Sound Change

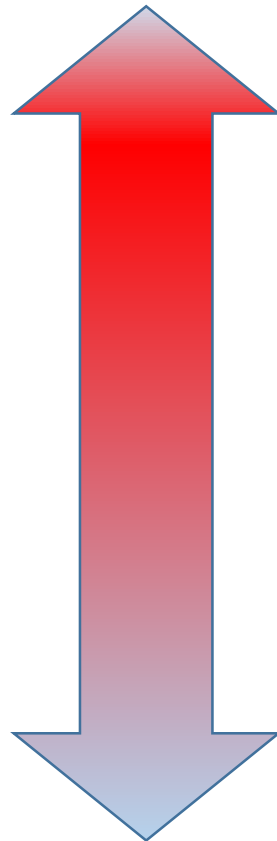4.41473 – Comparative Linguistics

Semester 2, 2013

Olga Temple, Linguistics & Modern Languages

SHSS, UPNG

Sonority Scale

A sonority hierarchy is a ranking of speech sounds, pronounced with the same amount of energy, by their *loudness*:

Most sonorous (loudest)

Least sonorous

• Low (open) vowels:	[a, ǣ, a:]
• Mid vowels:	[e, ʌ, ɒ, ɔ, ɔ:]
• High (close) vowels:	[i:, i, ɨ, u, u:, ʊ]
• Rhotics (flaps):	[r, ɹ, ʁ, ʀ]
• Laterals:	[l, ɬ, ɭ, ɫ, j, w]
• Nasals:	[m, ɱ, ɰ, n, ɲ, ɳ, ŋ]
• Voiced fricatives:	[z, v, ʒ, ɣ, ð]
• Voiceless fricatives:	[s, f, ʃ, h, x, θ]
• Voiced stops:	[b, d, g]
• Voiceless stops:	[p, t, k, ʔ]

Lenition vs. Fortition

Lenition - most common sound change (energy conservation):

- a change of [k] to [?] is more likely, than [?] to [k]:
- Eng. *another kind* → TP *narakain*
- Eng. *medicine* → TP *marasin*
- Eng. *water* → TP *wara*
- Eng. *picture* → TP *piksa*
- Eng. *day* → TP *de*

Fortition - relatively rare (it's contrary to energy conservation)

- Eng. [naif] → TP [naip]
- Eng. *afraid* → TP *pret*
- Eng. *full up* → TP *pulap*
- Eng. coffee → TP *kopi*
- Eng. *enough* → TP *inap*
- Eng. *brother* → TP *brata*
- Eng. *fire* → TP *paia*

Rhotacism: a *kind* of lenition

Rhotics (all types of *r* sounds , i.e., trills, flaps, glides, etc.)

Laterals (all types of [l] sounds + [w] & [j])

LIQUIDS

Rhotacism is the lenition of [s] or [z] to a *rhotic* between vowels:

Latin   - *genesis > generis* (of the types)
          - *hono:sis > honoris* (of the honour)

IE   - *wes- 'be' > Dutch *wezen*   'to be'
                          OE wæs / wæ:ron
                          ME was / were

Types of Sound Change

- *Sound Loss* (extreme lenition – no energy at all required! :)
- *Sound Addition*
- *Metathesis* (change in the order of sounds: *ask* → *aks*, etc.)
- *Vowel Breaking* (1 vowel sound → 2 sounds)
- *Unpacking* (1 consonant sound → 2 sounds)
- *Assimilation* – change in sound quality on account of the neighboring sounds

Sound Loss

- Aphaeresis [əˈfɛɹəsəs] – loss of word-initial sounds:
  - Because > ʻcoz
  - Eng yesterday > TP asde
  - TP blong > lo
- Apocope [əpɔkəpi] - the loss of word-final segments:
  - Eng *day*   >   TP *de*
  - Eng *grey*   >   TP *gre*
  - Eng yeast   >   TP yis
  - Eng August   >   Ogas
  - TP long   >   lo

Sound Loss

- Syncope [siŋkəpi] – loss of segments in the middle of the word:
    - Eng. *government* > TP *gavman*
    - Eng. *cake*   > TP *kek*
    - Eng. *paper*   > TP *pepa*; plate > plet; face > pes, etc.

- Cluster Reduction – consonant clusters are often reduced by deleting some of the consonants: Rus. *zdravstvuj* > [zdrastvuj] (hello); Eng. *government* > [gʌvəmənt]

- Haplology – deletion of one or more similar sounds or syllables: mineralogy for hypothetical mineralology, or [prɔbli] for [prɔbəbli], [læbɔrətri] for [læbɔrətəri], [laibrəri] for[laibri], etc.

