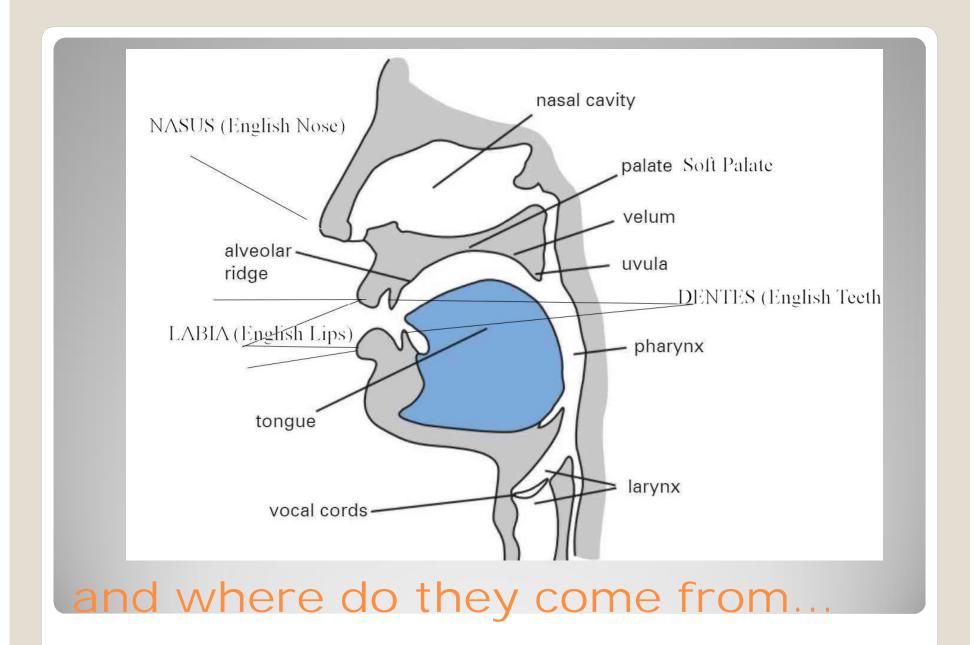
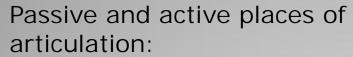
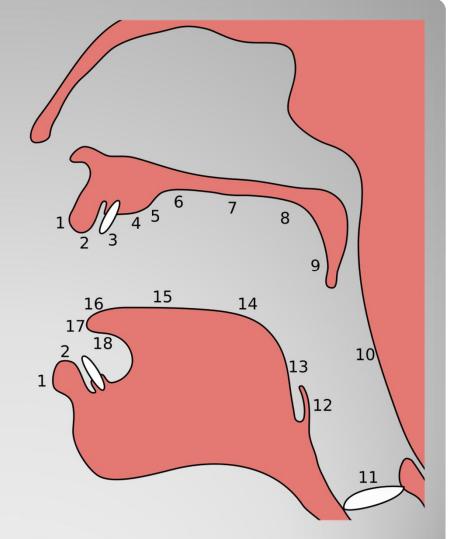
Sounds of Human Language

30-11-2020





- (1) Exo-labial;
- (2) Endo-labial;
- (3) Dental;
- (4) Alveolar;
- (5) Post-alveolar;
- (6) Pre-palatal;
- (7) Palatal;
- (8) Velar;
- (9) Uvular;
- (10) Pharyngeal; (11) Glottal;
- (12) Epiglottal; (13) Radical;
- (14) Postero-dorsal;
- (15) Antero-dorsal;
- (16) Laminal; (17) Apical;
- (18) Sub-apical or sub-laminal.



and where do they come from...

- The International Phonetic Alphabet (IPA) is an academic standard created by the International Phonetic Association.
- IPA is a phonetic notation system that uses a set of symbols to represent each distinct sound that exists in human spoken language.
- It encompasses all languages spoken on earth.

- The system was created in 1886 and was last updated in 2005.

It consists of

107 letters,

52 diacritics, and four prosodic marks.

- A "diacritical mark" or "diacritical point",
 "diacritical signis" is a glyph added to a letter, or basic glyph.
- Diacritical marks are added above, under or within a letter. They sometimes can also be placed in between two letters.

 Prosody is a representation of the rhythm, stress, and intonation of speech.













| <u>Phonetics</u> | | |
|------------------------|-----------------|---------------------------------------|
| <u>Phone</u> | Phonology | Orthoepy |
| <u>Articulatory</u> | <u>Sibilant</u> | Cacoepy; |
| <u>Alveolar</u> | <u>Plosive</u> | <u>Diphthong</u> /'dɪf.θpη//'dɪp.θpη/ |
| <u>Palatal</u> | <u>Apophony</u> | <u>Assimilation</u> |
| <u>Nasalization</u> | <u>Trill</u> | Syllabic Consonant |
| <u>Aspiration</u> | Schwa_ /swa:/ | <u>Onomatopoeic</u> |
| <u>Approximant</u> | Flap | <u>Unstressed</u> |
| <u>Palato-alveolar</u> | <u>Tap</u> | Weak Form |
| <u>Uvular</u> | Vocal Fry | <u>Suprasegmental</u> |
| <u>Velar</u> | Twang | <u>Inflection</u> |

- (a) What do you call a substitution of a sound which requires less muscular effort to articulate?
- (b) What do you call a consonant sound made when the tongue moves forward and down, and quickly touches the alveolar ridge?
 - (c) What do you call a quality of voice heard in some speakers that is related to the passing of air through the nose as they speak?

