Lecture 1:

Testable Concepts:

- *Dialects are mutually intelligible varieties of a language. e.g. Australian vs. Canadian English. All varieties count as dialects, even the 'standard'.*
- *Two systems are separate languages when speakers cannot understand each other (mutually unintelligible).*
- *Every language changes at least slightly each generation. Over time this creates different dialects. As these become mutually unintelligible, they become separate languages.*
- *After 60,000 years of change, there are now around 6,000 distinct languages in the world, 50-90% of which will probably be entirely lost in a few generations.*

The Meaning of "Dialect":

- Every language has a number of varieties.
- Each variety has some unique sounds, words, etc. (usually associated with place or class)
- Def'n of "dialect": Any variety of a language

Two different dialects: CAN understand each other (though different)
Two different languages: CANNOT understand each other (even if related)

The Story of Language:

A. Genesis: Where does language come from?

- 60,000 BC in the East African Savannah something happened to our ancestor's minds.
- Tools became far more diverse and efficient, art made its first appearance and the exploitation of food resources was done in a far more efficient way.
- Klein Theory: The onset of Upper Palaeolithic marks the origin of modern language, with its rich syntax and multitude of ways to express oneself. This happened because of a change in the ways our brains are wired, set in motion by a genetic event.
- The ancestors used their new brain power to build the first true human language. It gave us communicative power to live in any environment and become the dominant species on the planet.

B. Babel: Why are there so many different languages today?

- First, the ancestors used their new brain power to make the first true human language.
- Then, over time, two groups of the ancestors ended up separated (still the same language, but not in touch much).
- Then, the kids in each generation of each group changed a few words, sounds and created new dialects.
- Over a few generations, the little changes started to add up until they couldn't understand each other.
- In the end, the first language had become two mutually unintelligble languages.
- Every generation always changes language a bit. This continues today.
- Why does this happen? Because the brain power to create a complete language is still present in each of us. We don't just copy, each generation creates its own language - and makes some little changes as it does so.
- Each generation borrows freely from their parents, but then does things their way.

- Today there are 6,000+ languages.

C. Collapse: How many languages are going to die in your lifetime?

- Little changes are still going on in every language. We should be expanding, but we're not!
- Linguistic diversity is about to collapse.
- Up to 90% loss in a few generations.

Lecture 2:

Testable Concepts:

- *Politics complicates what we call 'one language': sometimes mutually intelligible systems are counted as 'separate languages' for political reasons (e.g. Serbian vs. Croatian). And sometimes mutually unintelligible systems are counted as 'one language', again for social or political reasons (e.g. 'Chinese', 'Arabic').*
- *A language does not just pick an arbitrary list of sounds. They key in on sets of distinctive features of sounds (including place and manner of constriction), and those features define a matrix of related but distinctive sounds.*
- *Every language combines its sounds into meaningful strings (words, but also affixes). Linguistics call these the 'lexicon' of the language.*
- *You can't just throw sounds together to make words any old way: each language imposed its own special phonotactic constraints.*
- *The RP dialect is a high-prestige dialect of British English, spoken by the Queen.*
- *RP has word-final (syllable-final) r-loss, and uses /əw/ instead of /o/.*
- *RP is not superior on linguistic grounds, but social factors give that system social prestige.*
- *RP is dying as a dialect*

Review Concepts:

- Language Change: Every language is slowly changing its sounds and words. (Sweet! Mad! Sick! or "Suit" pronounced as [sjut] or [sut])
- Dialects: Separated peoples end up speaking slightly differently. Dialects emerge from the changes. Dialects are mutually intelligible linguistic systems (e.g. Scottish vs Canadian vs. Australian)
- Historical Change into Distinct Languages: After time, two dialects can diverge into separate languages. They become distinct languages when they are no longer mutually intelligible (e.g. German, Dutch, English from Proto-Germanic or French, Spanish, Italian from Vulgar Latin)

Word definition change:
sweet -> good
sick -> good

Sound change:
dew -> dju or du
which/witch is pronounced the same now (wasn't in the past)

Political Interference and 'One Language':

A unique language is a strong factor in creating a group identity. Governments know this and use language to build nations (or destroy them).

Mutually unintelligible systems that are called 'One Language' for social or political reasons:

- Arabic
- Chinese
- Italian

Mutually intelligible systems that are called 'Separate Languages':

- Serbian and Croation
- Urdu and Hindi

"A language is a dialect with an army and a navy."

Political considerations make a difference in what gets classed as a 'separate language'.

<u>Basic Linguistic Concepts:</u>

Every language contains a sound system.

Each language chooses systematically:

- A particular set of places where sounds are made
- A particular set of manners (ways) of making distinct sounds

These combine to give a matrix of related but distinct sounds for the language. A few features produce an abundance of distinct sounds!

	LIPS		RIDGE		BACK ROOF (PALATE)	
	vibration	no vibration	vibration	no vibration	vibration	no vibration
stopped	b	p	d	t	g	k
continuous	β	Φ	z	s	ɣ	x

These two don't occur in English.
Used to use x in past.

Features combine so effectively, languages can pick and choose what distinct sounds they use.

Modern English chose to not include β and Φ, and got rid of x from the table above. Aren't using ɣ in this class.

We also combine our sound symbols into meaningful units.

/pis/ = peace
/sit/ = seat
/gis/ = geese
/ski/ = ski

Lexicon: List of sound-strings.

- Words are all in the lexicon. (e.g. dog, man, happy, etc)
- Some smaller meaningful strings also exist (e.g. prefixes, suffixes un-, -ness, -able)

Which sounds speakers use for each meaning is usually arbitrary (e.g. the string of sounds /d/ /ɑ/ /g/ is not logically connected to the meaning of "dog").

But, every language also imposes sound-based constraints on the lexicon: you can't just put sounds together however you want!

Possible ways to combine /p/ /s/ /t/ and /i/ :

- /pis/
- /ski/
- /stip/
- /it/
- /spit/

Impossible ways to combine /p/ /s/ /t/ and /i/ :

- /pt/
- /tpsi/
- /psi/
- /spt/
- /sptit/

Phonotactic constraints: Special constraints on how sounds can be strung together into words (e.g. English words cannot start with the sequence /ps/ even though /sp/ is fine)

Linguists can't use regular spelling to describe sounds. They need a single, unambiguous symbol for each sound.

For vowel in 'so, sew, oh' the IPA committee decided to use /o/. (You will also see this vowel transcribed for English as [ow]: these are correct but detailed transcriptions.)

/so/ - so
/toz/ - toes
/noz/ - nose
/sok moz toz/ - soak Moe's toes

For vowel in unstressed the, the IPA uses this symbol /ə/ (schwa). This vowel occurs only in unstressed syllables, if you stress it, the tongue position changes.

/əksplod/ - explode
/nozəz/ - noses
/əkspoz no nozez/ - expose no noses

The 'RP' Dialect:

Around the 1700s, Oxford University had it's own dialect. When kids went to Oxford, they would usually lose their childhood dialects and switch to the Oxford dialect. For reasons including wealth, high education, and the fact that they wrote the dictionary, this dialect became the 'prestige' dialect of Southern Britain.

This 'received' dialect became known as 'received pronunciation' (RP). (Queen's dialect of English)

Lexical differences in RP:

RP	CDN
lorry	truck
flat	apartment
chemist	pharmacist
maths	math
chap	guy

Phonotactic constraint in RP:

- In RP /r/ can never be pronounced at the end of a word (or syllable)
- RP speakers systematically drop /r/ (the older historical form), usually with a shwa instead

Word	RP	CDN
beer	/bɪə/	/bir/
bear	/beə/	/ber/
boor	/bʊə/	/bur/

Vowel system difference in RP:

- RP speakers have a systematically different vowel where we have /o/

Word	RP	CDN
sew	/səw/	/so/
throw	/θrəw/	/θro/

- Today RP is dying! (Gone from BBC but Queen still speaks it)
- Speakers under 50 typically reject RP characteristics.

Lecture 3:

Testable Concepts:

- *Prescriptive statements make judgements. Some may have good basis, but don't just assume e.g. the Queen's version is 'right' or that the older form is 'right, etc.*
- *IPA is necessary to describe sounds - spelling is often ambiguous and we need standards for all sounds in all languages*
- *IPA symbols so far: /i/ (ski), /o/ (toe), /ə/ (drunk uhhhh)*
- *RP originated in Oxford and became the prestige dialect of Britain. Characteristics include /əw/ instead of /o/ and r-loss in syllable final position.*
- *Historically, RP once had h-loss in most words (like modern Cockney); the dropped /h/'s came back in the 19th century under prescriptive pressure.*
- *Surprisingly for such a 'prestige' dialect, RP is now endangered.*
- *Salvadoran Spanish is a unique dialect with unique lexical items (including a special form vos for you) and phonotactic constraints (including s--->h at the end of word or syllable)*

Prescriptive vs Descriptive:

Prescriptive Statements (always judging):

- Ali makes mistakes in tense forms and in pronouncing many words
- Ali speaks bad (poor/incorrect/ungrammatical) English
- Ali speaks a sub-standard dialect of English

Descriptive Statements (describing without judging):

- Ali speaks a dialect where done is usually used as the perfect form (rather than have)
- Ali speaks a dialect that has regularized the past tense of many verbs (threw -> throwed)
- Ali speaks a dialect that deletes consonants in certain word-final clusters (probably related to a systematic phonotactic constraint)

Judgement is fine, except:

- Don't judge what you don't yet understand
- If you do judge people, you have to give real evidence

Caution:

Prescriptive is okay - there are bad things you can do with a language. But most prescriptive statements give no or weak evidence/reasons:

- the older form is correct (shouldn't we then speak Olde English?)
- the Latin pattern is correct (uh aren't we speaking English?)
- the Oxford dialect is correct (because the elite's dialect is intrinsically superior?)
- because I said so! (only works in grade school!)

Review Concepts:

- Linguists use an unambiguous sound-symbol system called "the IPA"
- /i/ used in see, leave, eat, ski
- /o/ used in sew, oh, toad

- /ə/ used in unstressed "the" or all except the first syllable in "Canada"

RP Dialect Continued:

/h/ mode-loss in modern working class (non RP) S.British dialects (Cockney):

S.Brit Working Class	Canadian
'ello	hello
'ate	hate

- RP used to have h-loss too (like modern Cockney). They later changed back to pronouncing /h/ under prescriptive pressure.
- RP pronounces "suit" as /sjut/
- RP pronounces the vowel sound in dance and mask differently

Language of the Week - El Salvador (Central American Spanish)

- Original languages of Central America were in the Mayan family
- In modern El Salvador, almost everyone speaks a form of Spanish
- Latin originated in Italy and spread to Spain with the Roman Empire
- Central American Spanish continues to evolve new lexical items (including vos for tu)
- Salvadoran Spanish descends from Latin via the Roman and then Spanish empires
- Spanish has almost replaced the traditional Mayan languages
- Salvadoran Spanish also has a phonotactic constraint: can not have /s/ at the end of a word (or syllable) -> changed to /h/

I love	yo amo	yo amo
You love	tu amas	vos amas
He loves	el ama	el ama
The wolves	los lobos	loh loboh

Phonotactic constraint (s-->h):

los lobos
loh loboh (el Salvador pronunciation)

Lexical differences:

El Salvador uses a special Mayan-derived word for money: pisto
Standard Spanish is dinero, moneda.

Lecture 4:

Testable Concepts:

- *Languages prefer syllables with onsets. Given a choice, a consonant (C) will always be put into the onset if possible.*
- *All languages restrict and inhibit the ends (codas) of syllables much more.*
- *The glottal stop, stopping the airflow of vocal folds, is symbolized with /ʔ/*
- *In English, it's just a reflex: we insert it always (and only) before vowels with no consonants in the onsets. It's predictable!*
- *Most languages insert glottal stop in this way too, but many other languages ALSO use glottal stop meaningfully INSIDE words*
- *Linguists can identify and reconstruct ancient lost languages by comparing similar words etc. in modern languages. They can find traces of ancient shared languages, up to 10,000 years old.*
- *Where a group of language shares a common ancestor, linguistics say they are in the same 'family'.*
- *The Salish family can be traced back to Southern BC and contains 23 clearly related modern languages, including Squamish and Halkomelem. The Salish have different phonotactics, among other things.*

How to Syllabify:

Bob = 1 syllable
Banana = 3 syllables
Alabama = 4 syllables

Step 1: make the vowels the centre (nucleus) of the syllable

ba na na
cv cv cv
syll syll syll

mad man
cvc cvc
syll syll

Step 2: make the start ("onset") of the syllable as big as possible

ba na na
cv cv cv
syll syll syll

mad man
cvc cvc
syll syll

Step 3: only put consonants in the end ("coda") of the syllable if you totally have to

ba na na
cv cv cv
syll syll syll

mad man
cvc cvc
syll syll

Example:

Al ab a ma
vc vc v cv

cap stone
cvc ccvc

Onsets:

- We love onsets!
- All languages make the onset as big as possible.
- We WANT our syllables to have onsets.

Codas:

- We're not so big on codas (end of syllables)
- Languages restrict the coda much more.
- Languages usually block many sounds from coda. (e.g. RP with /r/ and C.American Spanish with /s/)

Languages have different constraints, but general principles (syllable units, big onsets, restricted codas) are common to all languages.

Glottal Stop:

Articulation: short stoppage with vocal folds.

IPA symbol: /ʔ/

English: ʔ is frequent, but insignificant (can't signal meaning distinction)

e.g. Words starting with a glottal stop:

uh oh!
eat!
oh no!

Generalization: If an English word (or syllable) starts with a vowel, we have to insert /ʔ/

- Syllables must have SOME onset (some C at the start)
- If they don't have an onset (i.e. don't start with consonant), we insert meaningless glottal stop as a placeholder

e.g. "Apple, Oh"

æ pəl (not good)
v cvc

o (not good)
v

ʔæ pəl (good)
cv cvc

ʔo (good)
cv

Why don't we write ʔ in ordinary English spelling?:

It's not meaningful or significant! It doesn't signal meaning distinction. Even in the IPA you can skip it when it's fully predictable.
Use it narrow transcription! [ʔo] not broad /o/.

- In some languages, ʔ can occur inside words and does change meanings (/poʔo/ vs /poto/)
- In such languages, they must and do write the glottal stops at least when it's inside the word (usually shown as ' or 7)

In English, the glottal stop is not part of the "underlying" lexical entry. It is just inserted by a predictable change.

