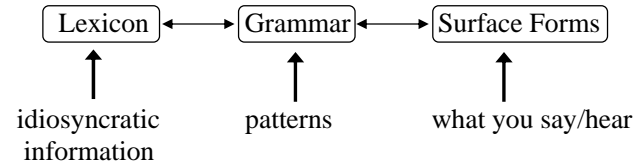


## Day 2: Features and Rule notation

Homework and Notes at:

<http://hum.uchicago.edu/~jriggle/phonol>

- Get the feature chart. Study it, love it, rejoice!
- Get Kie's handout on SPE-style rules – understand it.
- The big picture



Q: Which one contains “What you know when you know language X”?

- There is a whole lot of theory already present in our feature system.
- **Natural Classes**

Q: What features define these classes, what segments do they contain?

Labials

Sonorants

Sibilants

Coronals

Obstruents

Plosives

- Natural and or common rules and or processes:

Assimilation	- e.g. intervocalic voicing
Dissimilation	- e.g. manner dissimilation (for adjacent C's)
Strengthening	- e.g. aspiration in English
Insertion	- e.g. voiceless stop insertion in English <i>strength</i>
Weakening	- e.g. flapping in English
Deletion	- e.g. h deletion in unstressed syllables in English
Metathesis	- e.g. Leti: /danat+/kviali/= [dantakvali] <i>millipede</i>

Q: What is going on in Zoque?

Rule1:

context free rules: 1  
2

Q: What is going on in Papago?

Papago has a 5 vowel system with three high and two non-high.

The dental stops t and d contrast with the palatal affricates č and ĵ in what way?

Rule 1:

What about the other way round?

Q: What is going on in Chatino?

Upper case letters indicate voiceless vowels. What is their distribution?

Should we make a rule?

If so what?

How about a stress rule?

Q: What principles govern the light and dark l in Georgian?

Q: What principles govern the distribution of aspiration in Sierra Popoluca? (tʰ is an alveolopalatal stop)

Q: What are the three underlying vowels of Greenlandic Eskimo? (in the data r is a uvular trill)

Q: What's going on with the vowels in Mohawk?

**Zoque:** spoken in Mexico (Wonderly 1951)

<i>pata</i>	'mat'	<i>ŋgyunu</i>	'you fell'
<i>tatah</i>	'father'	<i>sis</i>	'meat'
<i>tʰitʰy</i>	'little'	<i>šohšahu</i>	'they cooked it'
<i>cima</i>	'calabash'	<i>kama</i>	'cornfield'
<i>cehcu</i>	'he cut it'	<i>nas</i>	'earth'
<i>kunu</i>	'he fell'	<i>ñanah</i>	'his mother'
<i>kenba</i>	'he sees'	<i>kaŋ</i>	'jaguar'
<i>myaŋdamu</i>	'you came'	<i>liŋba</i>	'he slashes'
<i>ʔiŋdʰoʔpya</i>	'he is sleepy'	<i>win</i>	'face'
<i>ñjehcu</i>	'you cut brush'		

Voiceless plosives	p	t, c	tʰ, č	k
Voiced plosives	b	d, dz	dʰ, j	g
Fricatives		s	š	
Nasals	m	n	ñ	ŋ
Liquids		l, r		
Glides	w		y	ʔ, h

**Papago (Tohono O'odham):** spoken in Arizona (Saxton & Saxton 1969)

<i>tatai</i>	'tendon'	<i>činig</i>	'to move the lips'
<i>tatal</i>	'mother's younger brother'	<i>čikpan</i>	'work'
<i>tamš</i>	'gums'	<i>daswua</i>	'to pile'
<i>tohnto</i>	'degenerate'	<i>doajida</i>	'healing'
<i>tokih</i>	'cotton'	<i>jšgos</i>	'storm'
<i>todsid</i>	'to frighten'	<i>jšwikon</i>	'to scrape'
<i>čuagia</i>	'net bag'	<i>žuni</i>	'dried cactus fruit'
<i>čučul</i>	'chicken'	<i>dakpon</i>	'to slip'
<i>čukma</i>	'dark'	<i>doʔag</i>	'mountain'
<i>čiposid</i>	'to brand'	<i>žusukal</i>	'lizard sp.'
<i>čilwin</i>	'to rub'	<i>žuhki</i>	'rain'
<i>čigitog</i>	'to think'	<i>žwhiadag</i>	'arrival'

