
   In physiological terms – the greater breath effort & muscular energy associated with stressed syllables; associated with loudness as perceived by the listener.
3. Vowel quality: whether a vowel is central or peripheral; e.g.:

- present (NOUN) /ˈprezənt/
- present (VERB) /prəˈzent/

In the above, stressed syllables contain the peripheral vowel /e/ & unstressed syllables have a central vowel /ə/. 
Factors that constitute stress (cont’d)

4. **Vowel duration**: an important factor in indicating stress; vowels are shorter in unstressed syllables than in stressed syllables; e.g.:

   cf. *sarcasm* $[^\text{'sæ:kæzm}]$

   *sarcastic* $[^\text{'sæ:kæ:stɪk}]$

   *TV* $[^\text{'tɪ:viː}]$
<table>
<thead>
<tr>
<th>Factors</th>
<th>Stressed</th>
<th>Unstressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Intensity</td>
<td>Articulation with greater breath/muscular effort. Perceived as greater loudness</td>
<td>Less breath/muscular effort. Perceived as having less loudness</td>
</tr>
<tr>
<td>2 Pitch</td>
<td>Marked change in pitch</td>
<td>Syllables tend to follow the pitch trend set by previous stressed syllable.</td>
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</tbody>
</table>
| 3 Vowel quality | May contain any vowel (except /ə/)  
Vowels have clear (peripheral) quality.  
Glides have clearly defined second element. | Generally have central vowels /ə/, /ʌ/ or syllabic consonants.  
Vowels may have centralized quality.  
Glides tend to lose second element. |
| 4 Vowel duration | Vowels have full length.                       | Vowels are considerably shorter.                 |

Characteristics of stressed and unstressed syllables (Collins & Mees, 2003: 111)
Functions of Stress in Languages

- In all languages that are said to have stress, stress has a *culminative* function; one syllable per word is marked as more prominent than the other syllables.
Stress in English

English is said to have a lexical stress system that is arbitrary/non-predictable while other items are stressed by rule.
Word Stress

2 degrees of stress within words uttered in isolation:

1. **Primary stress**: the strongest type of stress; indicated by a vertical mark [¹] (placed above the line) in transcription

   e.g. *clever* /¹klevə/
   
   *dancing* /¹daːnsɪŋ/
Word Stress (cont’d)

2. **Secondary stress**: weaker than the primary stress; shown by a vertical low mark \[\downarrow\] in transcription

- A secondary stress can occur before the primary (pre-tonic) or after the primary stress (post-tonic);

  e.g. /ˈkeɪnvəˈsiːfn/ - pre-tonic

  /ˈhauzəˌbreɪkə/ - post-tonic
• When a word is said in isolation, the pitch change (tone) is likely to be falling

• When the word occurs within connected speech the pitch will depend on the overall intonation of the utterance, the possibilities varying between falling, rising, combination of fall & rise, or level.
Sentence Stress

• Words which have stresses may lose them in connected speech.

• In sentence stress, certain words are stressed.

• General pattern:
  Function words, words which convey little information are likely to lose stress completely, e.g. articles, auxiliary, verbs, verb-to-be, prepositions, pronouns, conjunctions.

  Content words, words which carry meaning, e.g. main verbs, nouns, adjectives, most adverbs, which carry a high information load, are normally stressed.
Stress and Rhythm

• Sentence stress gives English its rhythm

• English has stressed time interval rhythm; the time between each stressed word is the same, e.g.:

  'Jimmy’s 'bought a 'house near 'Glasgow.

  Will you 'sell my 'car because I’ve 'gone 'abroad?

• A constant beat is maintained on each stressed word in a sentence.
Functions of stress in English

- Giving *special emphasis* to a word or to contrast one word with another; compare:

  'John or 'Mary should 'go.

  'I think 'John 'and 'Mary should 'go.
Functions of stress in English (cont’d)

- To indicate the syntactic relationships between words or parts of words, e.g.

  \[
  \text{an } \text{'insult} \\
  \text{to } \text{'sult} \\
  \{ \text{syntactic function of} \\
  \text{words} \\
  \}
  \]

Other examples: 2 word phrases forming compounds, e.g.:

- a \text{ 'walkout} - \text{ Noun}
- to \text{ 'walk 'out} - \text{ Verb}
- a \text{ 'put-on} - \text{ Noun}
- to \text{ 'put 'on} - \text{ Verb}
Functions of stress in English (cont’d)

- Stress in English can be associated with the grammatical structure of the words, e.g.:

  English word stress alternations

  *diplomat* *diplomacy* *diplomatic*
  *photograph* *photography* *photographic*
  *monotone* *monotony* *monotonic*

(Ladefoged, p.94: 2001)
Word Stress Assignment, Syntactic Category and Syllable Structure

- Stress falls on the second-last (penultimate) syllable
  - potato, apartment, relation, prediction, disaster

- Stress falls on the third from the last (the antepenultimate) syllable
  - camera, cinema, quantity, emperor, custody

- Stress falls on the final syllable

<table>
<thead>
<tr>
<th>Canal</th>
<th>lament</th>
<th>Degree</th>
<th>July</th>
<th>Ravine</th>
<th>estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>marzipan</td>
<td>Bucharest</td>
<td>ballyhoo</td>
<td>Fricassee</td>
<td>magazine</td>
<td>Balloon</td>
</tr>
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</table>
Verbs and adjectives in English

Final stress

- Examples of Final-stressed verbs:
  
  deny concede produce correct reply

- Examples of Final-stressed adjectives
  
  divine obscene serene alive correct immune
In verb/noun pairs such as:

<table>
<thead>
<tr>
<th>con'tract vs 'contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>di'gest vs 'digest</td>
</tr>
<tr>
<td>pro'duce vs 'produce</td>
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</table>

Where the verb takes final stress but the nouns does not.
Word Stress Assignment and Morphological Structure

Two classes of suffix

1. Stress shifting
2. Stress neutral

- Even where their addition would result in making a syllable heavy, and thus stressable, it remains unstressed.
- For instance, the verb bully (final syllable is not heavy, is stressed on preceding syllable)
- If we add third person suffix bullies
- Does have a heavy final syllable, nonetheless, the syllable remains unstressed.
For instance: the third syllable of *personal* is heavy yet unstressed (the suffix –al does not shift the stress in person)

While the third syllable of *personality* is light (the/i/ has been resyllabified into the onset of the next syllable) and yet it is stressed.
Compound words

Examples:

- Second-class – compound

- Boldness - non-compound (‘-ness’ is a suffix, not a word)
Compound words (cont’d)

Where the stress goes in a compound?

1. Stress is on the first element
   
   Examples: *textbook*, *nightdress*, *salami slicer*

   ➢ When precede a noun in a noun phrase:
     He is good looking/ he’s a good looking man.

2. Stress is on the second element

   ➢ Adjectival compound (first element is adjectival and second element ends in the –ing or –ed suffix)

   ➢ *Good-looking, clear-thinking, cold-hearted, hot-blooded*
Consider the following:

- **Greenhouse and gentleman**
  - Non-compound
  - They have single meaning
  - Not made up from the meaning of two sub-parts
  - Their meanings are like the other non-compound words, such as *shed* or *bloke*.

- **Green house and gentle man**
  - Compound
  - Is the case with phrases, stress on the last word
  - Meaning: ‘house which is green’ or man who is gentle’???
    - made up from the meaning of two sub-parts
Time to read up!