(d) What do you call a consonant sound that is made by stopping air flowing out of the mouth, and then suddenly releasing it?

(e) What do you call a consonant sound made when there is a little puff of air produced after the key sound?

- (f) What do you call a phoneme which combines a plosive with an immediately following fricative or spirant sharing the same place of articulation?
 - (g) What do you call the fact of a speech sound being influenced by the sound that comes before or after it?
- (h) What do you call a quality in someone's speaking voice that makes it sound rough and low?

Pronunciation / prannsi'er. Jan/

| (a) Reduction [rɪˈdʌkʃ(ə)n] |
|-----------------------------|
| (b) Flap |
| (c) Twang /twæŋ/ |
| (d) Plosive ['plausiv] |
| (e) Aspirated |
| (f) Affricate ['æfrɪkət] |
| (g) Assimilation |
| (h) Vocal Fry |

Phonology versus Phonetics

 Phonology has been argued to relate to phonetics via the set of distinctive features, which map the abstract representations of speech units to articulatory gestures, acoustic signals or perceptual representations.

Phonology versus Phonetics

 Phonology, on the other hand, is concerned with the abstract, grammatical characterization of systems of sounds or signs and how they pattern in and across languages. Phonetics is the general study of the characteristics of speech sounds.

phonetics is the study of how speech sounds are made / articulated.

____ phonetics is the study of physical properties of speech as sound waves.

____ phonetics
/perceptual phonetics is the study
of the perception of [speech]
sounds via the ear.

Phonetics is the general study of the characteristics of speech sounds.

Articulatory phonetics is the study of how speech sounds are made /

articulated. Acoustic phonetics is the study of physical properties of speech as sound waves.

Auditory phonetics /perceptual phonetics is the study of the perception of [speech] sounds via the ear.

Phonetics is the general study of the characteristics of speech sounds.

Functional phonetics /=phonology!/ studies the functions of sounds in the language as a phonemes based system.

Phonological units

Phonemes possess the design feature of discreteness.

Thus the whole language is built on a finite number of consonants and vowels.

The minimal pairs test

needs a minimal pair in language, when there are two forms or two words with exact same except for one sound.

The minimal pairs test

shows if there are two different phonemes or more specifically two allophones of two different phonemes, belonging to two different words or word forms (with two different meanings).

Phonological units

allophone ['æla faun]

is any of several speech sounds that are regarded as contextual or environmental variants of the same phoneme.

Phonetic insight is used in several applied linguistic fields such as:

- Forensic phonetics: the use of phonetics for legal purposes
- Speech recognition: the analysis and transcription of recorded speech by a computer system
- Speech synthesis: the production of human speech by a computer system

| Consona | nt P | honei | mes o | of English | | | | | | | | | | |
|-----------|------|-------|-------|------------|------|----------|------|--------|-----|------|----|-----|-----|-------|
| | Bil | abial | Lab | iodental | Inte | erdental | Alve | olar | Pal | atal | Ve | lar | Glo | ottal |
| Stop | р | b | | | | | t | d | | | k | g | | |
| Fricative | | | f | V | θ | ð | s | Z | š | ž | | | | |
| Affricate | | | | | | | | | č | Ĭ | | | | |
| Nasal | | m | | | | | | n | | | | ŋ | | |
| Glide | M | w | | | | | | | | у | | | h | |
| Liquid | | | | | | | | l r | | | | | | |

You may prefer to use the following alternative symbols for the palatal affricates and fricatives: $\check{s}=\int,\ \check{z}=\mathfrak{z},\ \check{c}=\mathfrak{t}\int,\ \text{and }\check{j}=d\mathfrak{z}.$



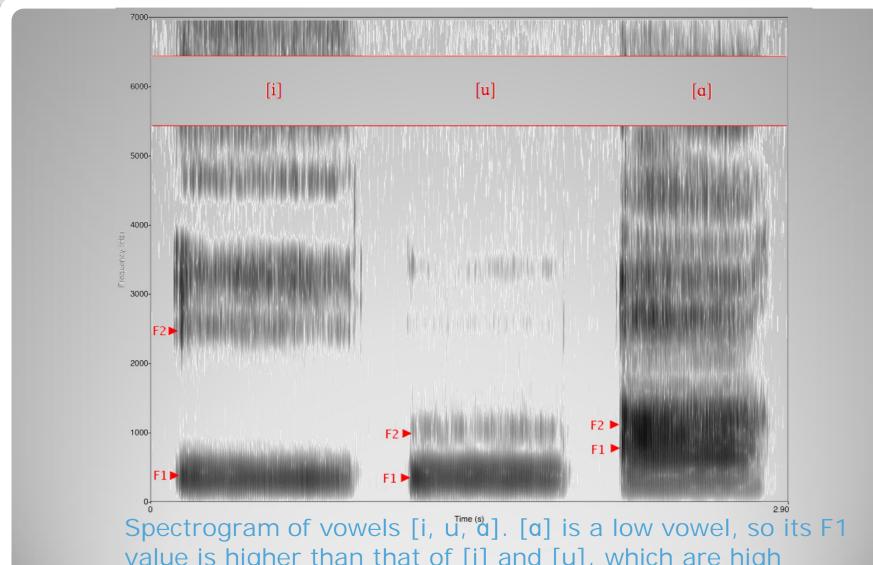
The International Phonetic Alphabet Keyboard (2005 revised edition)

