Pre-Midterm

Components of Language

Lexicon

- things about language that must be memorized
- vocabulary
- idioms (kick the bucket, etc.)

Phonology

- sounds combined into larger words

Syntax

- words combined into larger units

Semantics

- relate meaning of expressions to meaning of parts

Design Features of Human Language

Discreteness

- discrete units

Productivity

- discrete infinity
- parts of messages can be used to create parts of new messages

Recursion

- categories can contain themselves

Duality of Patterning

- two layers of structure
- sounds -> words
- words -> sentences

Arbitrariness of the Sign

- connection between sound and meaning is unpredictable
- exceptions
  - onomatopoeia
  - sound symbolism (kiki, buba)

Displacement

- communicate about things not immediately present

Reflexiveness

- use language to talk about language

Cultural Learning

- acquisition from community

Onomatopoeia

- words formed by association to a sound
  - woof
  - quack

Sound Symbolism

- kiki and buba
- bang, fizz, slide, slippery

Language Learning and Language Diversity Relationship

Signed Languages

- not different from other language
  - hand gestures can count as phonemes
- same features as other human language
  - duality of patterning
  - arbitrariness of the sign
- ASL grammar distinct from English
  - verbal aspect
  - word order
  - classifiers

Vocal Tract Anatomy

Humans

- short tongue
- lower larynx
- easier to move tongue freely
- easier to choke

Apes

- long tongue
- higher larynx

Differences Between Humans and Animals

- in general
  - no true productivity
  - no discrete combinatorial system

Bee Waggle Dance

- two continuous scales
  - duration
  - direction

Ape Communication

- aggression
- submission

Vervet Monkeys

- alarm calls specific to predators
- whole unit message
- no productivity
- only a lexicon

Bird Song

- syrinx instead of larynx
  - vibrations in membrane of trachea
- learn song in stages
  1) subsong
  2) plastic song
  3) crystallized song
- made up of discrete units
  - A A B B A C
  - follow a few basic patterns

Basic Results of Animal Learning Experiments

- rhesus monkeys and rats learn algebraic rules A B C A B C A B C
- tamarins, bengalese finches, pigeons and learn finite-state grammars
- humans and tamarins can learn regular grammars
- only humans can do context free

Order of Complexity

1) Finite-State Grammars (algebraic patterns): rats, monkeys, tamarins, finches, pigeons
2) Regular Grammars: humans, tamarins
3) Context-Free Grammars: humans only

Language Family

- descended from common ancestor speech community
- from a common proto-language
- English and German

Cognates

- words that share common origin
- features shared due to common descent

Proto-Languages

1) proto-indo-european
2) niger-congo
3) austronesian
4) trans-new-guinea
5) sino-tibetan
6) indo-european

7) afro-asiatic

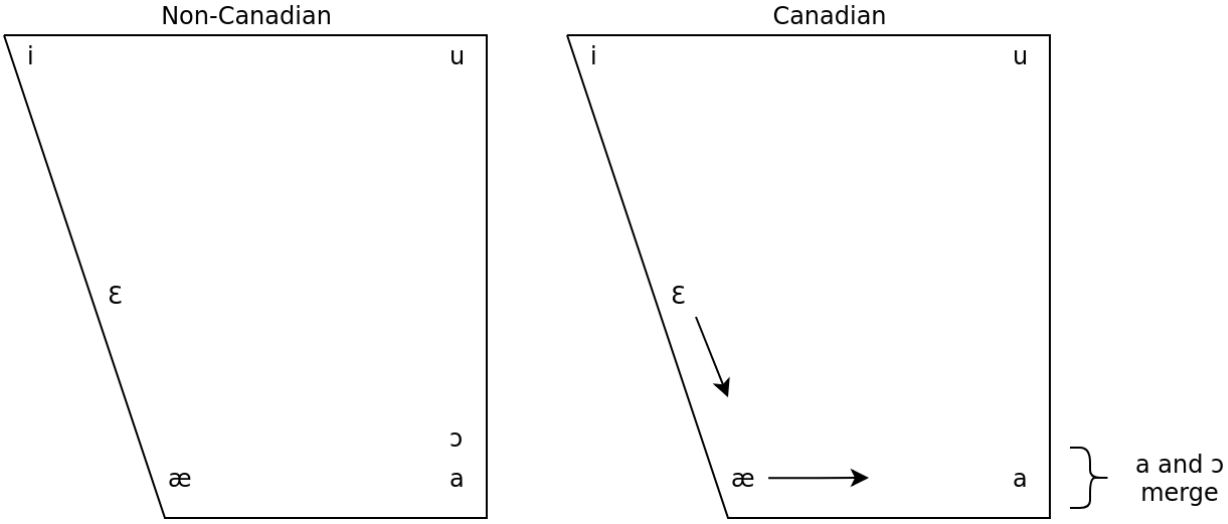
Comparative Method

- feature-by-feature comparison of two languages with common ancestor
- study language development