Language Families:

- Languages are always changing and splitting into other languages.
- When a language splits into two, the two new languages will share identifiable word and other features (at least for some generations)
- By comparing shared words and features, linguists can often show which group descend from a single older language.
- These comparisons give us glimpses into ancient lost languages.
- The oldest identified ancient ancestor-languages go back "only" 10,000 years

ex. How many lost 'ancestor languages' can you identify from related words here?

English	German	Sanskrit	Greek	Latin	Helq'emeylem	Squamish
foot	fub	pad	pod	ped	sxele	sxen'
brother	bruder	brata	phrater	frater	alex	ayish
acre	acker	ajras	agras	ager	n/a	n/a

English/German part of Proto-Germanic (descends from Indo-European)
Sanskrit/Greek/Latin part of Indo-European.
Helq'emeylem/Squamish part of Proto-Salish.

Proto-Human --> Indo-European --> Proto-Germanic, etc
Proto-Human --> Proto-Salish --> etc
Proto-Human --> Proto-Austronesian --> etc

Language family: Group of modern languages from a single traceable ancient ancestor

Can we reconstruct "Proto-Human", the lost first human language?

No after 10,000 years the changes are so overwhelming that you can't find real connections linguistically.

Salish Family:

- 13,000 years ago they settled in and around Vancouver
- They adapted well: found excellent resources for hunter gatherers, developed a rich and complex technology and ceremonial culture
- Gradually separated and divided into 23 distinct modern languages
- All were spoken Southern BC
- Salish languages have similarities to other BC languages, but no real historical connection can be identified

Major Problems Since Europeans:

- 90% of the population died from smallpox
- Land base required for culture/technology was taken away
- Residential school program aimed to "re-train" them ended in tragedy and loss of language

Languages in the Family:

- Central Branch: Halq'emeylem, Squamish
- Interior Branch: Lilloet, Shushwap, Okanagan

Features:

- Salish languages have different phonotactics
- ALL salish languages have glottal stops occurring inside words and is used to distinguish meaning, therefore it's written!

e.g. Halq'emeylem:

s'alhtel means "food" (' is used instead of ʔ for glottal stops)

Lecture 5:

Testable Concepts:

- *Pidgins are simplified languages (not a full language, not systematic), just used to communicate where no real shared language is present*
- *Kids naturally turn pidgins into creoles, which are full systematic languages. Macanese (spoken in Macau) is one example, but creoles are very common.*
- *Salish make uvular stops /q/.*
- *The uvular stop (with no vocal fold vibration) is symbolized by /q/. English "q" in writing is just a /k/. We don't say /q/.*
- *The first sound in "think" is transcribed as /θ/. We need a single symbol in IPA to avoid ambiguities with sequence /th/ (Catholic vs Lighthouse)*
- *Some English speakers say /hw/ at the start of "what". But initial /hw/'s are mostly being lost now.*
- *Proto-Salish evolved into 23 modern languages, including Halkomelem and Squamish. We have looked at examples of sound changes.*
- *Halkomelem evolved into three mutually intelligible dialects. Upriver, Island and Downriver.*
- *Words to learn from Halq'emeylem. Know translations!*
- *Indo-European split into Germanic and other branches sometime around 500 BC. Shifts included: kw > hw, t > θ, p > f which was discovered by Brothers Grimm*

Language of the Week: Macanese Creole:

- Derived from Portuguese
- In the 1500's, the fathers spoke Portuguese and the mothers spoke Sinhalese/Malay. They communicated in simple "pidgin"
- Pidgins are not real languages - they lack tense, agreement (not a full system)
- The children turned pidgin into creole (full blended language) called Macanese Creole
- Cantonese influence in the 1800's mixed it more, leading to modern form of Macanese

Creoles are very common:

- Kids can turn a pidgin (simplified) into a creole (full language) easily in one generation
- Creole contains complex structure that is not present in the parent's pidgin

Strange fact: even totally independent creoles share features with each other

Pidgins: not real languages.

Creoles: fully complex and systematic languages, use the pidgin just as a starting point

Using Your Uvula:

Review:

- Glottal stop is a short stoppage with vocal folds. IPA symbol ʔ

- English: ʔ is automatic and insignificant (cannot signal meaning)
- ʔ doesn't count for distinguishing words in English. We don't notice it, write it or even broadly transcribe it in IPA
- In other languages, ʔ does count. /poʔ/ vs /po/. It's always written and transcribed broadly. (i.e. Salish languages)

Uvula:

- Dangles at back of throat
- You can also make stops at uvula
- IPA for uvular stop (no vibration): /q/
- English never has a true /q/, "queen" just /kwin/

Summary of stop places so far:

- Lips / p /
- Ridge /t/
- Soft palate /k/
- Uvula /q/ (not used in english!)
- Glottis (at vocal cords) /ʔ/

Theta θ:

- Words: theta, bath, theoretical, math
- θ is not in bathe!
- made using tongue between teeth
- continuous
- voiceless

Why IPA θ, not th?

- lighthouse - no θ sound but spelling is "th"
- General IPA principle: can't use two symbols for one sound, because potentially ambiguous

Major Case Study - Halq'emeylem:

- Proto-salish splits into Squamish, Halkomelem and 21 other languages
- Salish people arrived to Southern BC 13,000 years ago.
- Squamish and Halkomelem are Southern BC languages
- Halkomelem itself split into 3 mutually intelligible dialects: Island, Downriver, Upriver (Halq'emeylem)
- Halq'emeylem is the Upriver dialect of Halkomelem
- Spoken up the Fraser River, from Langley to Chilliwack

Memorize Halq'emeylem Words:

Good (ey) - /ej/
Day (swayel) - /swejəl/
Morning (latelh) - /lætəɬ/
Get lost (s'ikw') - /sʔikʷˈ/
Skinned (sikw') - /sikʷˈ/

Major Case Study - Germanic:

- Indo-European splits into Germanic, Romance (italic) and other branches

An On-going English Sound Change:

hw --> w

Older forms - witch: /wɪtʃ/
- which: /hwɪtʃ/
Modern form - witch: /wɪtʃ/
- which: /wɪtʃ/
(pronounced the same)

- As usual, English spelling (which vs witch) reflects older form of language
- /hw/ pronunciation still around!

Emergence of Germanic:

- 10,000 years ago one group went to Northern India and another big group went to Europe
- Proto-Indo-European eventually split into a Germanic, Italic, Celtic etc branches
- Germanic split-off started around 500 BC with tribes in Germany
- This group introduced a series of sound changes which led to the new language "Proto-Germanic"
- Proto-Germanic split up later too into English vs German vs Dutch etc

How did Germanic Branch split off from Indo-European?

kw --> hw:

- Germanic systematically changed kw into hw
- Non-Germanics retained Proto-Indo-European /kw/
- English: what
- Latin: quod

t --> θ :

- English: third
- Latin: tertius

p --> f:

- English: foot
- Latin: pedis

These three shifts were a big part of the creation of Proto-Germanic (separated off from older IE):

- kw --> hw
- t --> θ
- p --> f

These were discovered by Brothers Grimm!

Grimm's Law:

- kw --> hw
- t --> θ
- p --> f

Lecture 6:

Testable Concepts:

- *The words fee, pecuniary, and German Vieh (cow,beast) trace back to the same IE root, one branch changed by part of Grimm's Law (p --> f)*
- *We noted that glottal stop insertion is not the only way to give vowel-initial words (or syllables) an onset. English also allows you to borrow from a preceding word in connected speech.*
- *We compared two linguistic models for English: (A) one with no underlying glottal stop and (B) a model that DID have an underlying glottal stop. We argued the model is simple and more sensible if the glottal stop is not underlying in English, but just inserted like in model A*
- *Stops are made with a short stoppage of airflow (we've looked at p, t, k, q, glottal stop)*
- *Fricatives are made with continuous airflow with heavy friction*
- *We've looked so far at places for fricatives*
- *We've noted some phonotactic constraints on /h/: in English it only occurs word (or syllable) initially, never at the end. Farsi does have /h/ at the end.*
- *We noted two strategies for borrowing sounds not in your system: some people substitute the nearest sound, others try and pronounce the sound as in the source language.*
- *We looked at how Britain first had Celtic languages, displaced by Anglo-Saxon, in the Germanic branch, starting around 450 AD.*
- *Changes since then in England have included: loss of /x/, loss of initial /kn/ clusters*
- *English underwent many changes later (after French invasion in 1066)*

Money Related Words Moral:

- Words come to us by complex paths
- Certain branches are altered by systematic historical sound-changes, e.g. Grimm's Law (p-->f)
- Modern German retained "cow" meaning while Modern English retained "wealth" meaning.
- Italic kept the "p" and retained the "wealth" meaning. Latin which derived from Italic also

kept the "wealth meaning".
- Same ancient root takes multiple modern forms, e.g. fee, pecuniary and German "vieh" (cow).

Giving Syllables Onsets:

- We organize consonants and vowels into units, called 'syllables'
- We always prefer onsets, and want syllables to have onsets

Glottal Stop:

- Short stoppage of air at the vocal folds
- In English, we unconsciously insert it if a syllable needs an onset (at the beginning of a word that starts with a vowel).

Another strategy for getting onsets (in connected speech):

- Steal a C from the preceding word

bab ɪz i zi = 4 syllables
cv cvc v cv

- Not all languages allow you to "steal" syllables from preceding words
- These languages probably use "word initial glottal stop" a lot more on the surface

Model 1: No "underlying" ʔ in English lexicon: rule just inserts when needed

- Explains: why we get ʔ in isolated V-initial words by insertion (e.g. apples)
- Explains: why we DON'T need ʔ in connected V-initial words (e.g ai lai kæpəlz)
- Bonus, also explains: different "status" of English glottal stop (we don't notice it, we don't write it)

Model 2: Suppose there was an "underlying" ʔ in English lexicon

- Explains: why we get ʔ in isolated V-initial words by insertion (e.g. apples)
- Fails for connected speech - you'd actually need a rule for glottal-stop deletion!
- And no bonus: if it's the same status as other C's, why don't we notice or write it?

Therefore ʔ is NOT underlying (i.e. in the lexical entry). Underlying (in the lexicon): /æpəlz/ . Glottal insert if needed (i.e. word-initial). But in connected speech, no glottal needed.

Moral:

- What you see on the "surface" of a word is not always what's in the underlying lexicon.
- This is because we systematically change the underlying strings, often because of syllable structure.

"Language does not wear its structure on its sleeve."

Review Concepts:

Stop consonants: any sounds made with a short stoppage of airflow (includes p,t,k,q,ʔ) and voiced (vibrating vocal folds) counterparts

- /b/, /p/ LIPS
- /d/, /t/ RIDGE
- /g/, /k/ PALATE
- /q/ UVULA

New Concept - FRICATIVES:

Fricatives: sounds made with continuous airflow, with heavy friction, e.g. /s/, /f/, /h/, /θ/

Note: nasals /m/,/n/, etc are NOT frictives. Neither are /r/, /l/, /j/ or /w/. These have smooth "note-like" quality rather than noisy friction.

Fricative /s/:

- pronounced at RIDGE
- continuous
- voiceless

Fricative /h/:

- pronounced at GLOTTIS
- continuous
- voiceless

Fricative /f/:

- pronounced with upper teeth on lower LIPS
- continuous
- voiceless

Fricative /θ/:

- tongue at upper/lower TEETH
- continuous
- voiceless

Fricative /ʃ/:

- tongue behind the RIDGE
- continuous
- voiceless

English phonotactic constraint for /h/:

- after a /l/
- no /h/ in a syllable coda, has to be at the beginning of a syllable!
- doesn't apply to all languages!

/x/ in English history:

Germans (and Halq'emeylem, Hebrew, etc) have more places for fricatives, including /x/.

- voiceless
- made at soft palate (similar to /k/) 'velar fricative'
- fricative
- in German spelled 'ch', it occurs in Bach.
- /x/ used to be a regular C in English but lost it recently!
- spelling still reflects older form in: night, knight, brought, freight, sight (parallel "cognate" words in German still all have /x/)

Why is English in the Germanic branch?

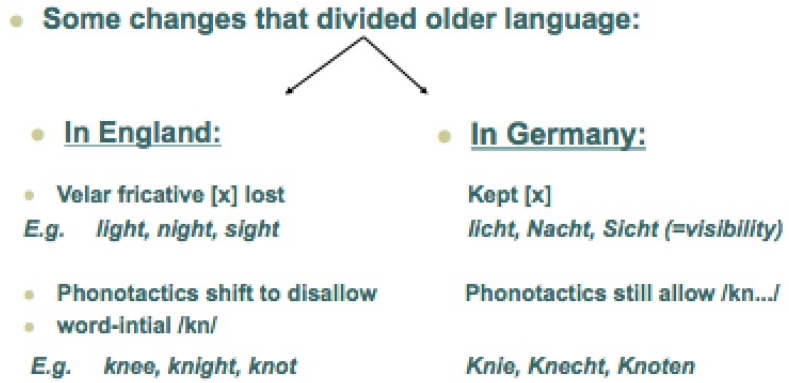
- English came only relatively recently to Britain
- Celtic languages were in Britain for much, much longer
- Celtic peoples are also Indo-European, but Celtic is it's own separate branch of IE

Celtic Languages:

- Spread through Britain around 450 BC
- Today Celtic language lives on as Scots Gaelic, Irish Gaelic, Welsh, Breton, etc

History:

- Celtic people were conquered by the Roman Empire
- Celts in English lived as Romans for 500 years!
- Then in 450 AD, the empire was gone! Then some Picts and Norsemen started to fight the Celts.
- The Celts hired Germanic mercenaries (Anglo-Saxons) to help.
- Then the Anglo-Saxon took over and killed Celtic Kings
- Anglo-Saxon kings were GERMANIC speakers. Their ancestors ruled England for another 500 years. Their Germanic language became dominant throughout England.
- English is directly defended from their Anglo-Saxon language (not original Celtic)
- The original Anglo Saxon language was Old English - a dialect of German at the time
- The original Germanic language gradually split into distinct modern languages. In England, made one set of changes. In Germany, made a different set of changes.



- Anglo-Saxon Kings were later overthrown by French speakers - leading to another huge change in English.
- Today only 10% of English vocabulary even traces back to the original Germanic origins!