Consonants (Pulmonic)

Missing some symbols? Apply Doulos SIL font

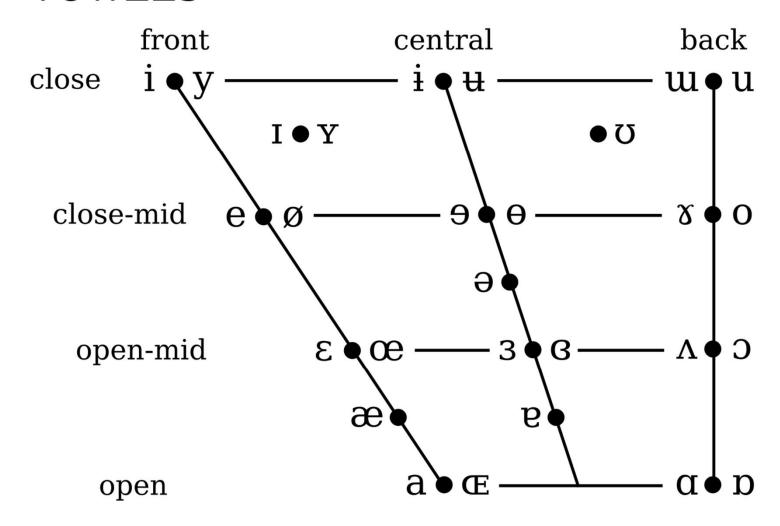
| | Bila | abial | Labio | dental | De | ntal | Alve | eolar | Postal | veolar | Retn | oflex | Pal | latal | Ve | elar | Uv | ular | Phary | /ngeal | Glo | ottal |
|----------------------|------|-------|-------|--------|----|------|------|-------|--------|--------|------|-------|-----|-------|----|------|----|------|-------|--------|-----|-------|
| Plosive | p | b | | | | | t | d | | | t | d | С | J | k | g | q | G | | | 7 | |
| Nasal | | m | | m | | | | n | | | | η | | ŋ | | ŋ | | N | | 200 2 | | |
| Trill | | В | | | | | | r | | | | | | | | | | R | | | | |
| Tap or Flap | | | | V | | | | ſ | | | | t | | | | | | | 0 | | | |
| Fricative | ф | β | f | ٧ | θ | ð | S | Z | ſ | 3 | S | z | Ç | j | X | Y | X | R | ħ | 5 | h | h |
| Lateral fricative | | | | | | | 4 | 13 | . 100 | | | *** | | 6 | | | | | | | | |
| Approximant | | | | υ | | | | J | | | | 1 | | j | | щ | | | | | | |
| Lateral approximant | | | | | | | | Ī | | | | l | | λ | | L | | | | | | |

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.



Spectrogram of vowels [i, u, a] is a low vowel, so its F1 value is higher than that of [i] and [u], which are high vowels. [i] is a front vowel, so its F2 is substantially higher than that of [u] and [a], which are back vowels.

VOWELS



Symbols represent (unrounded • rounded) vowels.

Back Front Front Central u High U Mid е 0 ə ε 0 Low æ a a

Phonemes and phonological systems in simplistic and wrong representation

| | Language | Consonants | Vowels | Total |
|---|--------------------------------|-------------------------|----------------------|------------------|
| 1 | Russian | 36 | 6 | 42 |
| 2 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | English hat is so French | 24 wrong about 17 | 20 this sch 15 | 44 eme? 32 |
| 4 | German | 22 | 18 | 40 |
| 5 | Abkhazian | 68 | 3 | 71 |
| 6 | Finnish | 13 | 8 | 21 |

Vocalization in Arabic Writing

Arabic vocalization (Ali by Mathieu Réguer)



Phonological units allophone ['æləˌfəʊn]

In English the aspirated initial (p)
(in 'pot' or 'pin')
and the unaspirated (p)
(in 'spot' 'or spin') are allophones of the phoneme /p/, as well as /t/ in 'top' and 'stop', whereas in ancient Greek the distinction was phonemic

Orthoepy ['ɔːθəʊˌɛpɪ] The OED recognizes the variants: /'ɔːθəʊˌiːpi/, /'ɔːθəʊˌɛpi/, /'ɔːθəʊɨpi/, and /ɔːˈθəʊɨpi/ for BrE, as well as /ɔrˈθoʊəpi/ for AmE.

is the study of correct or standard pronunciation Etymology: from Greek orthoepeia, from ORTHO- straight + epos word

What is the difference between just animal sounds and the sounds of human language?

Speak out your mind!