Dialect Maps

- geographical distribution of language speakers
- isoglosses = marks the boundary between linguistic features

The Canadian Shift



- Canadian shift moves "bet" low and "pat" back
- Nothern cities shift is the opposite, moves "bet" high and "pat" forward

Connection Between Change and Variation

- change leads to variation
  - grammar 1 affects language 1
  - language 1 affects grammar 2
- over time we are changing our grammar
- divergence across areas where language is spoken

Variations and Social Meaning

- Labov fourth floor department store study
  - variation between different social classes
  - upper class keeps r, middle class uses some r, lower class uses almost no r
  - upper and lower classes don't change much after the get older
  - middle class changes to imitate upper class as they get older (middle class crossover)

Basic Features of AAVE

Habitual Tense

- the "habitual be"

    - "be" doesn't carry the same meaning as standard english
- She be runnin'
    - She is often running

Negative Concord

- also used in Italian
- double negative indicates a single negative
- "I ain't never gonna love you"

Copula Absence

- absence of "is" "are" "am" "were" etc.
- She runnin'
    - She is running

Register

- formal, informal
- phonological reduction is usually informal register
- flapping "tt" -> "dd"
- unstressed vowel deletion
- contractions

The Nature of Perspective Rules

- one of the variants is prescribed
    - this is the "right" way to do it

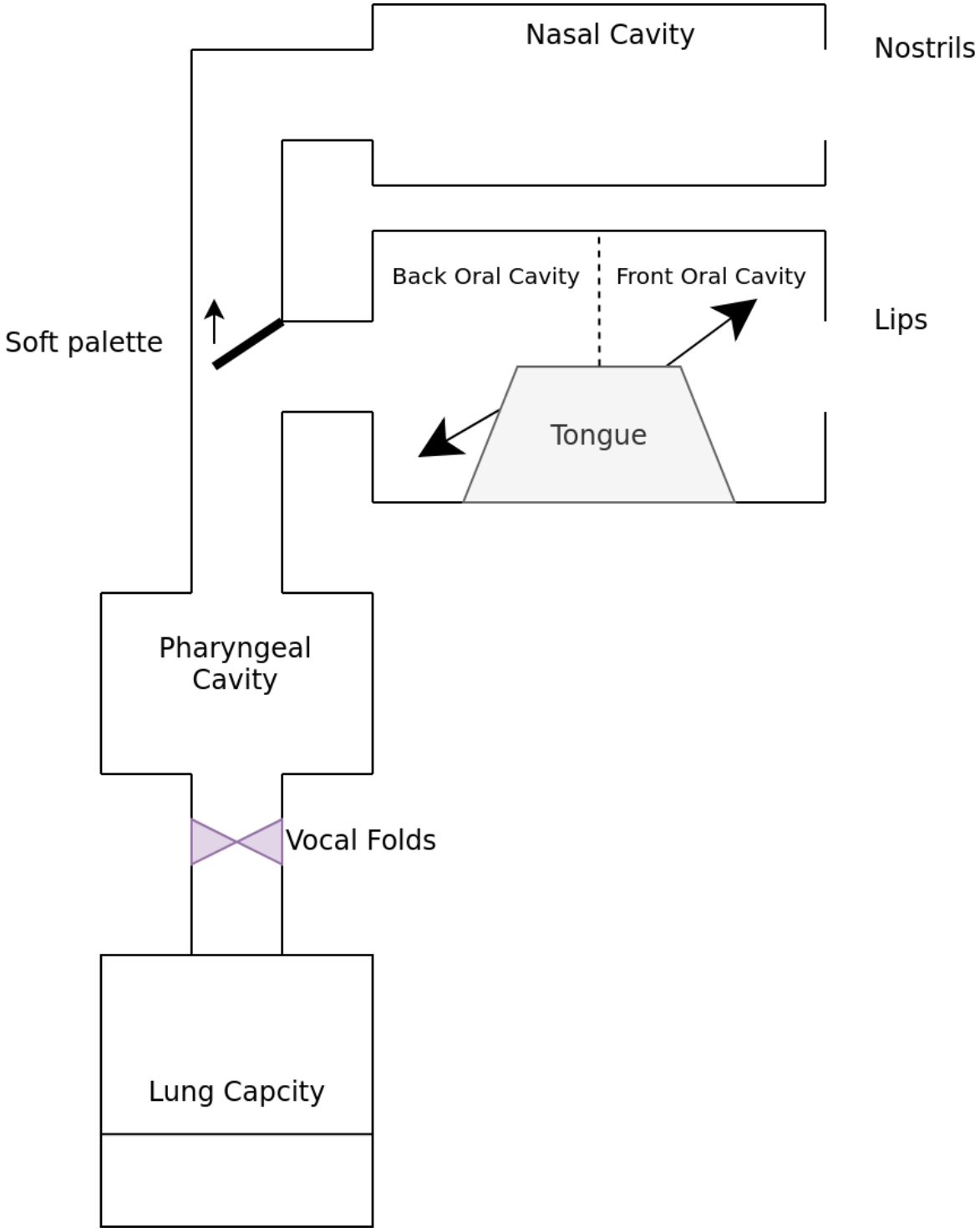
Gender Differences in Language Use

- women use more conservative variants of stable sociolinguistic variables
- girls use non-standard variables with peers
- boys use non-standard variables with interviewers

Gender as a Factor in Linguistic Change

- women conform more to overtly prescribed variants
    - conform less to variants that are not overtly prescribed
- women are one generation ahead of men

Basic Vocal Tract Anatomy



Basic Ideas About Vowel Articulation and Acoustics

- front
- back
- high

- low
- resonance, acoustic performance
- tongue changes the shape of the vocal cavity
  - divides it in two

Phoneme

- units of phonetics
- discrete units of sound

Allophone

- the sounds that represent a single phoneme

Minimal Pair

- pair words that differ by one sound

Presupposition

- implicit assumption related to an utterance
- Jim no longer walks on the beach
