

Applications of Linguistics

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08-23-2021



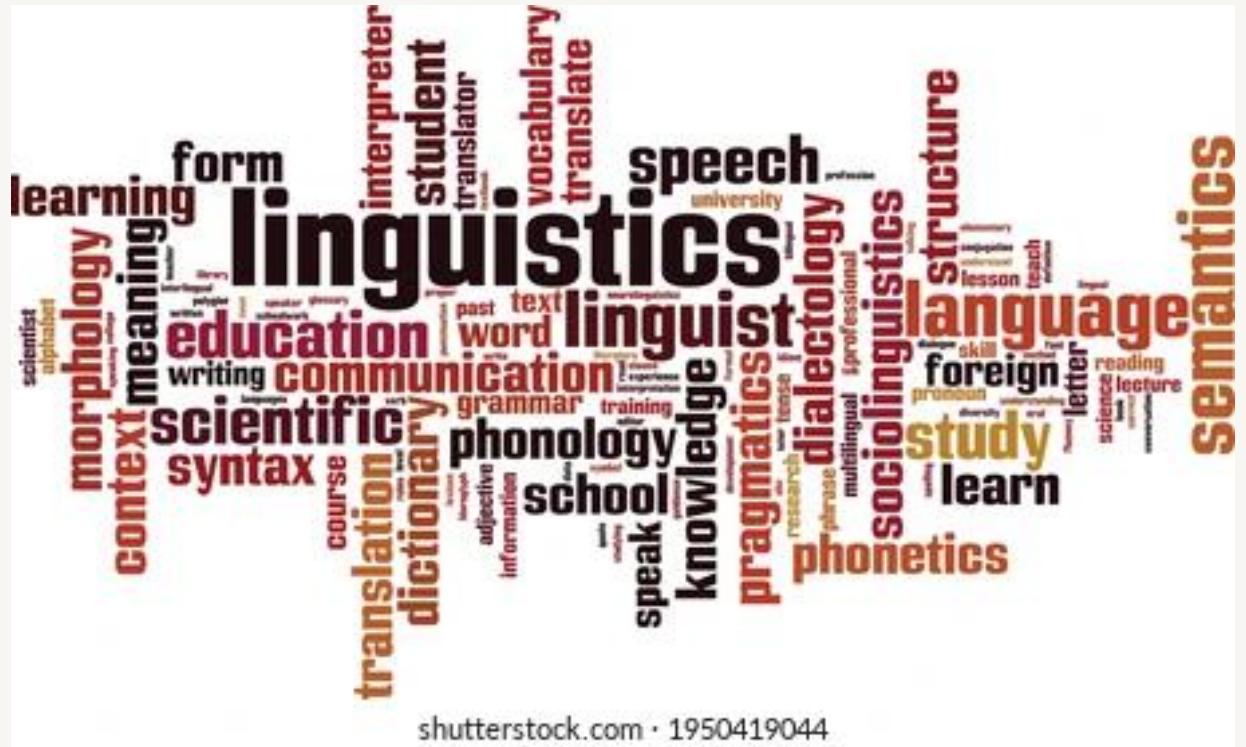
What is language?

- a structured system of communication used by humans, based on speech and gesture, sign, or often writing



What is Linguistics?

- Scientific study of language



What is Linguistics?

- Phonetics – sound inventory, how sounds are made and perceived
- Phonology – sound rules in a language
- Morphology – rules of word structure and formation
- Syntax – rules of sentence structure
- Semantics – rules for building meaning up from parts
- Pragmatics – reasoning about what a speaker meant in context
- Sociolinguistics – how/why do different people speak differently?
- Acquisition – how do children (or adults) learn language?
- Psycholinguistics – how is language processed in real time in the mind?
- Language typology – how are different languages similar or different?
-

Applications of linguistics

- This course (which satisfies an Institute-wide Humanities requirement) explores the relation of language (and linguistic theories) to real-world domains including but not limited to language learning, education, gender, advertising, politics, law, and medicine.
 - <https://www.linkedin.com/jobs/search/?keywords=Linguistics>





Applications of linguistics

Self-reflection questions

How does the research discussed in this course illuminate or contextualize your experiences?

To what extent/how can ideas from this class be used to improve your linguistic awareness/ society?

Start~of~semester survey

- <https://forms.office.com/r/LpLiqx300Y>



Applications of Linguistics

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What are the stages of first language development?



What are the stages of first language development?



STAGES OF FIRST LANGUAGE DEVELOPMENT

Age	Accomplishment	Examples
0-2 months	Crying (express hunger and discomfort)	
2-4 months	Cooing (express satisfaction or pleasure)	aaa, ooo
4-9 months	Babbling, gurgling, changing to echolalic babbling	gagaga, mamamama
9-18 months	One-word utterances; refer to people and objects in baby's life	juice; mama
18 months— 2 ½ years	Two-word utterances; the beginning of syntax, expanding to three-word utterances; allows for more communicative functions (commenting, negating, requesting, & questioning)	more juice juice fall down Daddy go?
2 ½ years —4 years	Telegraphic Stage (S-V-O): Expanded syntax and vocabulary; omit key grammatical markers and function words	I eated bread

Generalizations on first language acquisition

- Children acquire language in similar stages across the world
- When children are acquiring language, they do not speak a degenerate form of adult language
- Rather, they speak a version of the language that conforms to the set of grammatical rules they have developed at that stage of acquisition

What do children have to learn to “acquire language”?