Sound Addition

Unlike lenition/ sound loss, it is rather rare in English:

[sʌmpθiŋk] >[sʌmθiŋ] , [nəʊp] > [nəʊ], [jep] > [jɛ:].

Some languages have a characteristic consonant-vowel syllable patterning (i.e., Japanese, Maori, etc.). Speakers then tend to attach vowels to final consonants, by analogy with native patterns (i.e., Maori ka:fe = 'calf'; ko:ti = 'court'; kuki = 'cook,' etc.). This is common for many Papuan & Austronesian languages (and, therefore, also for Tok Pisin):

• Eng. Black > TP [bilǽk]; ants > anis; six > sikis; box > bokis, etc.

Sound Addition

• <u>Excrescence</u> – a consonant is added between two other consonants. This change is against the general tendency in languages to produce consonant + vowel structures, and so it is rather rare. The insertion of [p] in the middle of [mθ] cluster in 'something' is one example; others: *æmtig > ɛmpti 'empty'; *θymle > θimbl 'thimble,' etc.

• <u>Epenthesis</u> – an insertion of a vowel to break up a consonant cluster. Some varieties of English insert an epenthetic schwa [ə] between the final consonants of a word, i.e., [filəm] for [film], [milək] for [milk], etc. It is also common in Tok Pisin: English [blu:] > [bulu], [nekst] > [nekis], [skin] > [sikin], [plɛis] > [peles], [film] > [pilum], [plenty] > [pəlenti], etc.

• <u>Prothesis</u> – the addition of a sound at the beginning of a word: Motu *api became lahi 'fire,' *asan became lada 'gills of fish,' *au became lau 'I, me'

Metathesis

Metathesis – a change in the *order* of the sounds:

ask > [æks]; relevant > revelant; [brid] > bird;

Usually, metathesis affects only a few words in a language, but it seems to have occurred rather systematically between Ilokano and Tagalog, the national language of the Philippines (the 'source'):

Tagalog	Ilokano	English
taŋis	sa:ŋit	'cry'
tubus	subut	'redeem'
tigis	si:git	'decant'

Fusion

Phonetic *fusion* of separate sounds into one is a common sound change. The 'blend' usually has the phonetic features of both of the original sounds: *sol*d*ier, In*d*ian, woul*d* you*, etc.

In French:

*œn	>	œ~	'one'
*bɔn	>	bɔ~	'good'
*vɛn	>	vɛ~	'wine'
*blan	>	bla~	'white

Generalization here: Vowel + Nasal = Nasalised Vowel.

Revise assimilation in connected speech and draw parallels between the two.

Unpacking – the Opposite of Fusion

French			Bislama (Vanuatu Pijin)	
Camion	kamiɔ~	>	kamioŋ	'truck'
Accident	aksida~	>	aksidoŋ	'accident'
Carton	kaʁtɔ~	>	kartoŋ	'carton, cardboard box'
Caleçon	kalsɔ~	>	kalsoŋ	'underpants'

Result: Nasal Vowel > Vowel + Nasal Consonant

Vowel Breaking

Here a single vowel changes to become a diphthong, with the original vowel remaining the same, but with a glide of some kind added either before, or after it (on-glide or off-glide). Some varieties of American English show signs of vowel breaking: [bǽd] > [bǽəd, bǽid] (with an off-glide ə or even i).

Eng. shirt	>	TP siot
Eng. Church	>	TP sios

Assimilation [əsimiˈleiʃən]

- <u>Assimilation of Place</u>: /t/ >/p/ in ratbag [ˈræpbæg], good boy [ˈgʊbɔi], or oatmeal [ˈəʊpmiːl], etc., 'coz the alveolar plosive /t/ is simplified into the /p/ sound, which is closer to the bilabial plosive /b/ and to the bilabial nasal /m/.

- <u>Assimilation of Manner</u>: occurs when two different manners of articulation influence each other to form a different manner of articulation: Indian [ˈindʒiən] and soldier [sɔldʒiə]. This is because the plosive /d/ combines with the approximant /j / to form an affricate.