Total Number of English Speakers:

- L1 (native): 313 million (only spanish and mandarin have more)
- L2: 1.5 billion

Lecture 7:

Testable Concepts:

- *We looked at some family history for two language groups in India: (a) the Indo-European group (Indo-Aryan branch) and (b) the Dravidian family (not IE)*
- *We introduced the terms voiced for sounds made with vibrating vocal folds and voiceless for sounds made with no vibration.*
- *We looked at how the voiced/voiceless distinction distinguishes several sets of stop (/p,t,k/ vs /b,d,g/) and fricatives (/f,s,ʃ,θ/ vs /v,z,ʒ,ð/)*
- *We looked at whether there is an 'underlying' /r/ in RP 'car'. (i.e. the /r/ is present in their lexicon, but deleted. Because the /r/ DOES surface sometimes, it looks like the 'r' is there, but deleted when at end of syllable)*

Language of the Week: Hindi, Punjabi, Romani

Indo-Aryan:

- Largest language family in India
- 221 languages, 1.5 billion speakers - 1/2 of all IE speakers!
- Hindu/Urdu, Bengali, Marathi, Sinhala, etc

Dravidian:

- The other family (not IE!)
- only 85 languages
- 70 million speakers

- no connection to Indo-European language
- Tamil, Kannada, Malayalam

Voiced vs Voiceless:

voiced = with vibration (e.g. /z/)
voiceless = no vibration (e.g. /s/)

Adding voice vs voiceless distinctions doubles the sound system!

/f/ + voice = /v/
/s/ + voice = /z/
/p/ + voice = /b/
/t/ + voice = /d/
/k/ + voice = /g/
/θ/ + voice = /ð/ **very rare sound (used for the, this, them, bathe), both are spelled using "th"
/ʃ/ + voice = /ʒ/ ** used in beige

Note: voiced glottal stops are impossible! A voiced sound requires the opening of the glottis, but a glottal stop has it closed. Can't have both open and closed at the same time!

Follow-Up - S.British R-Loss:

Recall:

- car pronounced [ka] in RP
- sheer pronounced [ʃiə] in RP
- er pronounced [ə] in RP
- r is okay at start though! e.g. 'read' pronounced [rid]
- relatively new S.British phonotactic constraint - blocks /r/ at end of word (or syllable)

Generalization:

RP blocks /r/ at end of word or syllable (so speakers delete it).

The Question:

- How 'gone' is the /r/ for RP speakers?
- Is it present at ANY level (in the lexicon), then they delete it when the go to say the word?

Two possibilities:

Hypothesis A: Underlying r

Yes: /r/ is in the lexicon: /kar/

A phonological change deletes syllable final /r/ (like glottal insertion before a vowel)

Hypothesis B: No r at all

No: r is not in the lexicon: /ka/ (like x-loss in 'night')
There's no deletion rule. There's just no r (except in writing).

How to test?

- Method: Stick a vowel after car, e.g. car-oil
- Prediction: If the RP lexicon for car contains the /r/ [kar], it should "surface" in car-oil.

General rule:

- we only put C at the end if we have to. If a C can go at start of next syllable, it will.
- k a b ɔɪ l -- > c v c v v c
- the /b/ can go into end
- whenever we can, we make the /b/ (or and C) into the start of next syllable. This is a universal property of all languages - we like stuff at the start of syllables, not the ends.
- k a b ɔɪ l -- > c b c v v c
- If r in car is underlying, we predict the /r/ should surface when there's a vowel.
- k ə r ə n d (car and) : With vowel after, r naturally goes at the start of next syllable. Prediction is therefore that it WILL be pronounced here.../r/ will "surface" once free of the syllable-final trap.
- But if there is no /r/ at all, it should NEVER surface!
- Data collected from S. British Speaker: the /r/ does surface when there's a following vowel
- car and driver: [kərənddrajvər]

Lecture 8:

Testable Concepts:

- *We contrasted two kinds of sound-changing rules: (i) purely historical changes (e.g. Grimm's law), which are no longer applied, vs. (ii) active "string-adjustment" rules (the technical term is "phonological rule") which modern speakers must learn to apply to every form to pronounce a language, or dialect of a language, e.g. flapping of /t/ in certain environments in North American English.*
- *We looked at some of the features of the Indo-Aryan branch of IE, in particular: aspiration of voiceless stops, breathy-voice with voiced stops, and retroflex vs. non retro-flex sounds (you don't need to know the symbols, but understand the general basis of the feature distinctions).*
- *We also noted that the Romani language (language of the "gypsies") is in this Indo-Aryan branch--though today Romani is largely spoken in Europe.*
- *Nasal consonants are produced by allowing air to flow through the nose. You can open/close the back (by lowering the back of the palate) to allow/stop this nasal airflow.*

- *There are three nasal consonants in English: m, n, and ŋ. The latter is spelled "ng", but is actually a single nasal sound, and contrasts with the other two (e.g. sam, san, sang).*
- *Nasals are always voiced in English, so the voiced/voiceless contrast does not apply (in all languages, it appears that the lexical entries contain only voiced nasals).*
- *Nasals have continous airflow, but are too "smooth" to be fricatives.*
- *The final class of true consonants are called "liquids", basically just "r" and "l". "l" is called a "lateral liquid", because it has airflow over the sides. These are also not fricatives, and also normally always voiced.*
- *We summarized the English consonant system (not including glides w and j).*
- *We started looking at the Halq'emeylem C system, including especially the voiceless uvular fricative (χ) as in <u>x</u>a:m (to cry) and the voiceless lateral fricative (ɬ)*

<u>Common features for Indo-Aryan Sound Systems:</u>

<u>Distinctive aspiration for p,t,k:</u>

Hindi minimal pairs:

pal = take care of
p^hal = knife blade

Note: In English, we say both sounds (p and p^h) but only automatically and predictably (spat vs. pat), not distinctively like in Hindi

<u>Distinctive breathy voice for b,d,g:</u>

bal = hair
b^hal = forehead

b^h d^h g^h = have special "vibrating but breathy" state for the vocal folds

<u>Distinctive retroflexing (curling back tip of tongue):</u> /ʈ/, /ɭ/

Gaagudju (Australian not Indo-Aryan):

pata = leg
paʈa = beeswax

palapumu = to talk
paɭapumu = to sing

<u>Summary of common features of Indo-Aryan languages:</u>

- Distinctive aspiration on voiceless stops
- Breathy voice on voiced.
- Distinctive retroflex (curling back of tongue)

Modern Phonological Rules vs Old Historical Sound Changes:

Phonological rules: are active, present, rules in the modern language

Examples of phonological rules:

- Flapping (North American English) (e.g. butter)
- Aspiration of /p/ (All English dialects, though not all languages)
- Vowel-initial glottal-stop insertion (most, though not all languages)

We "know" and apply these even to brand new words.

Historical rules: changes that took place many years ago

- helped shape modern langue, but no longer active in the language

Examples of old historical rules:

- Proto-Germanic: p > f
- Proto-Germanic: kw > hw
- No one does this stuff now! No effect on new words!

Nasals:

Nasal: any sound with air through the nose
Nasal stops: stop air in the mouth, but release it through the nose

Nasal Feature:

Nasal version of /b/? (Total closure of both lips, but allow air through nose): /m/

Nasal version of /d/? (Total closure at ridge, but allow air through nose): /n/

Nasal version of /g/? (Total closure at soft palate, but allow air through nose): /ŋ/ (song, fling, hang - spelt as ng)

Dropped g's and Talking vs Talkin':

Talking vs Talkin': /tɒkɪŋ/ vs /tɒkɪn/ <-- no /g/ !

Spontaneous Voicing for Nasals:

Tip: nasals are always voiced (at least in the lexicon). Voiceless nasals occur on the "surface" in a

few languages, but never count as distinctive (significant sounds).

Liquid and Liquid-Lateral Sounds:

Liquid consonants: "liquids" are just /r/ and /l/, but "r" has many versions

- l is a "lateral" liquid: air flows over the sides

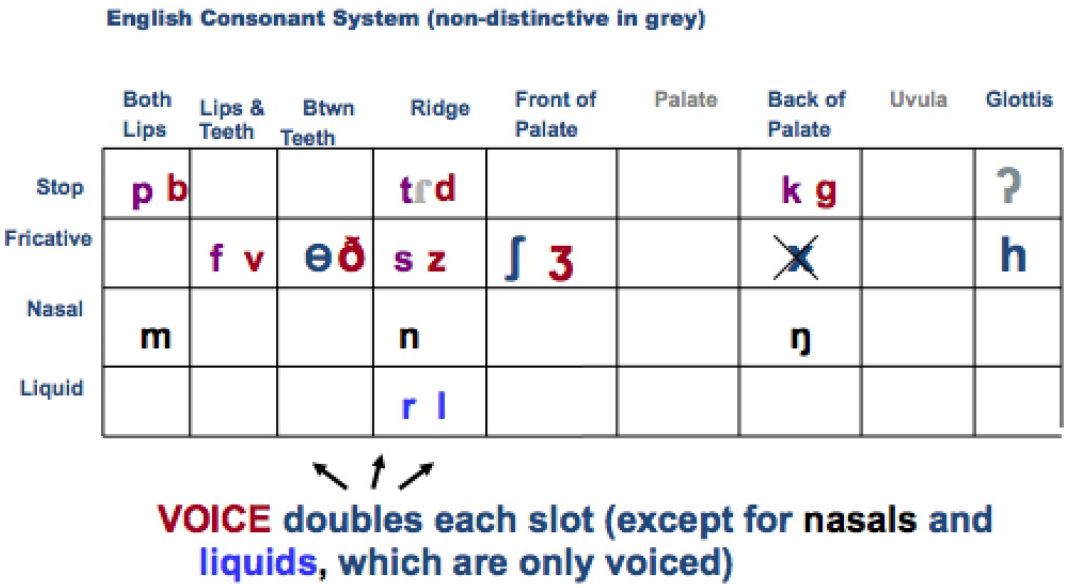
Rhotic liquid: Some call r a "rhotic" liquid (but "rhotic" just means r-like!)

- Technically the IPA for our "r" is an upside-down /ɹ /
- Letter "r" corresponds to a bunch of very different sounds in different languages!

/ɹ / in Canada: alveolar rhotic liquid
/r/ in Scotland: alveolar flap as in Canadian butter

Liquids are also spontaneously voiced (though a voiceless /l/ does sometimes occur)

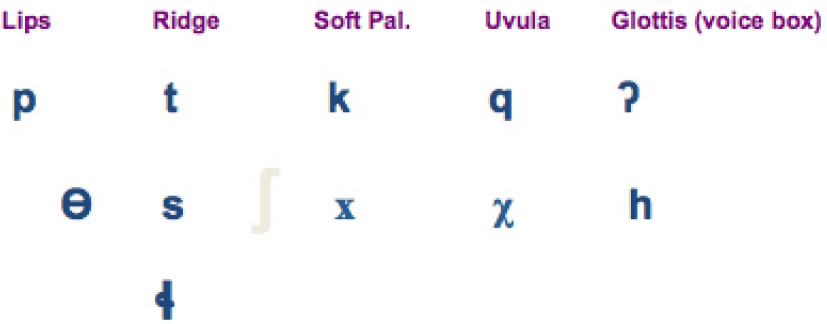
Round-Up: Full English Consonant System:



Note: English also has a /w/ as in witch and /j/ as in you. But these are more like vowels (or glides).

Halq'emeylem Fricatives:

Here is the actual U. Halq'emeylem Fricative System



Note: ʃ is common on surface, but actually predictable variant of /s/

Voiceless lateral fricative: /ɬ/

- Written 'lh' in Halq'emeylem writing (but a single sound), e.g. latelh 'morning'
- Also Welsh 'll" e.g. Lloyd Llewellyn

Voiceless uvular fricative (as for stop /q/): /χ/

- Written "x" in Halq'emeylem writing (e.g. xa:m 'to cry')

Lecture 9:

Testable Concepts:

- *We reviewed the concept of spontaneous voicing (nasals and liquids are almost always voiced--the vocal folds just start vibrating when you say them)*
- *We said two sounds are distinct in a language's sound system if switching them creates a different lexical item (e.g. a different word).*
- *We said a sound feature (like voicing) is distinctive in a language if switching that feature creates distinct sounds (e.g. switching voice turns /t/ into the distinct sound /d/ in English, so in English voice is a distinctive feature).*
- *We reviewed the full English C system. You will need to know this.*
- *We reviewed some parts of the "High German Consonant" shift, specifically: p became pf (though pure p returned later to the system) and the fricatives θð became /d/ (and those sounds never came back into the system)*
- *We reviewed the full German C system, and noted that they have a different "r". Their "r" is sometimes a uvular trill (/R/), and sometimes a voiced uvular fricative (/ʁ/)*
- *We added fricatives to the Halq'emeylem system. Some things to note here:*
- */ʃ/ exists 'on the surface' in Halq'emeylem, but is not distinct--/s/ just turns into /ʃ/ before a certain sound.*
- *In addition to a voiceless fricative made at the soft palate (/x/), Halq'emeylem also a voiceless uvular fricative, /χ/, as in /χæm/ - to cry. This is written with an underlined x in*

Halq'emeylem writing.

- *Halq'emeylem(like all Salish languages, and Welsh) has a voiceless lateral fricative (a 'hissy l'), symbolized ɬ as in /ej lætəɬ/ - good morning. This sound is written "lh" in Halq'emeylem writing.*
- *We searched for voiced stops and fricatives, but found none: voice is not a distinctive feature in Halq'emeylem (or any Salish language). Nasals and /l/ are voiced--but that's just spontaneous voicing (they are always voiced, in most langauges).*
- *Then we noted that rounding (having lips stuck out) is distinctive for /qæl/ - to steal and /qwæl/ - to talk.' (Note that rounded-q is not just a /q/ followed by a /w/; they are articulated at the same time.)*

Language of the Week: Cockney English

- Spoken on East Side (in the 'East End') of London, England
- Working class dialect, often judged "wrong"

"Secret" Rhyming Slang:

- Road = Frog (and Toad)
- Wife = Trouble (and Strife)
- Pub = Nuclear (and Sub)
- create two-word rhyme, then usually cut to one word

Note /t/ deletion in these words:

- cut
- part
- short
- thought
- to
- Tiny Tim

Why does the Cockney system do differently with /t/? (vs. Canadian/US or RP)

- replaces /t/ with a glottal stop
- /t/ only changes in certain positions, it still exists in the underlying lexical entry
- it changes at the end of a word (or syllable)
- some word-internal loss too, also in a predictable environment

Is /ʔ/ a 'building block' for making meaningful units in Cockney?