**Chatino:** another language of Mexico (Gleason 1955)

<i>katá</i>	'you will bathe'	<i>siyú</i>	'juice'
<i>kisú</i>	'avocado'	<i>sulá</i>	'open!'
<i>kusuʔwá</i>	'you will send'	<i>tiyé</i>	'stomach'
<i>seʔé</i>	'place'	<i>laʔá</i>	'side'
<i>šiʔí</i>	'sad'	<i>loʔó</i>	'where'
<i>tAʔá</i>	'fiesta'	<i>ndikí</i>	'you are burning'
<i>tihí</i>	'water'	<i>nguší</i>	'tomato'
<i>tUʔwá</i>	'mouth'	<i>kíʔ</i>	'fire'
<i>kinó</i>	'sandal'	<i>háʔ</i>	'grass mat'

**Georgian** (Robins and Waterson 1952)

<i>łamazad</i>	'prettily'	<i>zarali</i>	'loss'	<i>xeli</i>	'hand'
<i>leto</i>	'goal'	<i>kała</i>	'tin'	<i>xoto</i>	'however'
<i>saxtši</i>	'at home'	<i>pepetá</i>	'butterfly'	<i>cʰecʰxli</i>	'fire'
<i>łxena</i>	'joy'	<i>kleba</i>	'reduce'	<i>vɫečʰ</i>	'I split'
<i>kbits</i>	'tooth'	<i>ertʰxel</i>	'once'	<i>cʰoli</i>	'wife'

**Sierra Popoluca** (Elson 1947)

<i>petʰkuy</i>	'broom'	<i>hu : tʰh</i>	'where'
<i>petta : pʰ</i>	'it is being swept'	<i>ikapun</i>	'his barrow'
<i>kekʰpaʔ</i>	'it flies'	<i>ti : ttitʰ</i>	'mestizo'
<i>kekgakʰpaʔ</i>	'it flies again'	<i>nipʰ</i>	'mouth'
<i>nikʰpaʔ</i>	'he goes'	<i>ikkaʔ</i>	'he killed it'
<i>tʰu : kiʔ</i>	'turtle'	<i>makʰtiʔ</i>	'ghost'
<i>šiš</i>	'cow'	<i>ho : ppaʔ</i>	'it rolls'
<i>hos</i>	'hole'	<i>petʰpaʔ</i>	'he sweeps'
<i>ca : m</i>	'very'	<i>witʰhpaʔ</i>	'he walks'
<i>kuy</i>	'wood'	<i>ičič</i>	'he jerked it'
<i>toc</i>	'tongue'	<i>mičpaʔ</i>	'he is playing'
<i>mokʰ</i>	'corn'	<i>pikʰšiʔ</i>	'bow'

**Greenlandic Eskimo** (Schultz-Lorentzen 1945)

<i>ivnaq</i>	'bluff'	<i>qasaloq</i>	'bark'
<i>iperaq</i>	'harpoon strap'	<i>ikusik</i>	'elbow'
<i>imaq</i>	'sea'	<i>qilaluvaq</i>	'white whale'
<i>tuluvaq</i>	'raven'	<i>qatigak</i>	'back'
<i>itumaq</i>	'palm of hand'	<i>sakiak</i>	'rib'
<i>sava</i>	'sheep'	<i>ugsik</i>	'cow'
<i>nuna</i>	'land'	<i>orpik</i>	'tree'
<i>ine</i>	'room'	<i>nerdloq</i>	'goose'
<i>nanoq</i>	'bear'	<i>marraq</i>	'clay'
<i>iseraq</i>	'ankle'	<i>iga</i>	'pot'
<i>isse</i>	'eye'	<i>igdlo</i>	'house'
<i>sermeq</i>	'glacier'	<i>sako</i>	'tool'

**Mohawk** (Postal 1968)

<i>wísk</i>	'five'	<i>ké : saks</i>	'I look for it'
<i>rayáthos</i>	'he plants'	<i>royóʔteʔ</i>	'he works'
<i>yékreks</i>	'I push it'	<i>í : raks</i>	'he eats it'
<i>raké : tas</i>	'he scrapes'	<i>nikanúhzakeh</i>	'houses'
<i>rehyá : raʔa</i>	'he remembers'	<i>wahoyóʔdaʔ</i>	'he worked'
<i>rá : kas</i>	'he sees her'	<i>ranú : weʔs</i>	'he likes it'