Paralinguistics [pærəlɪŋ'gwɪstɪks]

Paralanguage ['pærə læŋgwɪdʒ] is the non-lexical component of communication by speech, for example intonation, pitch and speed of speaking, hesitation noises... When at large – pieces of non-verbal semiotics, such as body language included (e.g. gesture and facial expression).

https://learningapps.org/display?v=pimh7u47319



Watch the video and check yourself!



Check yourself!

-Approximant (noun) is a consonant produced by bringing one articulator (the tongue or lips) close to another without actually touching it, as in English /r/ and /w/ Approximants are speech sounds that involve the articulators approaching each other but not narrowly enough nor with enough articulatory precision to create turbulent airflow. Therefore, fall between fricatives, which do produce a turbulent airstream, and vowels, which produce no turbulence.

-alternation [aziltə'neis(ə)n

is the phenomenon of a morpheme exhibiting variation in its phonological realization.

Each of the various realizations is called an alternant [ɔːl'tɜːnənt].

The variation may be conditioned by the phonological, morphological, and/or syntactic environment [ɪn'vaɪər(ə)nmənt], [en-] / in which the morpheme finds itself.

alternation [| p:|tə'neɪʃ(ə) n

is a cover term for a wide variety of sound changes that occur at morpheme or word boundaries. Examples include: "Movable nu - v (in Ancient Greek); "Crasis (/'kreisis/ a type of contraction in which two vowels or diphthongs merge into one new vowel or diphthong, making one word out of two.;

Sandhi (/ˈsʌndi, ˈsæn-, ˈsɑːn-/; Sanskrit: संधि saṃdhí [sɐndʰi]

-Sandhi (/ˈsʌndi, ˈsæn-, ˈsɑːn-/; Sanskrit: संधि saṃdhí [sɐndʰi]

is a cover term for a wide variety of sound changes that occur at morpheme or word boundaries. Examples include:

ü Elision - is the omission of one or more sounds (such as a vowel, a consonant, or a whole syllable) in a word or phrase.

ü Liaison (French: [ljε.zɔ̃] is the pronunciation of a latent word-final consonant immediately before a following vowel sound.

ü Linking and intrusive R.

Sandhi (/ˈsʌndi, ˈsæn-, ˈsɑːn-/;

Sanskrit: संधि saṃdhí [sɐndʰi]

```
- Q-01. English I have /ai 'hæv/ /aiv/
        a) disfix;
        b) epenthesis (/ɪˈpɛnθəsɪs, ε-/;
        c) elsion [I'lI3(ə)n];
        d) excrescence [iks'kres(ə)n(t)s],
        [eks-]
        e) svarabhakti or anaptyxis
        (/ ænəp'tiksis/;
```

Check yourself!

- Q-01. Ablaut grades
- In Proto-Indo-European, the basic, inherent vowel of most syllables was a short e.
- Ablaut is the name of the process whereby this short e changed, becoming short o, long \bar{e} , long \bar{o} or sometimes disappearing entirely to leave no vowel at all.

– Q-01. Ablaut grades

Thus, ablaut turned short *e* into the following sounds:

| zero | short | long |
|------|-------|------|
| Ø | | ē |
| | 0 | ō |

- Ablaut grades
- If a syllable had a short *e*, it is said to be in the "e-grade" or "full grade". When it had no vowel, it is said to be in the "zero grade". Syllables with long vowels are said to be in "lengthened grade". (When the *e*-grade or the *o*-grade is referred to, the short vowel forms are meant.)

- Ablaut grades in Greek

| Ablaut grade | PIE (reconstructi on) | Greek | (Greek transliterated) | Translation |
|------------------------|---|------------------------------|------------------------------|--|
| e-grade or full grade | *ph ₂ - t • r -m | πα- τ έ ρ -α | pa- tér -a | "father" (noun, accusative) |
| lengthened e- grade | *ph ₂ - tér | πα- τήρ | pa- tér | "father" (noun, nominative) |
| zero-grade | *ph ₂ -tr-és | πα-τρ-ός | pa-tr-ós | "father's" (noun, genitive) |
| o-grade | *n-péh ₂ - tor -m | ἀ-πά- τ ο ρ -α | a-pá- t o r -a | "fatherless" (adjective, accusative) |
| lengthened o- grade | *n-péh ₂ - tōr | ἀ-πά- τωρ | a-pá- tōr | "fatherless" (adjective, nominative |

- Ablaut grades
 In this unusually neat example, the following can be seen:
- A switch to the zero-grade when the word stress moves to the following syllable.
- A switch to the o-grade when the word stress moves to the preceding syllable.
- A lengthening of the vowel when the syllable is in word-final position.

Ablaut grades

In PIE, there were already ablaut differences within the paradigms of verbs and nouns. These were not the main markers of grammatical form, since the inflection system served this purpose, but they must have been significant secondary markers.

In the daughter languages, these came to be important markers of grammatical distinctions. The vowel change in the Germanic strong verb, for example, is the direct descendant of that seen in the Indo-European verb paradigm.