- No, just automatic reflect like flapping in N.American English

Review Concept:

Spontaneous Voicing:

- Certain sounds are almost always voiced. This includes: /l/, /r/, vowels, nasal (/m/,n/,etc)

and glides (/j/,/w/)

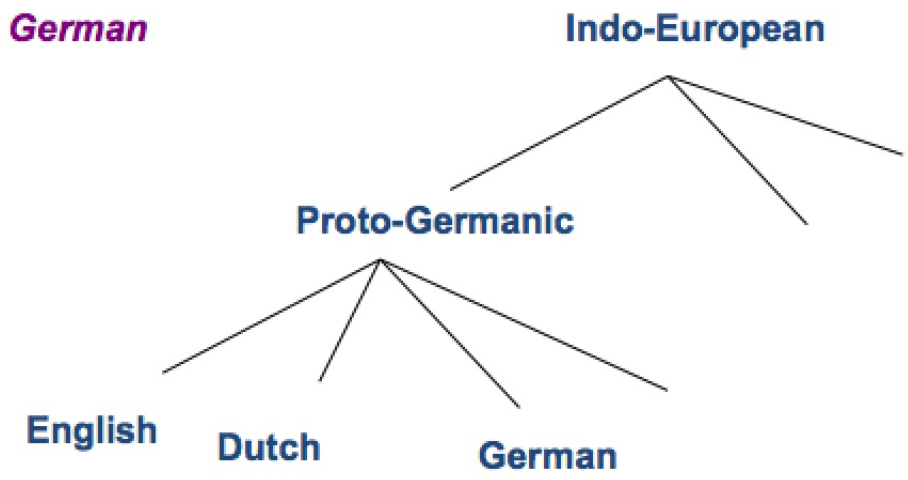
- Voiceless vowels and nasals do occur in some languages but overall very rare - and usually just from automatic changes (not phonemic)

Concept Definition:

Distinct Sounds: Two sounds are distinct sounds if switching them creates different lexical items. (e.g. eat vs it shows that /i/ and /ɪ/ are distinct sounds in English). These are the "IMPORTANT" sounds in any language.

Distinctive Feature: A sound feature is distinctive for a language if switching that feature creates distinct sounds. (e.g. voice is distinctive in English, at least for stops and fricatives because switching this feature creates distinct sounds: /s/ vs /z/, /p/ vs /b/, etc). These are the "IMPORTANT" features in any language.

German:

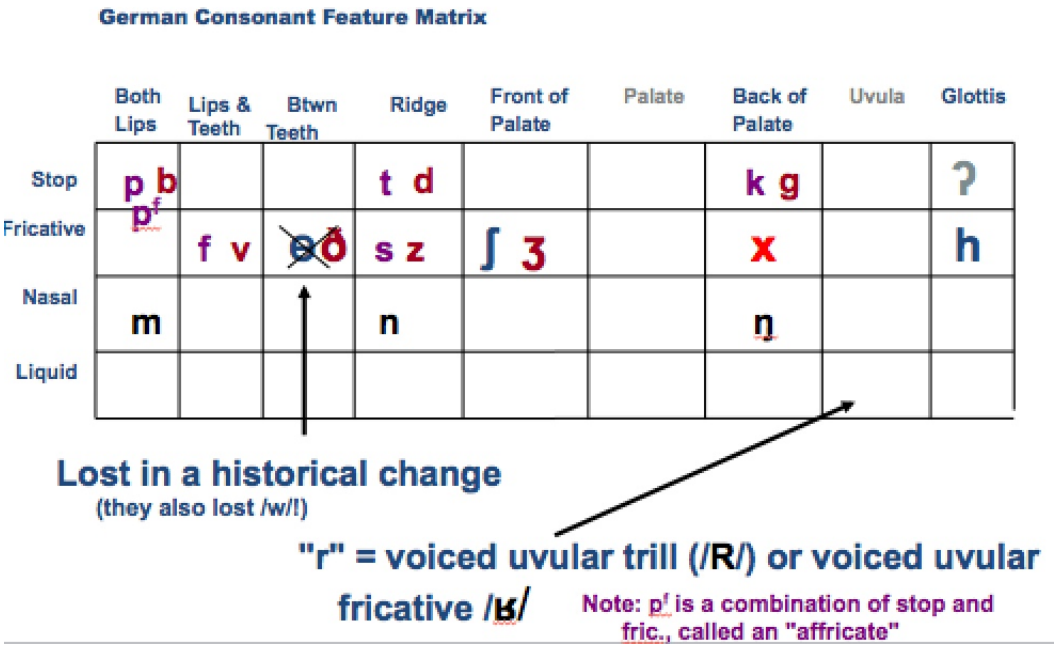


German Changes since Anglo-Saxon Times:

- Major German dialect (High German) lost sounds:
- /θ/ and /ð/ became /d/
- e.g.: these vs diese, think vs denken, thumb vs. Daume, that vs das
- older sounds /θ/ and /ð/ never recovered - still not present in modern (standard) German

- High German transformed all p's (for a while): p became p^f
- Note: and ends of words "p" became plain "f", e.g. Ship vs Schiff
- Germans brought regular /p/ back, much later
- German words borrowed and created in recent centuries have regular /p/ again: Paper, Parking

<u>German Full Consonant System:</u>



<u>Halq'emeylem Consonants: The Fricatives:</u>

<u>U.Halq'emeylem Fricative System:</u>

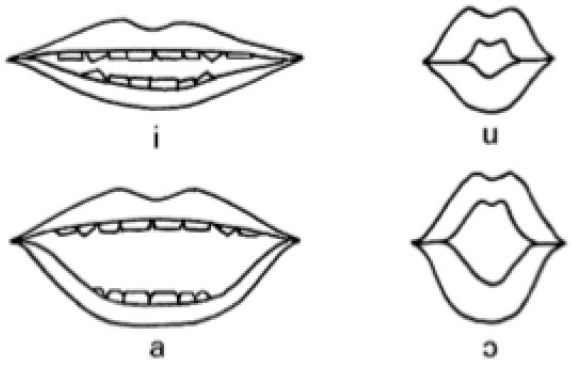
Lips	Ridge	Soft Pal.	Uvula	Glottis (voice box)
p	t	k	q	ʔ
θ	s	ʃ	x	χ	h
	ɬ			

Note: ʃ is common on surface, but actually predictable variant of /s/

Setting aside spontaneously voiced n, l, how many voiced C's do you hear in actual Halq'?

- There are 0 voiced stops in Halq
- There are 0 voiced fricatives in Halq.
- Nasal /m/, and /l/ are voiced but not contrastively either, since they *have* to be voiced.
- Voice is not a distinctive feature in Halq.

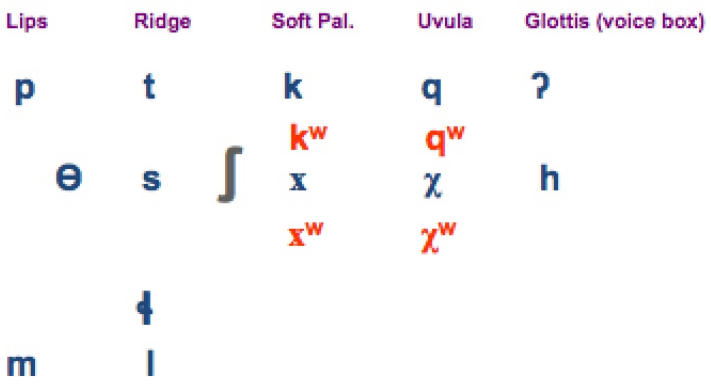
Halq'emeylem Rounded Consonants



- In English, certain vowels are round but rounding is not used to distinguish any vowels. (/u/ and /o/ are round, /i/ and /e/ are not).
- BUT: rounded vs unrounded can be used distinctively for both consonants and vowels.

<u>If U.Halq'emeylem C's had distinctive rounding, what set of C's would be possible?</u>

- **In fact, they use it only with *velars* (like /k/) and *uvulars*--but it still adds 4 consonants (so far)**



IPA Notes:

- Rounded consonants are transcribed in the IPA with a raised-w. e.g. q^w
- Halq'emeylem spelling writes them as kw,qw,xw - but they are single sounds, not sequences

Some lip-rounding contrasts *(2nd is near minimal, not quite):*

- **qal /qæl/ *'to steal'***
- **qwal /q^wæl/ *'to talk'***
- **xwlhep /$χ^w$ɬəp/ *'to slip'***
- **xlhet / χɬət / *'beat (him) up'***

Lecture 10:

Testable Concepts:

- *For language of the week, we looked at Cockney fricatives, and noted (i) optional initial h-loss, and (ii) optional transformation of fricatives θ to f, and ð to v*
- *Looking at the major case studies, we then looked at the ejective and rounding features in Halq'emeylem. Rounded C's are made with the lips protruding. Ejectives are made by closing both the vocal folds and a stop in the mouth (e.g. /p/, or /q/); you raise your voice box slightly, which compresses the air, giving a 'pop' when released.*
- *Combined with distinctive lip rounding, and use of the uvular place for both stops and fricatives, this gives a very rich C system for Halq'emeylem, as given on a slide in this*

lecture. Please learn the full Halq'emeylem c system, and be aware of the set of underlying distinctive features.

- *We noted how newborns appear to distinguish the the complex set of stops in Salish (including /k, k', q kw, kw', and qw'/). For children growing up in an English environment, though, the ability is rapidly lost.*
- *And finally we looked at how Standard French "r" changed from /r/ (here using the official IPA for a trill made at the ridge) into a voiced uvular fricative /ʁ/.*
- *Since the change in French "r" took place at around the time of Marie Antoinette (and hence after French Canada had been settled) , it is possible that her native language (German) influenced French in this regard. Rural dialects of Canadian French often retain the older trilled-at-the-ridge "r", though this is often condemned by French prescriptivists.*

Cockney Fricatives:

- Cockney has a number of systematic differences with respect to fricatives (some optional)
- h deletion in "hello, Harold, heater" (usually when emphasizing)
- θ --> f in "tooth, toothbrush, maths" (with some variability)
- *ð* --> *v* in "bother, mother, these, this" (but NOT at start of word)

Is it wrong to lose a Fricative like /h/?

If so, we'd better bring back the one we ALL lost in 'night', 'bought', and 'knight'!

Example of Hypercorrection (overcorrection):

- He eats his apples --> He heats his happles

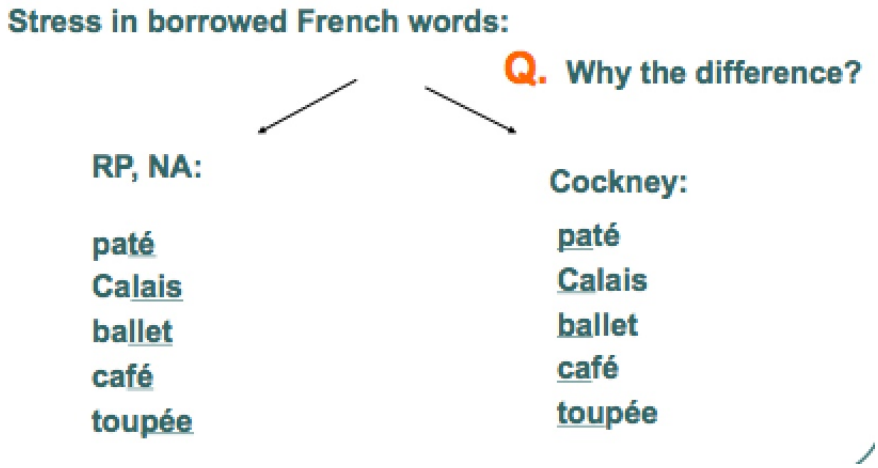
Stress: One syllable in each is predictably LOUDER, LONGER, SLIGHTLY HIGHER PITCH

English stress is predictable, but very complex. (nouns are different from verbs, and vowel and syllable quality can affect stress, e.g. permit, record)

English stress: CVCV

Examples:
Toto
mojo
teeny
copy

French stress: CVCV
paté
Calais
ballet
café



RP, NA: Use French stress. Adapt English to match French.

Cockney: Use regular English stress. Adapt French words to match English.

Both strategies are correct.

Two options with borrowed words:

Use the system of the language you borrow from (here, use French stress pattern)

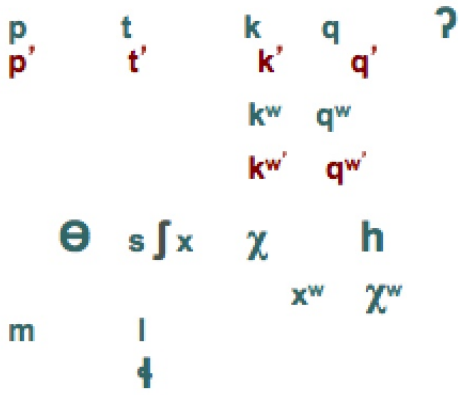
Or, adapt the word to the English native system (here, use English stress pattern)

Halq'emeylem Stops: Rounding, Ejectives and the Full C System

Halq'emeylem at Featural Level:

- Uvula as distinctive place (q, χ)
- Lip rounding distinctive for consonants (k^w q^w x^w $χ^w$)
- Voice NOT distinctive at all (no b, z, g, etc)
- No distinctive voice, but DO have ejectives!
- The 'pop' sound is technically an adjective.
- Halq'emeylem uses ejectives with ALL their stops (included rounded), except glottal.

Halq'emeylem Stops - The Full System:



Minimal Pairs (Ejective vs Non-ejective):

Some minimal pairs:

- **qal /qæl/ *'to steal'***
- **q'al /qˈæl/ *'to believe'***

- **tal /tæl/ *'mother'***
- **t'al /tˈæl/ *'go out of sight'***

Lot's of "K"-like sounds!

- soft palate vs uvula
- rounded vs. unrounded
- ejective vs. non-ejective

All newborns hear the contrasts. By age three, the ability to distinguish is maintained in Salish children but other kids lose it. We are born to hear ALL C system!

