1. model of grammar:
[semantics] -> "meaning" -> [thought, action]
[lexicon] -> "words" -> [syntax] -> "sentences"
[phonology] -> "sounds" -> [articulation,
acoustics]
[2]. lexical entries:

- strings of sounds, each sound a matrix of features
- unpredictable features that encode the vocabulary
- languages make different selections
- choices may depend on context
[3]. Phonological rules change feature structure depending on context
[4]. Output constraints: may block or activate rules: e.g. *SS blocks $\mathrm{t}->\int$ (recall transmission [ J ] but digestion [ t$]$ ] and pl. comma-[z], lip-[ s$]$, lid-[ z$]$, buss-[iz], fuse-[iz]], brush-[ iz]
[5]. Major questions: For any given lg. what are the lexical entries, what are the rules and constraints? Can we develop a theory that characterizes their nature?
[6]. Alternations: the phenomenon: the same lexical entry may have different phonetic shapes depending on the context. Various types:
- suppletion: go went
- lexically restricted but phonologically defined context (allomorphy):
a boy, a girl, a house; an apple, an elephant, a good apple
- phonologically defined; may recapitulate and be the product of rules distributing allophones (recall English lateral: real [1] but reality [1])
- or distinctive, lexically contrastive: transmit $[\mathrm{t}]$, transmission $[\mathrm{f}]$; confess [s], confession [J].
- rules distributing allophones are also ordered: Canadian Raising and flapping.
[ $\wedge j]$ life, lice, blithe, type, tight, bike
[ay] dive, rise, tythe, tide, time, tile, tie
atom [ r$]$, atomic $\left[\mathrm{t}^{\mathrm{h}}\right]$; metal [ r$]$, metalic[ $\left.\mathrm{t}^{\mathrm{h}}\right]$; bet [ t$]$, bettors [ r$]$ idyl [r], idyllic [d]; red [d] , redder [r]; bed [d], bedding [r]

- rule may be restricted to various domains
word-internal: life [ $\Lambda \mathrm{j}$ ], vs. lie free [aj]
unrestricted: flapping: atom, at Ann's, hit Ann [r]
juncture (sandhi) rules: Moore (Gur, Burkina Faso) á $=$ high tone à = low tone

| sá:gà 'broom’ bédà 'big' | !á $=$ downstep high |  |
| :--- | :--- | :--- |
| kòrgó | 'sack' | kè:gá 'green' |


| kò sá:gà | 'give a broom' | kór bédà | 'big sacks' |
| :--- | :--- | :--- | :--- |
| kò kòrgó | 'give a sack' | kòr kè:gá | 'green sack' |
| zá sá:gà | 'bring a broom' | sá bédà | 'big brooms' |
| zá kórg!ó | 'bring a sack' | sá ké:g!á | 'green broom' |

[7]. Buli (Gur, NE Ghana): á = high tone, = $\bar{a}$ mid tone, $\bar{a}=$ low tone, $\check{a}=$ rising tone

| indef | def |  |  |
| :---: | :---: | :---: | :---: |
| bí:k | bí:ká | 'child' |  |
| bāy | bāyká | bangle |  |
| bày | bànkǎ | lizard |  |
| buō | buōŋá | goats |  |
| wìmà | wìmàjǎ | monkeys |  |
| nî̀gà | nî:gáyáeyes |  |  |
| bîsà | bîsáyá | children |  |
| ná:b | cow | ná:b f ík | small cow |
| bū:k ${ }^{\text {w }}$ | goat | bū:k ${ }^{\text {w }}$ fîk | small goat |
| bày | lizard | bàn fǐk | small lizard |
| mî nátb | my cow | wà nǎ:b | his cow |
| mî bū:k ${ }^{\text {w }}$ | my goat | wà bū:k ${ }^{\text {w }}$ | his goat |
| mî bàn | my lizard | wà bày | his lizard |
| nîggà | eyes | wà nǐ:gà | his eyes |
| ná:mú | cow def. | wà nà:mú | his cow def. |

bîik mày good child wà bǐik màn his good child
bî:k f î:k small child wà bì:k fîtk his small child
wà ymà mǐ nà:b he blamed my chief
wà ymà mì bî:k he blamed my child
[8] Russian
[9] Basque

| Biscayan dialect |  |  |
| :--- | :--- | :--- |
| indef |  |  |
| sagar | def |  |
| gagar-a | apple |  |
| gison | gison-a | man |
| buzten | buzten-a | tail |
| tfakur | tfakur-e | dog |
| mutil | mutil-e | boy |
| buru | buru-we | head |
| mendi | mendi-ye | mountain |
| ate | ati-e | door |
| asto | astu-e | donkey |

Baztan dialect

| $\underline{\text { indef }}$ | $\underline{\text { def }}$ |  |
| :---: | :---: | :---: |
| gison | gison-a | man |
| egun | egun-e | day |
| mendi | mendi-e | mountain |
| buru | buru-e | head |
| etfe | etfi-a | house |
| afto | aftu-a | donkey |
| alaba | alab-a | daughter |
| neska | nesk-a | girl |
| muge | mug-e | limit, border |
| fabrike | fabrik-e | factory |

Arbizu dialect

| stem | ergative |  |
| :--- | :--- | :--- |
| gison | gison-ak | man |
| tfakur | tfakur-ek | dog |
| afto | aftu-ek | donkey |
| berde | berdi-ek | green ones |
| efku | efku-bek | hand |
| mendi | mendi-d3ek | mountain |
| alaba | alab-ak | daughter |