- Ablaut grades: Examples in modern English are the following:

| Infinitive | Preterit | Past participle |
|------------|----------|-----------------|
| sing | sang | sung |
| give | gave | given |
| strive | strove | striven |
| break | broke | broken |

Jacob Ludwig Karl Grimm /1785 - 1863/

Jacob Ludwig Karl Grimm /1785 –
1863/ is recognized for enunciating
Grimm's law, the Germanic Sound
Shift, which was first observed by the
Danish philologist
Rasmus Christian Rask.

Grimm's law was the first non-trivial systematic sound change to be discovered. Grimm's law, also known as the "Rask-Grimm Rule" or the First Germanic Sound Shift, was the first law in linguistics concerning a non-trivial sound change. It was a turning point in the development of linguistics, allowing the introduction of a rigorous methodology to historic linguistic research.

GRIMM'S LAW

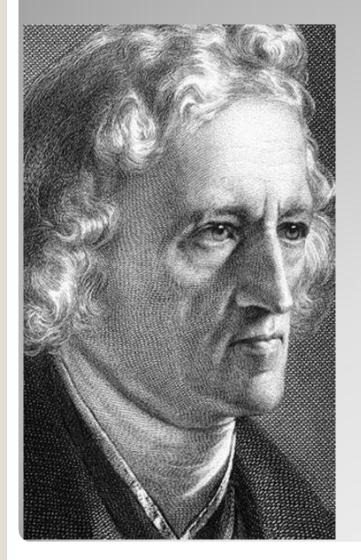
Grimm's law concerns the correspondence of consonants between the ancestral Proto-Indo-European language and its Germanic descendants, Low Saxon and High German, and was first fully stated by Grimm in the second edition of the first part of his Grammar.

The correspondence of single consonants had been more or less clearly recognized by several of his predecessors, including Friedrich von Schlegel, Rasmus Christian Rask and Johan Ihre, the last having established a considerable number of literarum permutationes, such as b for f, with the examples boera = ferre ("to bear"), befwer = fibra ("fiber").

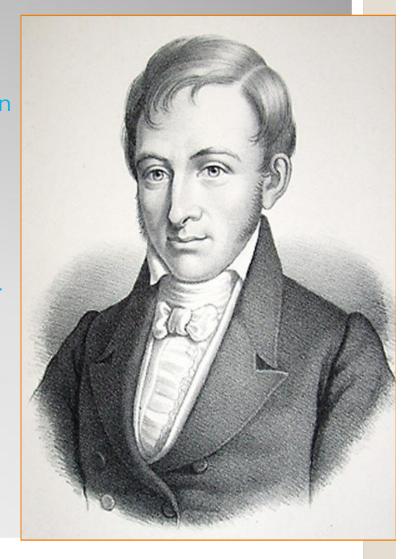
Rask, in his essay on the origin of the Icelandic language, gave the same comparisons, with a few additions and corrections, and even the same examples in most cases. As Grimm in the preface to his first edition expressly mentioned Rask's essay, there is every probability that it inspired his own investigations. But there is a wide difference between the isolated permutations described by his predecessors and his own comprehensive generalizations. The extension of the law to High German in any case is entirely Grimm's work.

The idea that Grimm wished to deprive Rask of his claims to priority is based on the fact that he does not expressly mention Rask's results in his second edition, but it was always his plan to refrain from all controversy or reference to the works of others. In his first edition, he calls attention to Rask's essay, and praises it ungrudgingly. Nevertheless, a certain bitterness of feeling afterwards sprang up between Grimm and Rask, after Rask refused to consider the value of Grimm's views when they clashed with his own. Jacob is recognized for enunciating Grimm's law, the Germanic Sound Shift, which was first observed by the Danish philologist Rasmus Christian Rask

Jacob Grimm versus Rasmus Rask



The Danish philologist Rasmus Christian Rask was the first to consider Norse language as a cue to understanding the origin of North Germanic. Rask relied on empirical study of language material, while Jacob Grimm would hypothesize [haɪˈpɔθəsaɪz] first.



Mechanics of Grimm's Law

It establishes clearly a set of regular correlations between early Germanic stops and fricatives and the stop consonants of certain other centum Indo-European languages.

There are three parts to Grimm's law, which may be regarded as the three consecutive phases in the phonetic shift that happened in the development of these languages.

- Proto-Indo-European voiceless stops change into voiceless fricatives.
- ii. Proto-Indo-European voiced stops become voiceless stops.
- iii. Proto-Indo-European voiced aspirated stops become voiced stops or fricatives.

Mechanics of Grimm's Law

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There are three parts to Grimm's law, which may be regarded as the three consecutive phases in the phonetic shift that happened in the development of these languages.

$$\begin{array}{c} b^h \rightarrow b \rightarrow p \rightarrow \varphi \\ d^h \rightarrow d \rightarrow t \rightarrow \theta \\ g^h \rightarrow g \rightarrow k \rightarrow x \\ g^{wh} \rightarrow g^w \rightarrow k^w \rightarrow x^w \end{array}$$

Mechanics of Grimm's Law

The law was the first systematic and coherent formulation, well supported by examples. It is important for historical linguistics because it clearly demonstrates the principle that sound change is a regular phenomenon and not a random process affecting only some words, as had been thought previously.