Summary:

- Halq'emeylem does not use voice distinctively
- It does have distinctive rounding
- And instead of voiced stops it has ejectives
- And we're all born hearing the differences! (Most of us lose it quickly)

Marie Antoinette and the Voiced Uvular "r" in French:

- German "r" is often a (voiced) uvular trill or fricative (though dialects vary, this is common in Austria)
- Marie Antoinette was Austrian - so her native language was German
- Before 1800, French speakers "r" was a trill made at the ridge:
- Much Canadian French still retains this older trill, but in France they lost this trilled /r/

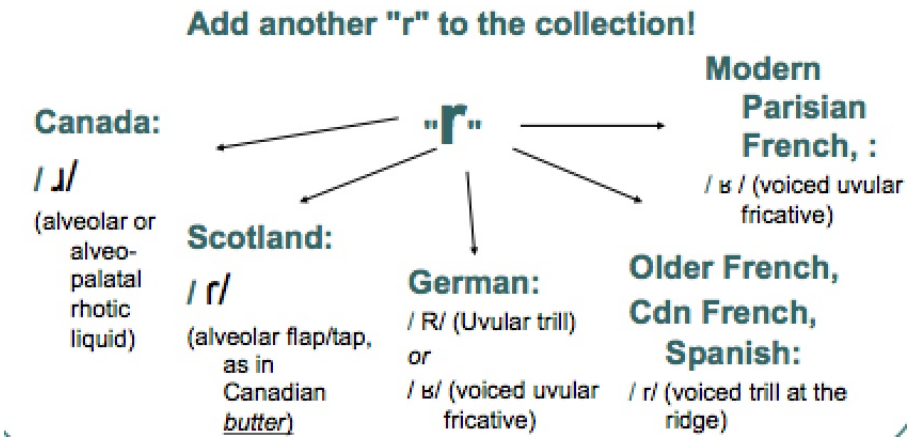
Voiceless uvular fricative: /χ/
Voiced uvular fricative: /ʁ/

Today, /ʁ/ has become the MOST common "r" in modern standard French (though dialects vary).

Why did French change /r/ -->/ʁ/?

- Happened when Marie Antoinette was queen. Her native German "r" was the voiced uvular.

The "r" collection:



Lecture 11:

Testable Concepts:

- *We discussed affricates, which are combinations of a stop followed by a fricative. Physically, they are two sounds (tʃ and dʒ in English, some other combinations in other languages); however, in terms of phonotactics they pattern as a single sound, i.e. occuring in positions where stop+fricative cannot otherwise occur in the language. So on one level, affricates pattern as single sounds, and linguists sometimes use a line over top, or a single symbol, to represent their unitary nature.*
- *We looked at borrowings of French words that start with initial ʒ. which violates English phonotactics (though we have the sound). Some English speakers substitute dʒ, but others violate English phonotactics and say ʒ as in French—in effect borrowing French phonotactics for that word.*
- *We observed how ʃn ʃm ʃl initial clusters violate English phonotactics, but are common in*

Yiddish borrowings. Again, we violate English phonotactics just in case of borrowings.

- *Then we looked at initial skclusters in English: we lost these for a time, but under Scandinavian influence we got them back through borrowings.*
- *Thus we see that borrowings can make permanent changes to the phonotactics (as well as the sound systems) of neighbouring languages.*
- *If time: we looked at how Dutch resistance fighters used the uvular fricative as a Shibboleth (pronunciation-based test) for Nazi spies, based on the fact that Germans read sch as the fricative ʃ but Dutch sch is /s/ followed by a uvular fricative.*

Affricates: One sound or two?

- Stop+Fricative cannot start a word in English (e.g. tsu, psi, pfu)
- If Stop+Fricative cannot start a word, why are the words "jeep" and "cheap" okay? (dʒip and tʃip)

/tʃ/ and /dʒ/ are physically two sounds, but in linguistic systems they act like single sounds!

Affricate: Stop+Fricative combo that acts like a single sound w.r.t. phonotactics

Note: You can transcribe its as two sounds. Official IPA puts a curved line over top of /tʃ/ and /dʒ/. But many linguists use /č/ (for tʃ) and /ǰ/ (for dʒ. Single symbol emphasizes how they act like single sounds.

Initial /ʒ/:

ʒ as in seizure, leisure, rouge
dʒ as in judge, jump, jug

Physically two sounds, but acts like one.

French:

Commonly starts words with ʒ. (Jean, Jacque, je, jeune)

English:

Native words never start with ʒ. Borrowing from French can go either way: adapt to dʒ (John, Jack) or pretend you're French (genre, etc)

If you say genre, you're not borrowing the sound - you're borrowing French phonotactics!

Initial ʃn ʃm ʃl :

English phonotactics normally block /ʃn/ /ʃm/ /ʃl/. Yiddish borrowings may end up changing English phonotactics. Depends on complex social factors. /ʃm/ may be as normal to our children as /sk/ is to us.

Initial /sk/:

- By around 800AD, English had developed a phonotactic constraint: no initial sk!
- Sk-words were all changed: scyrte > shirt, skip > ship
- Then around 870AD, the Scandinavians came to England. They created the huge Danelaw territory.
- Relations with English speakers were tense, but over centuries of close contact, we also borrowed many Scandinavian words.
- Through these borrowings, we gradually learned to say sk again.
- So many 'sk' words in English are of Scandinavian origin (ski, school, skate)

Moral:

- Language contact can make languages more similar (including sounds and phonotactics). Can happen even in languages with no shared history.

The Schevenigen Test:

- In German, spelling sch = ʃ
- German 'ch' alone usually represents soft-palate ("velar") fricative /x/ (same place as /k/). E.g. bach = /bax/
- In Dutch, ch = /X/
- Holland was occupied by Nazi Germany. Germans can learn to speak Dutch pretty well. Dutch resistance army need a Shibboleth!
- They ask them to read a map to find out if they were German or Dutch.

Lecture 12:

Testable Concepts:

- *We introduced the Wakashan family, a family of 7 languages spoken on the West Coast of Vancouver Island (and some nearby mainland areas).*
- *Then we looked at the system of vowel features. We started by looking at high vowels (i, u are high) mid-vowels (e, o are mid) and low vowels (æ and ɑ are low).*
- *Tense/lax feature for distinguishing vowels. We noted that i, e, u, o are tense, and I ɛ ʊ are lax.*
- *The lax vowels are all a little lower than their tense counterparts, but all of the physical correlates of tense/lax (if any) are not clear even to linguists.*
- *English phonotactics clearly distinguish tense vs. lax vowels as classes, though: lax vowels can never end words (or syllables) in English (except in some exclamations).*
- *We noted how by phonotactic criteria æ is lax and ɑ is tense (though neither has a tense/lax partner, like the non-high vowels)*
- *We previewed how nasalization and length can be distinctive features for vowels in some languages--but we have not looked at actual cases of this yet.*
- *We briefly reviewed glottal stop, noting it occurs only predictably in English (before vowel-*

initial words).

- *We noted that in Halq'emeylem glottal stop occurs distinctively within words. But we also noted that Halq'emeylem speakers also insert glottal stop predictably before vowel-initial words (as we just noted in English and as is true in most languages).*
- *And we looked at the journey of the Austronesians: from Africa to Taiwan (the Austronesian homeland).*
- *Then we talked about how from there one group of Austronesians branched Eastward and into the Pacific, eventually (quite recently, in linguistic terms) reaching Hawaii and New Zealand.*
- *We also noted how one group from the Malayo-Polynesian group went back West, to Africa. This group today is in Madagascar, and speaks the modern language Malagasy.*
- *If time, we noted that after /s/ there is a period of saying ɬ, even in English where it is not a distinctive sound. We used the term "phoneme" to talk about the set of sounds in a language that are distinctive (so* ***ɬ is a phoneme in Halq'emeylem, but not in English).***

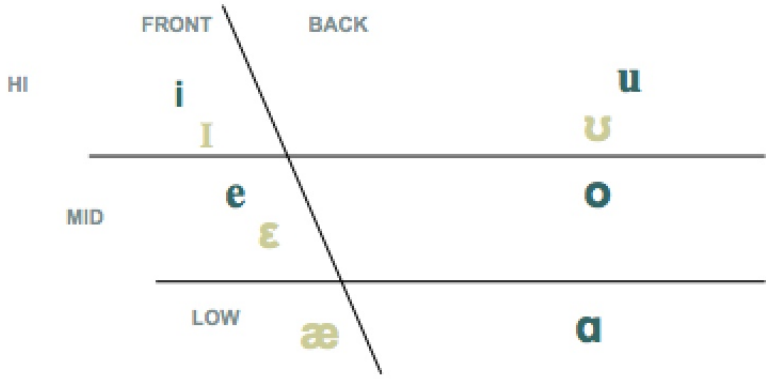
Language of the Week - Wakashan Family:

- Arrived in B.C. roughly 13,000 years ago. Approximately same time as Salish languages.
- Proto-language developed into 7 modern languages.
- Whole West side of Vancouver. A few on Mainland.

Vowels as a System:

- Vowel distinctions based primarily on tongue position. (High vs Low) and (Front vs Back)
- Also, there is a tense vs. lax feature
- Lax vowels are a little lower than tense vowels.

Vowel System:



Bolded: Tense vowels
Lighter: Lax vowels

English Phonotactic Constraint:

- only tense vowels can end a word (or syllable)
- In English, this is the clearest criterion for distinguishing tense vs. lax

Note: some exclamations do have lax vowels at the end: e.g. meh (but exclamations are somehow

outside the English system)
Note: low vowels do not seem to have tense-lax pairs

Phonotactically, æ acts lax (no english word ends in æ) and ɑ is tense (many words end in ɑ - saw)

Can lax vowels end words in other languages?

Yes! Halq'emeylem allows it!

Journey of the Austronesians:

- Spread across S. Asia
- Ended up in Taiwan, around 8,000 years ago
- Formosans: Stayed in Taiwan
- Malayo-Polynesians: Kept going into the Pacific.

Formosan Branch (oldest):

- All spoken in Taiwan
- More than 20 languages (e.g. Atayal, Bunn, Amis), each with multiple dialects.
- Severely endangered in Taiwan, many extinct or very few speakers

Malayo-Polynesian Branch: Not so endangered

- Javanese
- Tagolog
- Malay/Indonesian
- Fijian
- Maori
- Hawaiian

Note: One group of Malayo-Polynesians went BACK to Africa.

- Modern Malagasy: Spoken in Madagascar (only Austronesian language near Africa)
- Genetically in the Malayo-Polynesian branch (though far from Polynesian now!)

Hawaiian:

English non-distinctive ɬ :

- regular distinctive sound in Halq'emeylem
- surprisingly, you say ɬ in English!
- English phonological rule: l --> ɬ after /s/ ["sleep']
- Distinctively there are 20 consonants in English system (not counting j and w). But physically, we say many more "sounds".

Phonemes: the "true" set, the distinctive sounds, the ones that make a difference in the lexicon

Phonemes of English:

p b			t d			k g		
	f v	θð	s z	ʃ ʒ				h
m			n			ŋ		
			r l					

Lecture 13:

Testable Concepts:

- *We discussed the concept of a Vowel Length feature. In English vowel length is just predictable (vowels are shorter before voiceless consonants), but we noted that in many languages the same physical distinction between longer and shorter vowels can be distinctive.*
- *We reviewed the glottal stop. We recalled that it is not distinctive in English, but it is in Halq'emeylem.*
- *However, we noted that Halq'emeylem also inserts a glottal stop predictably, like English, when the word starts with a vowel. So there are distinctions based on glottal stops, but no distinctions in Halq'emeylem based on glottals at the start of a word. Word-initial glottals are not written in this position in Halq'emeylem either, just as we do not write them in English.*
- *We reviewed the low front vowel /æ/ and the low back vowel /ɑ/*
- *We introduced also a low central vowel, /a/. This does not occur in Canadian English, except predictably before /r/ (so can be analyzed as a non-distinctive alternate of /ɑ/. (It also occurs in English in something called "dipthongs", which we will cover shortly).*
- *However, we noted that the low central /a/ is very common in the world's languages--in fact in many languages /a/ is the only low vowel.*
- *We started our major case study look at Hawaiian language. We noted there about 1,00 speakers of the traditional Hawaiian language today, largely the result of a successful language revitalization program based on immersion schools.*
- *We noted that Hawaiian also has a different native language, called Hawaii Pidgin. Hawaii Pidgin is a blend of a number of other languages (technically called a Creole). It is a full language, and though it has some traditional Hawaiian words it is not the same as the Hawaiian language itself. Both Hawaiian and Hawaii Pidgin are complete languages.*
- *A "pidgin" is a simplified language, but Hawaii Pidgin is not actually a pidgin--though it would have been, at an early stage.*
- *We noted that First Nations Hawaiian people speak Hawaii Pidgin much more than traditional Hawaiian.*
- *Then we started looking at the Hawaiian system (in the traditional language). You are expected to know the C system on slide 42 of this lecture (fortunately, it's one of the smallest inventories in the world). We noted there is no voice distinction, no fricatives (unless you count /h/, but that can also be classed as a glide which would mean there are no fricatives in the language at all). In the main dialect (the "k" dialect) there is not even a /t/, which is extremely rare!*

- *We noted there are two dialects, one the k-dialect has /k/ but no /t/, the other dialect has /t/ but no /k/. The two stops are used in the same places in words, so often one dialect has a /k/ where the other has a /t/. The t-dialect (the Ni'hau dialect) is much smaller.*
- *We also looked at the vowel system, and you are expected to know the V system on slide 45. Again, fortunately, it is small.*
- *However, we noted that length is distinctive in Hawaiian.*
- *And we also noted the pairs **alo** vs. **'alo**, which shows that (i) glottal stops are not required in Hawaiian, even with word-initial vowels, and (ii) that presence/absence of a glottal stop is distinctive even in this position. Glottal stop is also distinctive word-internally in Hawaiian.*
- *If time, we started looking at the Kwak'wala language, in the Wakashan family. It has a very similar linguistic system (the C systems are almost identical, except that Kwak'wala does have distinctive voice with some consonants). It turns out the two families are not historically connected, though, but rather long generations of contact have caused the systems to grow similar (through borrowings of sounds, etc.). This is a common thing, that languages in an area grow more similar over time, and an area like this is called a Sprachbund. Linguists call this area the Northwest Coast Sprachbund.*

<u>Distinctive vs. Predictable Vowel Length:</u>

- Each vowel can be made short or long. IPA = (V:) . e.g. i vs i: , I vs I:, etc (can also double the symbol, i vs ii, I vs II)
- Many languages use vowel length distinctively (like Blackfoot)
- English has length too but not distinctively. It's just automatic/predictable in English.
- English vowels are shorter before voiceless consonants (pete) [pit]
- English vowels are longer before voiced consonants (peed) [pi:d]

<u>Glottal Stop:</u>

- IPA: ʔ
- English: only appears by predictable insertion (V-initial word, e.g. uh oh)
- Halq: distinctive word-internally, written with " ' " (e.g. /s'ikw'/ skinned vs /sʔikw'/ get lost)
- In Halq: ʔ is also automatically inserted before initial V (ibex - to walk actually starts with inserted ʔ)
- There are no glottal/non-glottal contrasts at start of word, so not written.
- Moral: even languages that have distinctive ʔ word-internally can insert it automatically before initial vowels

<u>æ, a, ɑ:</u>

- /æ/ Canadian English (CE) - bag, fat, lass, France (low front)
- /ɑ/ Canadian English (CE) - bog, fought, loss (low back)
- /a/ is an in-between version! (low central vowel)
- In CDN English /a/ usually occurs only before /r/ (car = /kar/ not /kær/)
- In CDN English, /a/ is non-distinct variant of /ɑ/ (/ɑ/ becomes /a/ before /r/)
- But a distinctive low central /a/ is very common!