  - the presupposition is that he used to walk on the beach

Implicature

- something a speaker implies with an utterance without expressing
  - "The picture frame is nice"
  - the implication is I don't like the picture *inside the frame*

Grice's Maxims

- speakers are good
- act in good faith during a conversation
- speakers are cooperative
- assume other speakers are cooperative
- quality, quantity, reverence

Syntactic Bootstrapping

- duality of patterning -> syntax
- children are born with the innate ability to understand syntax

Phonological Bootstrapping

- duality of patterning -> phonology
- children are born with the innate ability to understand phonology

Word Segmentation

- probability of when two sounds are next to each other
- children can segment words easily
- recognize own name by 4.5 months

Parental Feedback

- children don't need it to learn their native language
- Simon learned to speak ASL better than his parents
- Trackton, parents don't talk to their children before they can speak

Assumptions (Constraints) Guiding Learning of Word Meaning

- whole object assumption
  - words refer to whole objects
- taxonomic assumption
  - words refer to things of the same kind
- mutual exclusivity
  - words have a 1 to 1 mapping with meaning
  - only for monolinguals

Pidgin and Creole Characteristics

- pidgins
  - limited communication systems after contact
  - nobody's first language
  - small lexicon
  - unstructured, unsystematic
  - simple phonology, morphology
- creoles
  - full-fledged languages that develop from pidgins
  - native speakers
  - share some features with pidgins (simplicity of phonology and morphology)

Difference Between Pidgins and Creoles

- native speakers
  - pidgin no, creole yes
- pidgin has smaller lexicon
- creole is more structured and systematic

Superstrate/Lexifier vs Substrate

- socio-politically powerful language is superstrate or lexifier
- less powerful language is substrate
- English is the superstrate in Jamaican creole
- French is the superstrate in Hawaiian creole

Language Bioprogram Hypothesis

- children faced with unstructured pidgins impose structure upon them
- universal human grammar
- this could be how pidgins become creoles

Critical Period Hypothesis

- period in childhood when language acquisition is much easier
- adults start well, plateau quickly
- children start slowly and progress further
- could explain why pidgins never develop complexity, while creoles do