$$\begin{array}{c} b^h \rightarrow b \rightarrow p \rightarrow \phi \\ d^h \rightarrow d \rightarrow t \rightarrow \theta \\ g^h \rightarrow g \rightarrow k \rightarrow x \\ g^{wh} \rightarrow g^w \rightarrow k^w \rightarrow x^w \end{array}$$

GRI MM'S LAW



| Non-Germanic (unshifted) cognates | Change | Germanic (shifted) English examples |
|--|---------------------------------------|--|
| Latin: pater, piscis | *p→f [φ] | English: |
| Latin: tenuis | *t→þ [θ] | English: |
| Latin: cord- | *k→h [x] | English: |
| Latin: quod, Irish: cad, | | English: |
| Sanskrit: kád, Russian: | *k ^w →hw [x ^w] | |
| ко- (ko-), Lithuanian: kas | | |
| Latin: baculum | *b → p [p] | English: |
| Latin: dent- | *d→t [t] | English: |
| Latin: gel ū | *g→k [k] | English: |
| Lithuanian: gyvas | *g "→ kw [k"] | English: |
| Sanskrit: bhr ātṛ | *b ^h →b [b]/[β] | English: |
| Sanskrit: mádhu 'honey' | *d ^h →d [d]/[ð] | English: |
| Ancient Greek: χήν (kh ē n) | *gʰ→g [ɡ]/[ɣ] | English: |

| Non-Germanic (unshifted) cognates | Change | Germanic (shifted) examples |
|---|-------------------------------|---|
| Latin: pater, piscis | *p→f [φ] | English: father, fish |
| Latin: tenuis | *t → þ [θ] | English: thin |
| Latin: cord- | *k→h [x] | English: heart |
| Latin: quod, Irish: cad, Sanskrit: kád, Russian: ко- (ko-), Lithuanian: kas | *k ™→ hw [x ™] | English: what, Gothic: Խа ("hwa"), Icelandic: hvað, Faroese: hvat, Danish: hvad, Norwegian: hva |
| Latin: baculum | *b → p [p] | English:peg |
| Latin: dent- Latin: duo: | *d→t [t] | English: teeth Gothic Twai |
| Latin: gel ū | *g→k [k] | English: cold |
| Lithuanian: gyvas | *g ™→ kw [k ™] | English: quick |
| Sanskrit: bhr ātṛ | *bʰ→b [b]/[β] | English: brother Goth. brobar |
| Sanskrit: mádhu 'honey' | *dʰ→d [d]/[ð] | English: mead /OE medu |
| Ancient Greek: χήν (kh ē n) | *gʰ→g [g]/[ɣ] | English: goose, German: Gans, Icelandic: gæs, Faroese: gás, Danish, Norwegian, Swedish: gås |

- q Grimm's law contained exceptions
- Verner found a pattern among the exceptions
- Verner's Law additionally accounted for the occasional mutation of *s à z in the Germanic Languages.
- The ordering of Verner's Law and Grimm's Law is unclear

- 1. Grimm's law only applies to initial consonants and consonants following a stressed syllable
- 2. In all other circumstances voiceless obstruents become voiced
 - *pà b
 *tà d
 *kà g
 *kwà gw
 *sà 7

q Verner' Law: What's all about

- The Proto-Germanic voiceless fricatives changed into voiced if they were immediately preceded by an unstressed syllable
- q Father ['faːðə] (modern English)
- origin: Old English fæder, of Germanic origin; related to Dutch vader and German Vater, from an Indo-European root shared by Latin pater and Greek pater

q Verner' Law: What's all about

- The Proto-Germanic voiceless fricatives changed into voiced if they were immediately preceded by an unstressed syllable
- ¬Brother ['br∧ðə] (modern English)
- origin: Old English brothor, of Germanic origin; related to Dutch broeder and German Bruder, from an Indo-European root shared by Latin frater

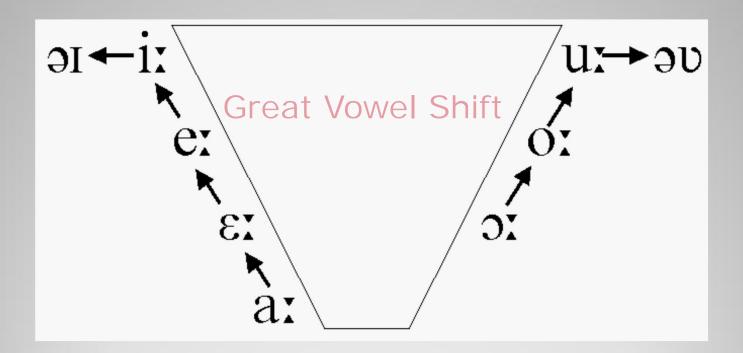
Verner realized that all the early Proto-Germanic voiceless fricatives [f, θ , h] became voiced between vowels if the preceding vowel was unstressed, otherwise, they remained voiceless.