<u>Hawaiian System:</u>

- Austronesian Family --> Malayo-Polynesian Branch

- Arrived on the Islands comparitvely recently - around 400AD
- Language was banned in schools by US Gov't in 1893
- After official US takeover in 1896, Native Hawaiian very nearly died entirely
- Today, Hawaiian has one of the best immersion-based revitalization programs in the world!
- Result: 1,000 native speakers
- Hawaii has another (different) language: a creole, which they call Hawaii Pidgin
- Hawaii Pidgin is a blend: Hawaiian, English, Portuguese, Cantonese, Tagolog, Japanese, Korean, Spanish!
- Hawaii Pidgin has 600,000 speakers. Originated in a pidgin (simplified language) but is now also full, distinct language.
- Traditional language: Hawaiian Language - 1,000 speakers
- Newer language; Hawaii Pidgin - 600,000 speakers, different language, also full language

Hawaiian Consonant Phonemes (main dialect) :

	lips	*ridge*	*soft-pal*	*glottis*
stop	p		k	ʔ
fricative				
nasal	m	n		
lateral		l		
glide	w			h

- smallest inventory in the world - hence very long words
- no voice, no fricatives and not very many places of articulation

Dialect Variation with Consonants:

Big-Island (k) Dialect				Ni'hau Dialect			
p		k	ʔ	p	t		ʔ
			h				h
m	n			m	n		
	l				l		
w				w			

Hawaiian Vowels in IPA (same in both dialects; in IPA /ː/ marks length):

i	u	i:	u:
e	o	e:	o:
a		a:	

- lolo – brain, lōlō – stupid
- kanaka – man, kānaka - men
- alo, [alo] = face
- 'alo [ʔalo] = to dodge <- ʔ is not automatic! Distinguishes meaning here! Hence written even at starts of words.

Language of the Week: Kwak'wala vs. Halq'emeylem & the NW Sprachbund

Wakashan Family:

- Family of 7 languages
- Largely on West Cost of Vancouver Island
- All severely endangered

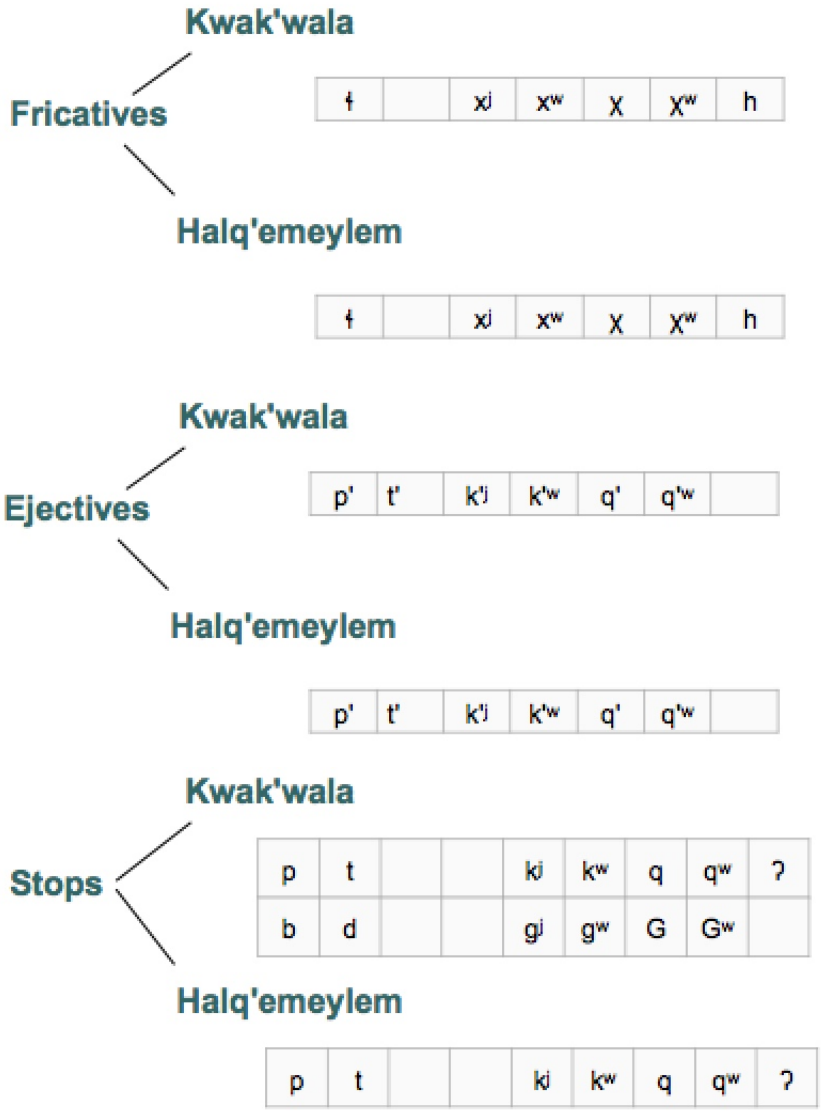
Salish Family:

- Family of 23 languages
- On Southern Mainland, some on East Coast of Island
- Also all severely endangered

The Kwak'wala Language:

- Wakashan --> Kwak'wala
- Spoken largely Northern end of Vancouver Island
- Under 300 native speakers, mostly elderly
- Two competing writing systems, both from 20th century
- Strong community revitalization efforts

Kwak'wala vs Halq'emeylem Inventories (Wakashan vs Salish):



Summary:

- Salish and Wakashan inventories are very similar
- The families share large and very complex inventories.

Are Wakashan and Salish historically related?

- No! They are many borrowings but otherwise 0 cognates.
- There was 13,000 years of contact between Wakashan and Salishan people
- Many speakers were bilingual due to trade, intermarriage, and slavery
- Wakashan speakers adopted many sounds, phonotactics, etc. from Salish - and vice versa.
- Over time, the two sound system largely converged.

- Wakashan and Salish languages are not historically related, but they have grown similar through long term contact and borrowing.

Sprachbund: A group of languages, with no single historical source, that have come to share many features through borrowing and contact.

Linguistics call this area the "Northwest Coast Sprachbund"!

Lecture 14:

Testable Concepts:

- *We looked at the Hindi writing system. This is called Devanagri, and is a syllabic system (each symbol represents one syllable). Devamagro is descended from an older syllabary called Brahmi, which is the basis for most South Asian (and some East Asian) writing systems.*
- *We started our major case study look at Hawaiian language. We noted there about 1,00 speakers of the traditional Hawaiian language today, largely the result of a successful language revitalization program based on immersion schools.*
- *We noted that Hawaiian also has a different native language, called Hawaii Pidgin. Hawaii Pidgin is a blend of a number of other languages (technically called a Creole). It is a full language, and though it has some traditional Hawaiian words it is not the same as the Hawaiian language itself. Both Hawaiian and Hawaii Pidgin are complete languages.*
- *A "pidgin" is a simplified language, but Hawaii Pidgin is not actually a pidgin--though it would have been, at an early stage.*
- *We noted that First Nations Hawaiian people speak Hawaii Pidgin much more than traditional Hawaiian.*
- *Then we started looking at the Hawaiian system (in the traditional language). You are expected to know the C system on slide 25 of this lecture (fortunately, it's one of the smallest inventories in the world). We noted there is no voice distinction, no fricatives (unless you count /h/, but that can also be classed as a glide which would mean there are no fricatives in the language at all). In the main dialect (the "k" dialect) there is not even a /t/, which is extremely rare!*
- *We noted there are two dialects, one the k-dialect has /k/ but no /t/, the other dialect has /t/ but no /k/. The two stops are used in the same places in words, so often one dialect has a /k/ where the other has a /t/. The t-dialect (the Ni'hau dialect) is much smaller.*
- *We also looked at the vowel system, and you are expected to know the V system on slide 26. Again, fortunately, it is small.*
- *However, we noted that length is distinctive in Hawaiian.*
- *And we also noted the pairs **alo** vs. **'alo**, which shows that (i) glottal stops are not required in Hawaiian, even with word-initial vowels, and (ii) that presence/absence of a glottal stop is distinctive even in this position. Glottal stop is also distinctive word-internally in Hawaiian.*
- *We reviewed borrowing strategies. We noted two strategies: (1) sometimes speakers change the word to match their language (substituting the nearest sounds in their system, and adding or deleting sounds to match their phonotactics. (2) Other times, speakers (especially bilinguals) will use non-native sounds and phonotactics.*
- *When there is a lot of close contact, and many borrowed words shared between languages,*

they often become more similar over time, even if they are not actually historically related.
- *We looked at languages of the Caribbean, including the Carib and Arawakan families. These are no longer spoken in the Caribbean, but we borrowed many words, including Barbecue, Hammock, Hurricane.*

Language of the Week: Caribbean Languages and Dialects

- Families of the Caribbean Area: Arawakan - 59 languages, today mostly extinct but some still spoken in Central and S.America
- Families of the Caribbean Area: Carib (aka Cariban) - 31 languages, same situation as Arawakan
- Lots of conflict and also mixing of Arawakan and Carib languages.
- All speakers in Caribbean died or after European conquest.
- Before they were destroyed, we borrowed lots of words from Arawakan. (Barbecue, Hammock, Hurricane, Iguana, Papaya, Potato)
- First permanent "settlements" in British sections were English and Africans (mostly Niger-Congo)
- Their blended language developed into Caribbean dialects of English.

What to do when Borrowed Words don't "Fit"?

- Sometimes you don't have the sound (e.g. German Bach /bax/)
- Sometimes you have the sound, but it still violets your phonotactics

Borrowing Strategies:

- Make the word fit your language -> Use the nearest sound (Bach > /bak/) AND/OR drop/add a sound to match our phonotactics (ʒənʁə > dʒənrə) and (psūchê > psyche (saIki))
- Make your language fit the word -> Use a sound not in your system (Bach > /bax/) AND/OR use with phonotactics not in your language (ʒənʁə > ʒənrə)

Hawaiian Phonotactics:

- No CC clusters at start of word or syllable (aloha, hula, kahuna, poi)
- No CC clusters at ends, either
- Only two kind of syllables: CV or plain V. Makes for many long words!
- Severely restricted syllable shapes: CV or V only

Borrowings:

- Hawaiian changes the English word to match the Hawaiian system
- They look for the closest similar sound in their system - but since they don't have many, that's often just /k/!
- They insert vowels as needed (sometimes /i/, sometimes /a/) to give all CV or V syllables
- Similar adaptations are used in many languages, especially those with restrictive syllable shapes. (e.g. Japanese)

Summary:

- Tiny C system (k-dialect very unusual to have no /t/!)
- Tiny 5-V system (but distinctive length doubles it to 10)
- Severely restricted syllable shapes (CV or V only). Results in long words!

Hindi Follow-Up - Writing System:

- Egyptian Hieroglyphs -> Semitic alphabet -> Brahmi (one branch) and Arabic/Hebrew/Latin/Greek (other branches)
- Brahmi: each syllable represents a SYLLABLE (ka, k^ha, ga, g^ha, ta, t^ha etc.)
- Separate symbols for aspirated vs unaspirated required.
- If no special marks, vowel is always understood to be /a/. For other vowels (and final /m/), you add marks to the basic symbol.

