

Suprasegmentals: Stress, pitch, tone and intonation

Stress

It is a suprasegmental feature of syllable that denotes its prominence within a word. It is relational meaning that a syllable is stressed compared to another such that its prominence is visible (or audible). A single consonant can be alveolar, palatal and so on; a single vowel can be front, high, and so on. However, identifying a single syllable as stressed is not meaningful unless it is in relation with another syllable. A stressed syllable is different from an unstressed syllable in its pitch, loudness, and duration.

written: [ˈɹɪtən]

return: [ɹɪˈtɜ:n]

differ: [ˈdɪfɹ]

defer: [dɪˈfɜə]

Primary and secondary stress

In words with more than two or three syllables, more than one syllable will bear stress. In such cases, one stress is primary and another is secondary. Primary stress is marked by a raised vertical tick mark and more prominent than the secondary. Secondary stress is marked by a lowered vertical tick mark.

concentration: [ˌkɒn.sənˈtʃeɪ.ʃn]

indivisibility: [ˌɪn.dɪˌvɪ.zɪˈbɪ.lə.ti]

Fixed and variable stress

Fixed stress languages: Stress always appear in the same position of the words, like last syllable or penultimate syllable with only a few exception. For example, in Welsh, penultimate syllable bears stress. In contrast, in Czech first syllable bears stress.

Variable stress languages: Stress position is not predictable although the stress in a particular word is always the same. Such stress is also called *free stress*.

Note that unlike English, in Nepali, stress is not a contrastive feature, meaning that stress doesn't change the meaning.

- **REcord** /'ɹɛk.ɔ:d/ (noun) – “a vinyl record”
 - **reCORD** /ɹɪ'kɔ:d/ (verb) – “to record a video”
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Words may lose their lexical stress when they appear in a phrase and sentence.

- over: ['əʊvə]
- The dog jumped over the fence: [ðə 'dɒg 'dʒʌmpt əʊvə ðə 'fens].

'John can't have for 'gotten 'Sally's 'birthday.

John/canhavefor/gotten/sallys/birthday

Duration:

John- 406 milliseconds

canhavefor- 542 milliseconds

gotten- 427 milliseconds

sallys- 500 milliseconds

birthday- 676 milliseconds

The stressed syllables (beginning at John and gotten) appear to be roughly equally spaced in time.

- Each stressed syllable and the syllables following it constitute a unit known as **foot**.

Second foot (at got) is roughly equal to the first foot (at John), but the number of syllables are higher (3x) in the second foot. Therefore, the syllable rate must be

higher in the second foot so that the stress occurs at equal intervals. ==> This is the property of *stress-timed language*.

- It is not easy to point to one physical attribute as the determinant of stress.
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Lexical Stress: Stress as a property of word

Rhythm

Rhythm: A pattern of occurrence of weak events and strong events in speech utterance.

In *stress-timed language* like English, stressed syllables=strong events and unstressed syllables=weak events.

Galloping vs Machine-gun rhythm: English vs Italian: large vs small difference between stressed and unstressed syllables.

Pitch accent

Pitch accent: Elements of an utterance can be made more or less prominent by changing their pitch.

Pitch of the target element can be increased in contrast to its neighbors, or the change in pitch can be brought through the element itself.

For example:

- a) Give the **red** ball, not the yellow one.
- b) **He** told you to get it done.

When pitch movement occurs at or close to stressed syllables, they are called *accented syllables*.

- Broad focus: Take the **wooden chair** home. [Wooden chair or Wooden table?]
- Narrow focus: Take the **wooden** chair home. [Wooden or plastic chair?]

Lexical Tone

Lexical tones, in some languages, identify syllables as having different pitch heights or pitch movements. In such "tone languages", words can be differentiated by pitch alone.

The standard example of a tone language is *Chinese*, although many east Asian languages and a substantial portion of the languages found in Africa, the Americas and Papua New Guinea have lexical tone. The four Chinese words "ma" can be used to demonstrate the four tones in Chinese.

(1) high level, (2) high rising, (3) low falling-rising, (4) high falling – **Contour tone**

Some languages have tone inventories that consist entirely of level tones, i.e., no tone movement – **Register tone**, e.g., *Yoruba* (and other African languages).

Reference

- The study of Language (George Yule).