It is stated that the PIE version of $ph_2t\acute{e}r$ ("father") had the stress on the second syllable, and $b^hr\acute{e}h_2t\acute{e}r$ ("brother") did not, this explained the $t\rightarrow d$ change.

```
PIE root *duk (to lead) – inflection stressed ducere (Latin)
tug (English)
```

Grimm's law predicts /tux/ Verner's law explains the final /g/

Evidence of Verner's Law in English The term was coined by Otto Jespersen (1860 -1943)



Transition of English [o:] into [u:]

```
- roof [ro:f] -> [ru:f]
```

- cool [ko:l] -> [ku:l]

sheep [se:p]
we [we:]

XV [ʃi:p] [wi:]

Middle English [a:] transformations

XIV end XIV XV XVI-XVII XVIII

take [ta:k] - [tæ:k] - [te:k] - [te:k]

shake [a:k] - [a:k] - [s:k] - [e:k] - [e:k]

Middle English [i:] transformations

XIV century XV XVI XVII

five [fi:v] [feɪv] [fæɪv] [faɪv]

my [mi:] [mei] [mæi] [mai]

Middle English [u:] transformations

XIV century XV XVI

town [tu:n] [toun] [taun]

out [u:t] [out] [aut]

Middle English [3:] transformations

XVi century XVII XVIII

road [ro:d] [roud]

stone [sto:n] [stoun]

Middle English [E:] transformations

XIV century XVI XVII-XVIII

ete ['ɛ:te] eat [e:t] [i:t]

se [se:] sea [se:] [si:]

Middle English [e] -> [] before r transformations

earlier now we have it as

sterre far

ferre star

Middle English [a] transformation into [æ]

XIV century XVI

cat [kat] [kæt]

Middle English [a] transformation before [w]

XV century presently

-want [want] [wont]

Middle English [u] transformation into [1]

XV century XVII

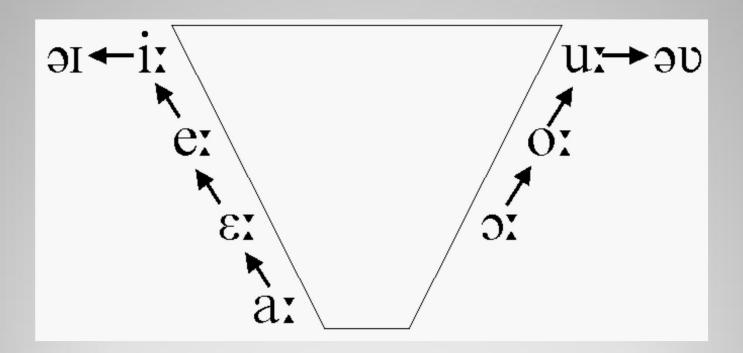
–run [run] [r∧n]

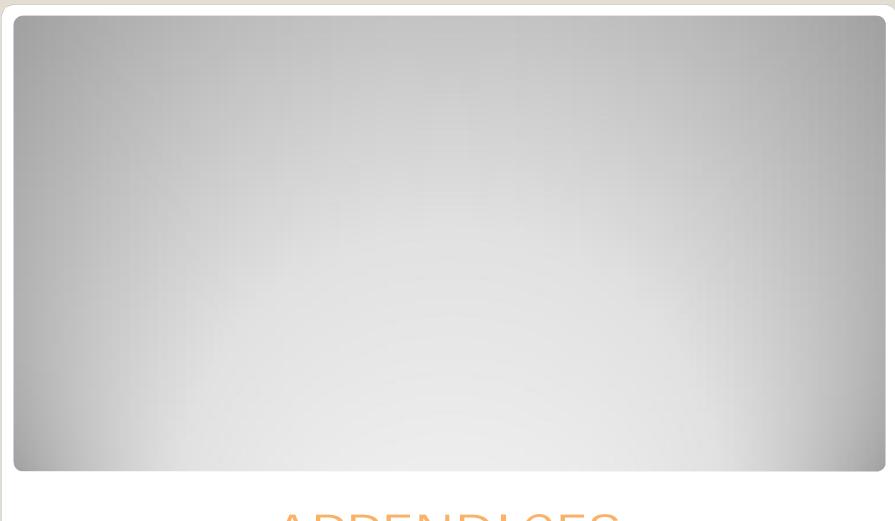
Great Vowel Shift

| (1300) | 1400 | | 1500 | 1600 | 1700 | 1800 | | present |
|--------|------|------|------|---------------|---------------|------|------|---------|
| driven | /i:/ | /ri/ | /ei/ | /εi/ | / ʌi / | /ai/ | | |
| house | /u:/ | /ʊu/ | /ou/ | /ou/ | /Au/ | /au/ | | |
| feet | /e:/ | | /i:/ | | | | | |
| fool | /o:/ | | /u:/ | | | | | |
| beat | /ε:/ | | | | /e:/ | /i:/ | | |
| foal | /ɔ:/ | | | | /o:/ | | | /əu/ |
| take | /a:/ | | /æ:/ | /ε:/ | /e:/ | /ei/ | | |
| sail | /ai/ | | /æi/ | /ε i / | /e:/ | /ei/ | | |
| law | /au/ | | /pu/ | /p:/ | | | /ɔː/ | |

| Middle English | | | Early Modern English | | | Modern English | |
|----------------|----------------|---------------|-------------------------|--------|---------------|-------------------|--------|
| [aː] | [naːmə] 'name' | -> | [٤ː] | [nɛːm] | \rightarrow | [e _I] | [neɪm] |
| [٤ː] | [mɛːt] 'meat' | -> | [eː] | [meːt] | → | [iː] | [mi:t] |
| [eː] | [meːt] 'meet' | -> | [iː] | [miːt] | \rightarrow | [iː] | [mi:t] |
| [iː] | [riːd] 'ride' | \rightarrow | [əi] | [rəid] | \rightarrow | [ai] | [raid] |
| [xc] | [boxt] 'boat' | -> | [0:] | [bort] | \rightarrow | [əv] | [bəvt] |
| [oː] | [bo:t] 'boot' | -> | [uː] | [buːt] | \rightarrow | [uː] | [burt] |
| [uː] | [muːθ] 'mouth' | \rightarrow | [əʊ] | [məυθ] | → | [av] | [maυθ] |