Urdu/Hindi:

- Urdu: Uses a variant of the Arabic script (because largely Muslim)
- Hindi: Uses a syllabic script derived from Brahmi, called Devanagari

Devanagari:

- As in Brahmi, each symbol represents a SYLLABLE with default vowel /a/
- Separate symbols for aspirated and retroflex consonants
- Symbols are changed from older Brahmi, but again diacritics are used to mark other vowels.
- The Brahmi "syllabary" is also the source for MOST other South-Asian writing systems.
- It is also used in East Asia, including Thai, Tibetan - and it even influenced Japanese

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Lecture 16:

Testable Concepts:

- *We introduced the Niger-Congo, the largest (though not only) language family in South Saharan Africa. We looked at how Niger-Congo originated in Northwest Africa, but then spread throughout sub-saharanAfrica, replacing most (though not all) of the older language families.*
- *Then we discussed how pitch (high, low, rising, falling, etc.) can be distinctive in some languages. This is called a tone language.*
- *English changes pitch at the sentence level (distinguishing questions from statements, and a few other uses); however in English no individual words are ever distinguished with this feature. So English does NOT have distinctive tone and so is not a tone language.*
- *We noted that tone distinctions refers to relative pitch, not an absolute value. Low tone for a small child might correspond to high tone for a tall man*
- *We looked briefly at tone in Akan, a Niger-Congo language spoken in Ghana.*
- *We looked at Akan examples showing contrasts between high vs. low vs. falling. Like most Niger-Congo languges, the number of distinctive tones is fairly small (most Niger-Congo have just high vs. low, sometimes combined to make rising or falling).*
- *Then we looked briefly at the Sino-Tibetan family, which includes 14 languages in the "Chinese" branch, and 425 languages in the Tibeto-Burman branch.*
- *We noted how Sino-Tibetan languages commonly have fairly small inventories of sounds, and quite limited syllable structure. They often use only one syllable for each meaningful item, and they very commonly have distinctive tone.*
- *We compared four different words ba in Mandarin:*
- *ba - high level = scar (tone 1)*
- *ba - mid rise = cymbals(tone 2)*

- *ba - low with glottal (Beijing dialect) = target(tone 3)*
- *ba - high fall = dam (tone 4)*
- *We compared four different words mao in Mandarin:*
- *maʊ - high level = cat (tone 1)*
- *maʊ - mid rise = as in Chairman Mao, also means fur (tone 2)*
- *maʊ - low with glottal (Beijing dialect) = rivet (tone 3)*
- *maʊ - high fall = hat (tone 4)*

Language of the Week - Caribbean:

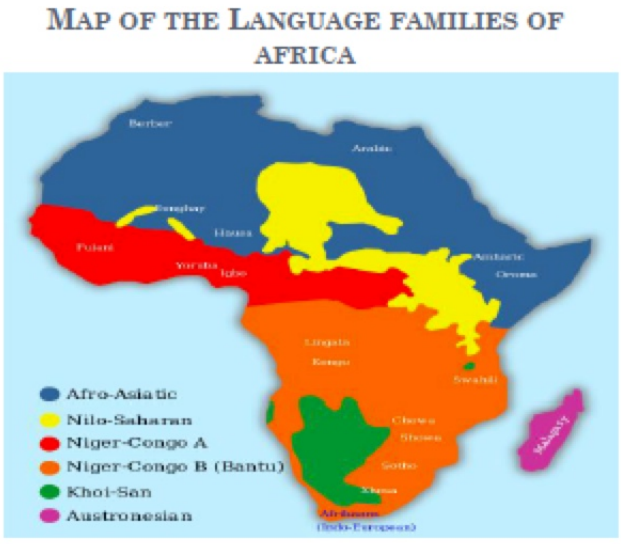
- Caribbean (like British) often has a /a/ where Canadian has /æ/ (CDN: man /mæn/ Caribbean: man /man/)

Language of the Week - Niger Congo:

- The language families of Africa: Austronesian Family (Many languages but just one in Africa, in Madagascar)
- Language = Malagasy (Austronesians originated in Taiwan, some came all the way back to Madagascar!)
- Afro-Asiatic Family: Group of languages spoken North of the Sahara (includes Semitic)
- Khoi-San: Maybe more than one historical Family, this group all have "clicks" (South of Africa)
- Nilo-Saharan (includes Fur, Nubian, Maasai) (North Africa)

Niger-Congo Family and the Niger-Congo Expansion:

- Proto Niger-Congo: Linguists trace Niger-Congo family originally to small W.Africa area
- Then they expanded (in area)!
- Then way more expansion! Today enormous geographical area!
- 1,532 distinct languages (just in this family)
- Two main branches: Niger-Congo A (Northwest) and Niger-Congo B (Southern) "Bantu branch"



Pitch as a Distinctive Feature: Tone

- How do we use our vocal folds to distinguish sounds? Voiced (vibrating) vs. Voiceless (non-vibration)
- You can also vibrate different ways (high vibration and low vibration)
- High/Fast vibration (high pitched speech) and low/slow vibration (low pitched speech)
- In English, we vary out pitch in sentences but only at the sentence level, not to distinguish individual words.
- Men usually have a lower overall pitch rate.
- Rate of vibration (pitch rate) potentially could distinguish meanings.

Akan Language:

- Niger-Congo family
- 14 major dialects
- 8 million L1 speakers in Ghana
- 1 million L2 speakers
- Has minimal pairs based on pitch

Sino-Tibetan:

- Sino-Tibetan family: 449 languages in Southeast Asia
- Incluses Mandarin, Cantones, 12 other languages in the Chinese branch and 452 languages in the Tibeto-Burman branch
- Relatively simple inventories of consonants, vowels
- Often very limited syllable structure (e.g. CV or CV-Nasal only)
- Most meaningful units are a single syllable
- Distinctive use of pitch, i.e. tone

Mandarin:

- Mandarin is spoken across most of Northern and SW China
- Simple inventory of consonants, vowels, very limited syllable structure, one-syllable meaningful units, and distinctive tone
- Two syllables: /ba/ and /maʊ/
- /ba/ means cymbals (mid rise), dam (high fall), scar (high level), target (low with glottal)
- /maʊ/ means cat (high level) purple line, mao/hair (mid rise) yellow line, rivet (low with glottal) red line, hat (high fall) blue line

Conclusions:

- Pitch can be used distinctively at the word level (minimal pairs)
- Distinctive pitch is called "Tone", languages that have it are called "tone languages"
- English uses pitch meaningfully at the sentence level (Q vs. statement) but it not a tone language
- Vietnamese has 7 distinct tones in one dialect (maximum for any language)
- English and German have variable pitch in speech, but for us it's NOT distinctive at the word level
- tone language: distinctive feature at the WORD level

Lecture 17:

Testable Concepts:

- *We looked at the Medumba language (see separate slides)*
- *We reconstructed some words in Proto-Polynesian (or an older form of Polynesian), and could even see the order some of the changes must have taken place in, even without any written records.*
- *Then we looked at intonation, which is the use of pitch to distinguish sentence type or sentence-level connections between words.*
- *Though physically both involve differences in pitch, intonation is different from tone: tone languages change meanings of words just with pitch; English has intonation, but it never changes the basic meaning of a word.*
- *We noted some major uses of intonation in English: yes/no questions rise, statements fall, lists rise repeatedly till the end, and wh-questions have a rise-fall pattern.*

Medumba:

- 210,000 speakers
- A Niger-Congo language

- Cameroon-Africa

Reconstructing Polynesian History:

- Easy enough to learn "kw went to hw in Germanic" but how do linguists figure that stuff out?
- They use written records, but writing is only 5,000 years old. How do they reconstruct languages 10,000 years old?
- Look at a piece of data, and use the principle "more likely that one or two groups would change, than nine or ten"
- By comparing sets of modern languages, you can reasonably reconstruct historical changes. And even the order the changes took place.

Intonation:

- Tone language: wrong pitch, wrong word!
- Intonation: Pitch is used to distinguish sentences, not individual words.
- An English word can be a question or statement (yes? yes!) but retains its basic meaning. English has intonation but not pitch.

English Intonation Patterns:

- Yes/No Questions normally rise
- Statements normally fall or level off
- Do yes/no questions rise in all languages? Common, but not universal. In Chikasaw (SE US), the statements rise and questions fall!
- If list is not finished, pitch rises.
- If list is at end, pitch falls. "fall when done"
- Yes/No Questions and unfinished lists both have 'more' coming.

Summary:

- Pitch is important in English, but only as sentence-level.
- Statements fall…yes/no questions rise…lists fall till the end…wh-questions rise and fall
- Tone: Marks word-level meaning: different pitch = totally different word
- Intonation: Marks sentence types, but not individual word meaning.

Lecture 18:

Testable Concepts:

- *We reviewed briefly the Wakashan and Salish families, and introduced the Na-Dené family.*
- *Na-Dené were probably a later migration than Salish and Wakashan, and there is a traceable linguistic connection between Na-Dené and some languages in Siberia.*
- *Most Na-Dené languages are in Northern Canada and Alaska, but a smaller group migrated south to Arizona and nearby within the last thousand years. This group became modern Navajo (probably the largest First Nations langauge in the US and Canada) and Apache.*
- *In the case study on Halq'emeylem, we looked at the historical change of all n's into l's, and at the reason the change must have taken place in this direction.*
- *We looked at the dipthong aɪ, as in 'ride', 'sigh', my', and how this optionally simplifies to /a/ in many Southern US (including Texas) dialects*

- *We looked at the dipthong aʊ, as in 'how', 'loud', wow', and how this corresponds to /oʊ/ in Caribbean dialects*
- *We looked at the lax vowel /ɔ/, as in New Jersey English 'coffee', and how this vowel merged with ɑ in Canadian and US Mid-western dialects.*
- *We also introduced (or you should read about it, if we did not) the dipthong /ɔɪ/ as in 'toy', 'boy', 'Roy'*

Review: Wakashan and Salish

- Wakashan Family: family of 7 languages, largely on West Coast of Vancouver Island, all severely endangered
- Salish Family: family of 23 languages, on *Southern Mainland*, some on East Coast of Island
- Also all severely endangered

Language of the Week - The Na-Dené Family

- Salish and Wakashan part of 1st "wave of migration"
- Na-Dené people were the 2nd wave
- Inuit and related languages were the 3rd wave
- Oldest: Salish and Wakashan: no traceable connection to Eurasian languages
- Newer: Na-Dené: just barely recognizable connection to small group of languages in Siberia
- Na-Dené cover enormous territory in North America
- 46 modern languages and largest is Navajo
- US Army Code used Navajo so that Japanese code-breakers couldn't crack the code.
- Relatively simply C and V inventories, syllable structure
- Enormous verb templates
- Often distinctive vowel length and tone

Dipthongs:

- Dipthong in ride, sigh, hide /aɪ/
- In the Texas dialect, /aɪ/ becomes /a/
- Dipthong in how, loud, wow /aʊ/
- In the Caribbean dialect, /aʊ/ becomes /oʊ/ (since 'o' is pure, they contrast /o/ and /oʊ/)

Lax vowel /ɔ/:

- Lax version of /o/: /ɔ/
- Mid back lax (rounded) vowel
- Not distinctive in CDN dialect. o --> ɔ before /r/
- But o vs ɔ can be distinctive! (e.g. Akan language)
- Used in 'toy and boy' as /ɔI/

Lecture 19:

Testable Concepts:

- *For language of the week we looked at the Dene-Sułiné - Chipewyan*
- *We noted how the family (Na Dene) was recently shown to be related to languages in Siberia, leading to a new larger language family: Dené-Yeniseian*

- *We listened to some Chip. sounds, and saw how their vowel system has a combination of distinctive length, distinctive nasality, and a distinctive contrast between high and low tone.*
- *We reviewed the mid back lax (rounded) vowel: /ɔ/. Linguists sometimes call this 'open o'.*
- *In Canadian (and some US) dialects, /ɔ/ is just a variant of /o/. We pronounce /o/ predictably as /ɔ/ before /r/ in these dialects.*
- *Other dialects, including many US East Coast dialects, have an older form of English, distinguishing /o/ from /ɑ/ from /ɔ/. In these dialects you would say:*
- *coat /kot/*
- *caught /kɔt/*
- *cot /kɑt/ (this vowel may be more central, i.e. /kat/)*
- *Historically, the dialects with the /o/ /ɑ/ /ɔ/ distinction are older. In Canadian most older /ɔ/s were turned into / ɑ/, and so cotand caughtare now pronounced the same for us. (However, we kept the open-o just before /r/; some US dialects, including in California, lost it even there, saying either /a/ or /ɑ/ as the first vowel in orange).*
- *We introduced caret ([ʌ]). Caret is a physically a bit lower and further back than shwa, but in the English system caret is just a predictable variant of shwa: ə becomes ʌwhenever it is stressed. In broad transcription you can just always use shwa, but physically the vowels do sound quite different (some languages distinguish them).*
- *Then we introduced "Aristotle's Problem": how do we construct new sentences, without having heard them before? We saw that this is only possible if our lexical entries, in addition to strings associated with meaning, also contain a specification for 'grammatical category' (classes of words, which we label 'noun', 'verb', etc.); if our words come with categories, then it's easy to understand how we can be creative: we learn templates like noun verb (in English), or noun verb noun; then, we can fit words of various categories together in new ways, but following those category-based templates--this must be how language works, to explain productivity.*

<u>Language of the Week - Chipewyan</u>

- Na-Dené family
- Related to languages in Siberia
- This led to the creation of a newer and larger language family Dené-Yeniseian

<u>Aristotle's Problem & Categories of Words:</u>

- As children, how do we learn to put words together?
- One simple idea - you listen to your parents and learn which sentences are okay one by one
- You hear: "John danced" and learn "John" goes before "danced"
- This simple-minded model child MEMORIZES sentences one by one
- Arguments against "memorize each sentence" model:
- Productivity/Creativity: children can create sentences they've never heard
- Memory load: impossibly many sentences to memorize
- Misses patterns: there are patterns in word order (certain types of words go in certain places)
- Our words are grouped into abstract categories which help us build templates and patterns
- Category of words are not fully predictable from meaning. Must be stored in the lexicon.

<u>Summary:</u>

- We don't just learn sentences one by one. We learn patterns.

- To have patterns, words must be grouped into categories (NOUN, VERB, etc)

Lecture 20:

Testable Concepts:

- *We introduced the Greek language. Ancient Greek is an IE language, it had emerged as a distinct language by 2,000B.C. Ancient Greek diverged into several dialects, the most predominent of which was the Ionic dialect (which later became Attic).*
- *We introduced the idea of generative rules for creating sentences, and we noted how this allows an infinite number of sentences with a finite lexicon (by looping, such as S --> N V (S).*
- *We then argued for an NP rule, giving sets of generative rules like this: S --> NP V (S), NP --> (DET)(ADJ)N*
- *We refined the system again slightly adding a VP unit (we did not argue for the VP unit, but it is well founded), giving a set of rules like this for English: S --> NP VP NP -->(DET)(ADJ) N VP --> V (NP) VP --> V (S)*
- *Then we looked at DET. In English, we noted that DET is not used before proper names, but a DET is usually required with "common" (regular) nouns.*
- *In English, we noted that the DET "a" is used with new information, while "the" is used with old or familiar information. So English DET usage is sensitive to OLD vs. NEW information or referents.*

Language of the Week - Greek:

- From the Proto Indo-European split, one group ended up in Greece.
- The Ionic dialect was spread by Alexander the Great's conquests. (Language of Plato, Aristotle, etc)
- Attic (where branches from Ionic) became the official language of the Eastern Roman Empire.
- For 1,000 years a leading language of religion, government, and scholarship.
- And the language of the Christian New Testament.

Chomsky's Problem: Infinite Syntax:

- Words come in different categories
- We know thousands of nouns, verbs and adverbs
- Listing all the variety of templates will take a LONG time (NV, NV(comp)NV etc)
- Categories are great. But you can never just list all possible templates.
- 'Generative' rules - keep reapplying a rule to affinity
- If they allow looping, they are called recursive generative rules.
- Sentence building is done by generative rules. Natural language rules are also recursive.