Nicaraguan Sign Language

- creole sign language
- spontaneously emerging sign language in a new community
- children restructure input radically
  - give bias to certain grammatical structures and regularities

Post-Midterm

Signed Languages (Basic Properties)

- distinct from languages around them
- all design features of human language
  - duality of patterning
- iconicity (an exception to arbitrariness of the sign)
- suprasegmental (stress, facial expression, etc.)
- pronouns by location

Parameters in Sign Language Phonology

- at least one of these must change during the sign
- parameters
  - location
  - direction
  - handshape
  - non-manual markers
- assimilation -> signs taking on parameters of neighboring signs
  - this happens in spoken English too
- affixation
  - prefixes or suffixes

Similarities and Differences Between Signed and Spoken Languages

Similarities

Syntax

- spoken
  - word order changes for questions / passive form
- signed
  - SVO is typical word order
  - other word orders occur frequently as well

Phonology

- spoken
  - words combined through syntax
- signed
  - meaningless elements to meaningful parts
  - words are combined through syntax

Simultaneity of Features

- spoken
  - only one utterance at a time
- signed

  - still severe constraints on multiple things happening at once

Differences

Suprasegmental

- spoken
  - pitch/timbre
- signed
  - facial expressions

Iconicity

- spoken
  - some iconicity in spoken language
  - fewer things that can be represented audibly than visually
- signed
  - signs bear visual similarity to messages

Discreteness

- spoken
  - 3 layers
  - features, sounds, words
- signed
  - 2 layers
  - features, words

Natural vs Artificial Form in Poetry and Music

- both
  - rules are formally complex
  - acquired automatically
- natural
  - same sense as language
  - categories from elsewhere in language
  - rule types from elsewhere in language
  - stress, syllables, consonant vs vowel, iambic pentameter
- artificial
  - artificial rules
  - greater conscious control than grammar
  - can only be learned artificially
  - e.g., increase letter by one every line

Textsetting, Sung Verse (Drunken Sailor)

- textsetting
  - syllables at regular intervals
  - regardless of what word you're on
  - AKA isochronic

Drunken Sailor Song

- Halle and Lerdahl
  - figure out grammar of the song
  - ability to improvise implied there was a rule

- line up syllables to the beat of the song (textsetting)
- find stressed syllables and link to the strongest beats
- language stress and rhythm operate independently

Meter, Metrical Template

- meter
  - recurring pattern of stresses or accents
  - provide a pulse / beat
- iambic pentameter
  - sequence of weak/strong beats = foot
  - 5 iambic feet
  - WS WS WS WS WS
- intuitive hypothesis
  - stressed -> strong
  - unstressed -> weak
  - only 6.8% of Shakespeare's sonnets comply
- open-classed words
  - stressed -> verbs, nouns, adjectives, adverbs
- closed-classed words
  - unstressed -> articles, general functioning words
- metrical template
  - grammatical representation of the meter
  - WSWSWS WSWSWS WSWSWS...

Core English Metrical Constraint

- linguistic representation also has stressed and unstressed syllables
- perfect lines -> complete match between W and unstressed, S and stressed
  - most lines are not perfect
- the imperfect way of doing it:
  - S -> any syllable
  - W -> only unstressed syllables unless one syllable word
  - exception: the first W can be stressed for any word
- not identical to WSWSWS pattern but does not depart far

Metrical Tension/Counterpoint

Tension

- mismatch between weak/strong pattern of template and line
- produced through
  - gradual motion to higher or lower pitch
  - reiteration
  - increase in dynamic level
  - partial syncopations between consonance and dissonance

Counterpoint

- mismatch between linguistic representation and metrical template
- harmonically dependent
- independent in rhythm and contour

Structural Differences Between Sung and Written Verse

- sung verse -> generally not as strict

- written verse -> generally iambic pentameter

Musical Grammar, Judgements

- experienced listeners can tell what's right and wrong
- grammatical judgements -> a speaker's judgement on how well-formed a string is
- musical grammatical judgement is called musical idiom

Properties Shared by Music and Language

Grouping / Constituency

- utterances have hierarchal grouping and structure
  - -> constituents can be inside other constituents

Headedness

- noun phrase has a head
- musical strings have a head

Rhythm

- regular alternation of strong and weak
- prosody -> patterns of rhythm and sound used in poetry