The term coined by Otto Jespersen (1860 –1943)





APPENDICES

Self-test exercices

- Q-01.
- umlaut ['umlaut] (esp in Germanic languages) the change of a vowel within a word brought about by the assimilating
- influence of a vowel or semivowel in a preceding or following syllable
 - a) disfix;
 - b) epenthesis (/ɪˈpɛnθəsɪs, ε-/;
 - c) elision [I'lI3(ə)n];
 - d) excrescence [iks'kres(a)n(t)s],
 [eks-]
 - e) svarabhakti or anaptyxis (/ˌænəp'tɪksɪs/;

```
- Q-01. English I have /ai 'hæv/ /aiv/
        a) disfix;
        b) epenthesis (/ɪˈpɛnθəsɪs, ε-/;
        c) elision [I'li3(ə)n];
        d) excrescence [iks'kres(ə)n(t)s],
        [eks-]
        e) svarabhakti or anaptyxis
        (/ ænəp'tiksis/;
```

- Q-1.0. Phonetics [fə'netiks] is

- a) the study of sounds;
- b) a set of sounds of human language;
- c) the branch of linguistics that deals with systems of sounds;
- d) the study of the sound system of a language or of languages in general;
- e) the system of relationships among the speech sounds that constitute the fundamental components of a language.

– Q-1.1. Phoneme is

- a) a sound
- b) a set of sounds of human language

Q-01. In phonology, vowel harmony is an assimilatory process (featured e.g. in Turkic and Uralic languages) in which the vowels of a word have to be members of the same class (thus "in harmony").

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a) disfix;
b) epenthesis (/ɪˈpɛnθəsɪs, ε-/;
c) elision [ɪˈlɪʒ(ə)n];
d) excrescence [ɪksˈkres(ə)n(t)s],
[eks-]
e) svarabhakti or anaptyxis
/ˌænəpˈtɪksɪs/;
```

- Q-01.
- umlaut ['ʊmlaʊt] (esp in Germanic languages) the change of a vowel within a word brought about by the assimilating
- influence of a vowel or semivowel in a preceding or following syllable
 - a) ablaut;
 - b) reduction;
 - c) umlaut;
 - d) elision [I'lI3(ə)n];
 - e) anaptyxis / ænəp'tiksis/;

- -Q-01.
- sandhi ['sʌndi] san¦dhi noun [mass noun] the process whereby the form of a word changes as a result of its position in an utterance (e.g. the change from English a to an before a (an initial) vowel) ablaut;
 - a) reduction;
 - b) umlaut;
 - c) elision [I'lI3(ə)n];
 - d) anaptyxis / ænəp'tiksis/;

```
- Q-09. English I have /ai 'hæv/ /aiv/
        a) disfix;
        b) epenthesis (/ɪˈpɛnθəsɪs, ε-/;
        c) elsion [I'lI3(ə)n];
        d) excrescence [iks'kres(ə)n(t)s],
        [eks-]
        e) svarabhakti or anaptyxis
        (/ ænəp'tiksis/;
```

- Q-1.0. Phonetics [fə'netiks] is

- a) the study of sounds;
- b) a set of sounds of human language;
- c) the branch of linguistics that deals with systems of sounds;
- d) the study of the sound system of a language or of languages in general;
- e) the system of relationships among the speech sounds that constitute the fundamental components of a language.

– Q-1.1. Phoneme is

- a) a sound
- b) a set of sounds of human language

Q-1.2. A morpheme is

- a) a meaningful morphological unit of a language that can be further divided;
- b) an indecomposable sign;
- c) the same thing as morph;
- d) any of the variant forms of a phoneme as determined by the context in which it is used.

– Q-1.3. Morphophoneme [ˌmɔːfə(ช)ˈfəชniːm] is

- a) the set of phonemes or sequences of phonemes that constitute the various allomorphs of a morpheme;
- b) the set of speech sounds in any given language that serve to distinguish one word from another;
- c) any of the various phonetic realizations of a phoneme in a language, which do not contribute to distinctions of meaning.

- Q-1.4. T/F Question
 Morphophonology
 [ˌmɔːfə(ʊ)fəˈnɒlədʒi] /
 morphophonemics
 [ˌmɔːfəʊfəʊˈniːmɪks] is the study of
 - a) interaction between morphological,phonological and phonetic processes;b) the sound changes that take place in morphemes;
 - c) the sound changes that take place in phonemes;

THANK YOU FOR ATTENTION!