Summary:

- Linear templates like NOUN VERB are too simple
- Instead we need generative rules like S -> NV, S -> NVS
- These include "looping" recursive rules like S -> N (COMP) S
- Every human language includes recursive rules
- Chromsky identifies recursion as the key evolutionary step in human language evolution

Refining the Generative Rules: NP

- There are determiners: a, the (a.k.a articles)
- N can always become DET N: The woman left. A woman left.
- Then, there are adjectives: tall, ugly, happy
- DET N can always become DET ADJ N:

Summary:

- Generative rules include an NP unit:
- S -> NP V (NP)
- S -> NP V (S)
- NP -> (Det)(Adj) N
- …
- Linguists also use a VP unit.
- S --> NP VP
- NP --> (Det)(Adj)N
- VP --> V (NP)
- VP --> V (Comp) S

Function of DET in English:

- DET is required with regular ('common') nouns
- But DET is not allowed with proper names (in English)
- Plurals and 'mass nouns' do not require the DET, but allow it e.g. The men are here
- English determiners mark OLD vs NEW information

Summary:

- English nouns are in phrases, NP -> (Det)(Adj) N
- In English, DETs are not used with proper names.
- English DETs are sensitive to "old" vs "new" referents (relative to the conversation)

Lecture 21:

Testable Concepts:

- *We looked at some of the historical changes in Greek. The specific change will not be tested, but worth reviewing as practice analyzing historical data.*
- *We reviewed a basic set of generative rules for English, using NP and VP units.*

- *Then we looked at the role of DET in English. We recalled that DET is not used (or allowed) with proper nouns (i.e. names), but DET is required with other nouns (though plurals and nouns describing "masses", like liquids, only optionally use DET).*
- *In terms of the function of DET, we observed that a vs. the marks new vs. old information/referents in the conversation.*
- *Then we looked at generative rules for Halq'emeylem. We observed that the NP rule is the same as English, but the S rule puts the VP first (S --> VP NP), which puts the verb at the start of the sentence.*
- *Then we noted that Halq'emeylem ALWAYS requires DET, even with proper names. (Other languages also do this, including certain dialects of Spanish and German).*
- *Then we looked at the function of DET in Halq'emeylem. It does NOT mark old vs. new information: instead, Halq'emeylem DET marks (i) male vs. female, and (ii) near vs remote location.*
- *Then we introduced the notion of "subject" vs. "object". These are structural positions in the trees generated by generative rules: subject NPs are beside the VP, object NPs are inside the VP.*
- *We noted a strong cross-linguistic generalization: if you have an agent (doer) and a patient (receiver) in a sentence, the agent always goes into the subject NP and the patient into the object NP. (If there's just one NP, though, it will be the subject, and it can be either agent or patient).*
- *Many languages mark NPs for whether they are in subject or object position. Sometimes this is done (as in German) by choosing a special DET, other times it is done by putting a suffix on the noun. However you mark it, this is called "Case" marking. (Other structural positions and relations can also be marked, e.g. indirect objects, and that is also called "case" marking).*
- *We noted that English used to always mark case on all NPs, but we lost case marking after 1066 (though we still mark it on a few pronouns: e.g. he is used for subject, but him for object).*
- *Then we looked at basic German syntax, focusing only on embedded sentences (e.g. ...that she left). We noted that German is very similar to English, except that here the VP rule is flipped: in German VP --> NP V. This ends up putting the verb last in most sentences. (Non-embedded sentences use the same generative rules, but the word-order is complicated because they move NPs around; we did not have time to look at this in this course.)*

Language of the Week - Greek:

- Language first of Alexander's Empire, then the E. Roman Empire, then hugely popular in the renaissance
- There are a huge number of Greek borrowings in modern English
- German academics rejected use of Greek for technical terms

Sentence Building (Syntax): English DET

- Eng: NP --> (Det)(Adj) N
- Eng: Proper nouns do not take DET, common (singular, non-mass) nouns require DET (the thin man, a dog, the pretty teacher)
- But what is DET for? What's the difference between a and the?
- English determiners mark OLD (definite, specific) vs. NEW (indefinite, non-specific) information

Halq'emeylem Phase Structure and DET:

- Verbs -> imex (walk) t'ilem (sing)
- Nouns -> Mali (mary) Chol (John)
- Det -> te
- Adj -> hikw (big)
- NP -> (Det)(Adj)N (same as English so far)
- S -> VP NP
- VP -> VP
- S level rule is REVERSE of English
- Halq'emeylem requires determiners even with Names. Same as dialects of German, Spanish, and many other languages.
- Halq'emeylem DETS do not distinguish between old/new info in conversation. " te swiyeqe can mean 'a man' or 'the man'"
- Halq'emeylem DET does NOT mark 'new' vs 'old'. Their DET marks location.

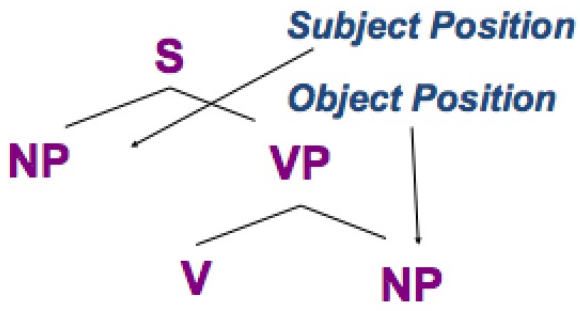
Summary:

- Halq'emeylem S is reversed from English (S -> VP NP)
- Halq'emeylem names require DET
- Halq. DETs are sensitive to near/remote and male/female (not old/new)

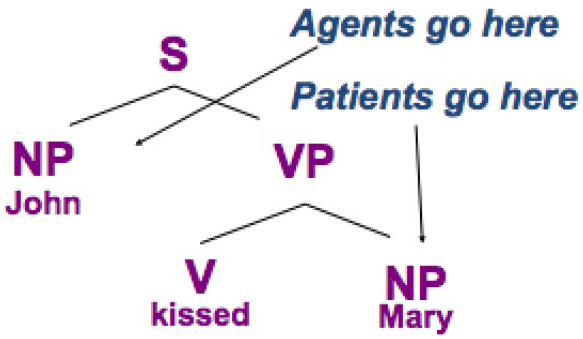
Sentence Building (Syntax): Case Marking:

- S -> NP VP
- VP -> V (NP)
- NP -> (Det)(Adj)(N)

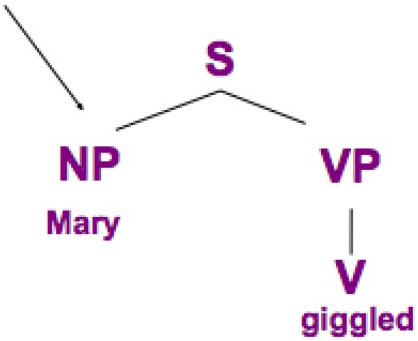
Definition: "Subject" and "Object" are positions:



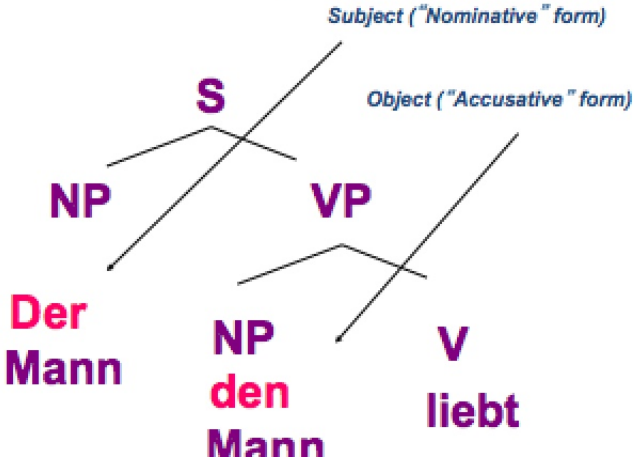
Subject vs. Object always correlates with agentivity. If AGENT and PATIENT present:



Note SUBJECT is not identical to AGENT, though: If just one NP, it can be non-agentive:



Many languages mark subject vs. object:



Case Marking (def'n): Marking an NP as subject of object (or other structural position)

- Case marking sometimes a change in DET, but can also be suffixes etc.
- English used to mark all NPs, just remnants today: he vs him, she vs. her
- Old English had Case too, like Modern German

- We lost it (except with a few pronouns) after French invasion in 1066

Sentence Building (Syntax) German Word-Order (Basic):

- Embedded S: S within S (e.g. I know that she left)
- Note: embedded S often has special verb forms, word-order, etc.
- In German, the word order is SIMPLEST in embedded sentences.
- S -> NP VP (same as English)
- VP -> V (same as English)
- VP -> NP V (someone flipped VP!)

German so far:

- S -> NP VP
- But the VP rule is reversed: VP -> NP V
- Result: "V Final" language

Lecture 22:

Testable Concepts:

- *We looked at the Afro-Asiatic family, originating in North Africa and then spreading also to the Middle East.*
- *We noted how in the Middle East the Semitic branch evolved--including the Arabic languages (which later spread back into Egypt and North Africa), Hebrew, and (extinct) Phoenecian.*
- *We noted that Semitic languages commonly use the pharynx (the area above the vocal folds), and that they can make stops, fricatives, and trills in this area.*
- *We also noted that Semitic languages commonly have lexical entries with only consonants (they combine with vowels, but the vowels are separate lexical entries).*
- *Then we looked at the development of phonetic writing, which first took place in the Middle East.*
- *We noted how two civilizations, the Sumerians (who developed the cuneiform system) and the Egyptians (who developed hieroglyphs) arose and developed mass agriculture, cities, and writing at roughly the same time (though their writing systems were different).*
- *Both Egyptian and Sumerian writing started out logographic, and then was extended in various ways. They used some syllabic symbols (based on rebus extensions), and some consonant symbols (based on the first-sound principle).*
- *Later the Phoenecians had a simplified version of Egyptian, which wrote only consonants (but still no vowels).*
- *The Greeks (IE Family) borrowed the Phoenecian (semitic family) system--but because they were very different languages, the systems didn't match up. What to do with leftover symbols? Use them for the vowels! After more than 60,000 years of language, and 5,000 years of writing, someone finally wrote a vowel!*
- *We looked at how this profound technological change depended on contact between diverse systems, illustrating strongly that diversity has its advantages, too--unpredictable and sometimes chaotic, but also sometimes with powerful positive effects on human society.*

Language of the Week - Afroasiatic Family:

- 375 modern languages
- 300 million speakers total
- 221 million "Arabic" speakers (30 languages)
- Originates in N. Africa
- Spread to Middle East
- Major branches: Berber, Chadic, Cushitic, Egyptian
- Semitic branch went to Middle East
- Semitic Branch of Afroasiatic: Phoenecian (extinct), Aramaic, Hebrew (was extinct, now 5 million+), Arabic
- Semitic loves the "pharynx" (space between the uvula and the larynx)
- They can trill, make a fricative and vibrate the aryepiglottic folds.
- Interesting lexical property of the Semitic: Many lexical entries include no vowels, just 3 consonants. Vowels are inserted, but from separate lexical entries.
- Semitic languages often only write consonants (no vowels).

Uniformity vs Diversity:

- In all biological and social systems: Each has advantages and disadvantages. Forces for each exist in tension.
- In the world of human languages: Uniformity is hugely winning (impending up to 90& loss of human languages)

Anti-Diversity (in language) Argument:

- Endangered language revitalization is not important, because linguistic diversity is "useless"

The Story of the Phonetic Alphabet:

- 10,000 years ago: Middle Easterners invented mass agriculture
- Surplus food = surplus people = surplus labour = lots of stuff
- With tons of stuff you need: inventories, bills of lading, receipts, very precise calendars (This is when we started writing!)
- In Mesopotamia, with the Sumerians (Cuneiform on clay tablets)
- In Egypt, with Hieroglyphs (on papyrus)
- Initially, it was just "logographic writing" (one picture per meaning, no relation to sounds)
- Gradually, the pictures got stylized which made it easier to write.
- But the scribes had a problem. One picture per word is always way too many pictures!
- Rebus Extensions: Use the same symbol for homophones (homophone = unrelated words with the same sounds; this is sometimes called "rebus" writing). THis leads to symbols for syllables. (e.g. /bi/ /ai/ etc) "syllabic writing"
- Acrophonic "first consonant" aka "acrophonic" writing. Letter A was originally an ox (ʔælɛf) Later Semitic systems used A for "any" glottal stop. i.e. A = /ʔ/ (i.e. an acrophobic "first letter" extension)
- Egyptian Hieroglyphs ended up very mixed: some pictures were logograms, some were extended by the rebus, others (like their version of A) used first consonant
- Sumerians different, but also a mixed system. Theirs was more stylized and on clay (cuneiform).
- But a strange fact persisted for thousands of years: no one ever thought to write the vowels! They had C symbols (e.g. "A") but never V's!
- Were tri-consonantal roots a factor? Maybe.
- Result: Egyptian (and Mesopotamian) writing was insanely complicated. Only highly skilled

professionals could write.

The Accidental Phonetic Alphabet:

- Phoenicia (modern day Lebanon): The Phoenicians have a successful writing system. They simplified Egyptian symbols. Heavy use of the 'first letter' principle. Separate symbol for EACH C. Wisely ditched most logograms and syllabics. A is still ʔ, and still no vowels!
- Their alphabet starts spreading which brings it to Ancient Greece. Not far from Phoenicia, but a totally different family (IE)
- The ancient Greeks did NOT invent their alphabet, they directly borrowed the Phoenician writing system.
- But because Greek was so different from Semitic, something happened: They sound systems didn't match!
- For one, the Phoenicians had a distinctive glottal stop. So they had to write every /ʔ/, that C was their A.
- But in Greek, the glottal stop was NOT distinctive. They had no USE for A, and four other C sounds!
- So what to do with the leftover symbols? They used them for vowels!
- The term "phonetic" comes from "Phoenecian", but they didn't invent true phonetic writing. The Greeks didn't really invent phonetic writing either. This was the "idea" of phonetic writing, just because the Greeks had some leftover sounds!
- It was a happy accident that happens, when diverse system interact! The Greeks passed their alphabet to the Etruscans, the Etruscans passed theirs onto the Romans, who passed it on to us.
- Notice, that development depended crucially on contact between linguistically diverse systems.
- Diversity has costs, but also benefits. One accidental benefit was writing. Another benefit is all of modern linguistics. Another benefit is a healthy attitude towards other systems, other cultures, other ideas, and other ways of life.