- <u>Assimilation of Voice</u>: have to [ˈhæftə] (voiced fricative followed by a voiceless consonant)

Assimilation of place will, of course, affect the manner of articulation, so these different types of assimilation usually occur together. Assimilation can be
- **partial**, when the changed sound retains at least one of its original features, or
- **total**, when the two sounds end up identical (a geminate, or phonetically double sound);
- **regressive** (operating backwards, i.e. when the preceding sound is changed: A < B), and
- **progressive** (operating forwards, when the following sound becomes more like the preceding one: A > B)

Assimilation [əsimiˈleiʃən]

Assimilation is:

- <u>partial</u>, when the changed sound retains at least one of its original features (partial regressive assimilation examples: indivisible [ˌindiˈvizəbl], imbalance [ˌimˈbæləns], incredible [iŋˈkredəbl], inadmissible [ˌinədˈmisəbl], etc.

or

- <u>total</u>, when the two sounds end up identical (a geminate, or phonetically double sound; you can see many examples of total regressive assimilation in Modern English word formation, where the last prefix consonant becomes totally like the following sound:

abbreviate	aggressive	appeal	attend
account	alleviate	arrive	
affect	annual	assent	

Assimilation [əsimi'leiʃən]

Assimilation is:

- *regressive* (operating backwards, i.e. when the *preceding* sound is changed: A < B), as in the examples above (account, impose, etc.)

or

- *progressive* (operating forwards, when the *following* sound becomes more like the preceding one: A > B), i.e., handkerchief > ['hæŋkətʃi:f]

ʃ

Regressive Assimilation Is More Common

because our organs of speech tend to 'prepare' to make the following sound by changing their position in advance:

abbreviate	**ag**gressive	**ap**peal	**at**tend	immature [imə'tʃuə]
account	**al**leviate	**ar**rive	**ap**prehend	
affect	**an**nual	**as**sent	**ap**pear	

 * All the highlighted prefixes are allomorphs of **ad**- 'to, toward.' The d in ad- always changes to the sound of any following consonant, except m, j, and v, as in ad**m**ire, ad**j**ust, ad**j**acent, ad**v**ance, etc.

Partial Regressive Assimilation

Examples of partial regressive assimilation:

indivisible	[indəvizəbl]
imbalance	[imbæləns]
incredible	[iŋkredəbl]
inadmissible	[inædmisəbl]

Palatalization

Palatalization is a kind of Assimilation of Manner of Articulation, which occurs when two different manners of articulation influence each other to form a different manner of articulation: Indian ['indʒiən], soldier [sɔldʒə].

By this change, a non-palatal sound becomes a palatal sound, usually before a front high vowel /i/, or sometimes /e/, or before the semi-vowel /j/ (like in the examples above, the plosive /d/ combines with the approximant /j/ to form an affricate).

Voicing & Devoicing

Voicing of intervocalic stops and devoicing of voiced consonants in word final positions are also a common type of assimilation in many languages:

- Russian: [got] 'year' > [goda] 'of the year'; [gorot] 'city' > [goroda] 'of the city'
- German: Bad [ba:t] 'bath'; Tag [ta:k] 'day'; Hund [hunt] 'dog', etc.

Vowel Harmony

Sometimes assimilation may cause a change in a sound not immediately before or after the 'influencing' sound, but further away in the word - at a distance. This is called harmony. Many languages have vowel harmony, which means that there is assimilation of one or more features of one vowel to some or all of the other vowels in the same word. In Bislama, for example, we see:

- kuk-um - 'cook'   mit-im – 'meet'   har-em – 'feel
- put-um – 'put'   kil-im – 'hit'   mek-em – 'make'
- sut-um - 'shoot'   rit-im - 'read'   so-em - 'show'

- Following a syllable with a high back vowel, the high front /i/ vowel of the suffix becomes high back vowel /u/.
- Following a syllable with a mid or low vowel, the high front /i/ of the suffix is lowered to /e/.

Umlaut

This term is most frequently used in Germanic languages to refer to the fronting of a back vowel or the raising of a low vowel under the influence of a high front vowel in the following syllable. Often the high front vowel that had caused the change, was later dropped (by apocope), or reduced to schwa.

Thus the new front vowel became the only way of marking the difference between some words. The irregular singular/plural pairs, such as foot/feet in English are the result of such vowel harmony, or umlaut: Sg. [foːt], Pl. [fɔti] > [fæti] > [feːt] > [fiːt]

Dissimilation

This process is precisely opposite of assimilation: instead of making two sounds more similar, it makes one sound become less like some other nearby sound. A famous example of dissimilation, frequently mentioned in textbooks of historical linguistics, is often referred to as Grassman's Law (after the German linguist Hermann Grassman, who first wrote about it in 1862). This sound change took place in both Sanskrit and Ancient Greek, both of which distinguished phonemically between aspirated and unaspirated stops. In words with two consecutive syllables containing aspirated stops, the first of these lost its aspiration:

Sanskrit: *bho:dha   >   bo:dha   'bid'

Greek;   *phewtho   >   pewtho   'bid'

References

- Crowley, Terry. 1997. An Introduction to Historical Linguistics. 3rd edition, Oxford University Press.

- Temple, Olga. Genesutra. www.templeok.com