Recursion

- organized into constituents
- constituents inside constituents
- grouping signaled through how it sounds (pitch, duration, intonation)

Features Shared

1. Syntax
2. Phonology
3. Discreteness
4. Recursion

Differences Between Musical and Linguistic Structure

- finite set of available pitches
  - continuous in language, discrete in music
- equivalence of pitches that differ by a multiple of 2
  - 110Hz, 220Hz, 440Hz, 880Hz = A
  - possible linguistic parallel? phoneme corresponds to multiple sounds... but this is weak
- tonality -> "home key" as the central tone of a piece
  - other pitches have tension/instability
- musical idioms
  - conventional sequences build and resolve tension
- simultaneity
  - in language you mostly can't do two things at once
  - suprasegmental stuff, yes
  - but you can't say two things at once

Sapir-Whorf Hypothesis

- language shapes thought
- the way you speak determines the way you think (strong form)
  - not a strong contender
- the way you speak *influences* the way you think (weak form)
  - this is a more realistic contender
- language is merely a part of culture (weakest form)
  - this is obviously *at least* true, but the above may be true as well

Studies Investigating Language and Culture

Language and Color

- colors within category are harder to perceive differences than colors across categories
  - e.g., two shades of red vs red and orange
  - this is true even when distance on the spectrum is the same
- tested English and Russian speakers
  - in English, one category for blue
  - in Russian, two categories for blue
  - other color used as a control
  - Russian speakers very slightly better at distinguishing
- two possibilities:
  1. Russian speakers are using different perceptual systems
  2. subjects are using language to think about color
- give a simultaneous linguistic task to make language unavailable for the color task
  - difference disappears
  - possibility 2 is the winner

Language and Time

- next Wednesdays meeting has been moved forward two days
  - is it on Monday?
  - is it on Friday?
  - how do you position yourself relative to time
- do you perceive yourself:
  - moving forward through time?
  - time moving forward around you?
- spacial primes
  - related tasks prime people to answer one way or the other
  - people who had been standing in line for long time were more likely to say Friday
  - people who had just flown (perceived themselves as moving) answer Friday
- the fact that this can change (based on priming) goes against SWH
- Borodistky (2001)
  - Mandarin and English native speakers
  - Mandarin -> vertical time concept
  - English -> horizontal time concept
  - exposed to primer images
  - vertical bias greater for those who started learning English later in life

Language and Space

- studied Guugu Yimidhiir and English
  - English -> relative
  - Guugu Yimidhiir -> absolute
- Levinson (1997)

  - do Guugu Yimidhiir retain relative or absolute positions in memory
  - speakers use language to encode memory
  - so, yes, there was a difference between English and Guugu Yimidhiir

Causes of Language Endangerment and Loss

Endangerment

- colonial interactions
- missionary activity, cultural disruption
- economic disruption
- geographic disruption
- educational policy
  - residential schools
- lack of official recognition

Loss

- almost no record of it
- last native speaker dies
- no longer widely used
- speakers shift to different languages

Factors in Language Vitality

1. speaker population
2. ethnic population
3. trends in population size

- **unequal** bilingualism
- attitude, prestige (substrate languages)
- official recognition
- how children are learning it

Goals of Language Documentation

- work with endangered language communities
- work to benefit communities **and** scholars
- listen to what communities want
- Gleason (1961)
  - ideally, alphabetic system has a one-to-one correspondence between phonemes and graphemes
  - not always the case or possible
- Rehg (2004)
  - system should be designed by ideal linguist using ideal theory in ideal language in ideal society
- dictionary making

Common Ethical Issues with Field Linguistics

- stages of attitude development
  1. benefit only researcher
  2. consider consequences of research
  3. change attitude to benefit community as well
- elicitation
- stories
- experiments

Problems With Traditional Elicitation

- artificial, culturally alien setting
- who decides what is "correct"
- data can violate privacy
- language can have spiritual value, not shared with outsiders
- Ken Hale talked about this
  - language research inevitably affects larger socio-cultural environment
  - responsible for mitigating this effect

Solutions?

- work from first principles
- too complex to study everything at once
- language study is not a purely scientific activity
  - it is cultural, social, political
  - it has cultural, social, political consequences

The Prepositional Model

1. research on speakers vs with speakers
2. research for linguists vs for speakers
3. research by linguists vs by speakers **and** linguists