1. Sounds (how to make them, how to perceive them)

- Motor skills in the mouth
- Babbling is how they practice! (First learn vowels and stops, then fricatives and consonant clusters!....) [IPA chart]
- CV syllables are easiest ("ma, da"); CVC are harder
- Perception precedes production: "My fis" / "Your fis?" / "No, my fis!!" / "Your fis?" / "NO, my fis!!" / "Your fish?" / "Yes!!"
- Word segmentation and stress – often misperceive unstressed initial syllables ("banana" is "nana", "granola" is "nola")

What do children have to learn to “acquire language”?

2. Words

- First learn words for immediate, visible things (nouns before verbs....)
- Mistakes and over-extension!
- Preschool divided kids into “teams” by having them sit on blankets; later, girl complained that her brother “won’t stay away from my team” (meaning blanket!)
- “Doggie” used for dogs, cats, and slippers! (furry things)
- Abstract meanings (adjectives like “big, small”; verbs like “give”) are harder
- Pronouns, prepositions, “function words” (all, every) come later
- Around age 1, start learning ~10 words a day!....

What do children have to learn to “acquire language”?



What do children have to learn to “acquire language”?

3. Rules for putting words together into (meaningful, correctly structured) sentences

- One-word stage to two-word stage to more fully productive stage
- Dada!” to “Daddy sit” to “he won’t stay away from my team”
- “Where he is going?” - not imitating adults!, what does this mistake show about how the child is learning grammar?
- Child keeps refining hypotheses about how “grammar” works until they get it right?
- Over-regularization: “growed”, “goed” (Brooks et al. 1989<https://www.jstor.org/stable/1132309>)
- Sometimes, kids learn the “correct” irregular form first, then “regress” to the over-regularized form (“growed, goed”) before they get it straight again!

What do children have to learn to “acquire language”?



What do children have to learn to “acquire language”?

4. Social interaction skills – develop alongside language skills

- Joint attention / pointing (dogs don't understand pointing!; chimps understand it but don't really use it; babies do understand it)
- Turn-taking
 - Example of parent treating even burps and smiles as “turns” in a conversation, getting baby used to the idea
- Learning how language can be used to get what you want!, to share/ get information....and much later, to figure out what others want or believe
- “Why did she say this instead of that?” - how complex is this reasoning and when does it emerge?....

What do children have to learn to “acquire language”?



Applications of Linguistics

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08-30-2021

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Switch the student presentations on 09/01 with
Bilingualism and language education on 09/08

Course Plan

	Monday	Wednesday	<i>By end of the week</i>
Week 1 8/23/2021-08/27/2021	Introduction	L1 acquisition	Sign up for article presentations for next 5 weeks
Week 2 08/30/2021-09/03/2021	L2 acquisition	Student presentations [L1, L2 acquisition]	Discussion due [L1, L2 acquisition]
Week 3 09/06/2021-09/10/2021	<i>Labor Day</i>	Bilingualism and language education	

Presentation sign-up sheet

Questions about L1 acquisition

- Nature / nurture debate!
 1. how much of language is “innate”? Nature? Or Nurture?
 2. Is there a universal grammar?

Poverty of the stimulus

- Noam Chomsky
- Children do not receive enough input to learn complex syntax (which requires generalization, cannot be memorized)
- Children are exposed to slips of the tongue, false starts, ungrammatical and incomplete sentences
- Children learn aspects of language about which they receive no information (such as structure dependent rules, and the data the children is exposed to is impoverished)

Poverty of the stimulus

- children somehow know to invert the auxiliary of the main clause when forming a question like:
 - Is the boy who is sleeping __ dreaming of a new car?
 - Rather than • *Is the boy __ sleeping is dreaming of a new car?
 - To do this, the child must somehow understand structure dependency and constituent structure, something that adults do not consciously know

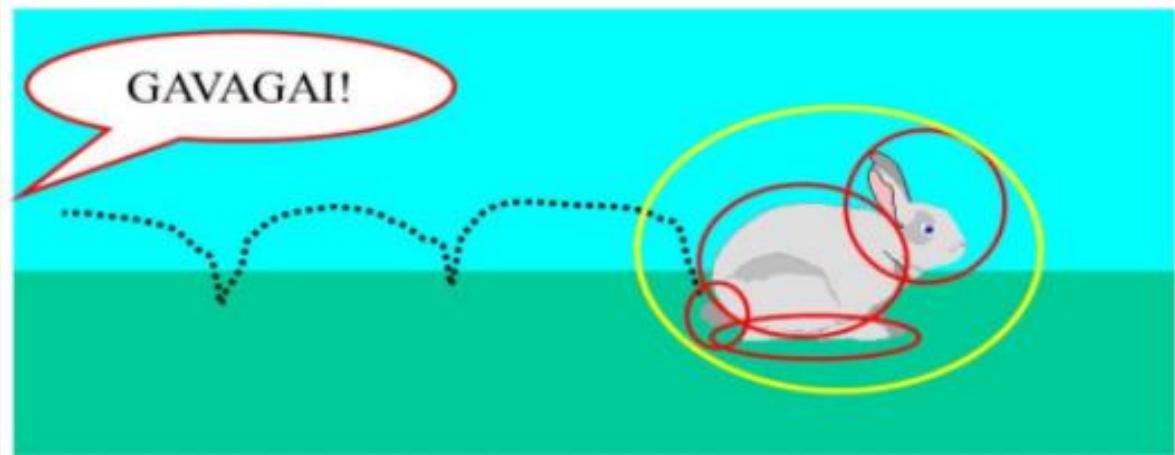
Poverty of the stimulus

- Lack of corrections by parents to kids
- How much do parents actually correct kids?
 - Correct TRUTH more than structure ("Doggy outside" / "No, he's inside!")
 - Often reformulate, though (unclear if kids pay attention) - "Doggy outside" / "Yes, the doggy is outside!"
- How much input do kids actually receive, and can they learn syntax from it even without any corrections? – somewhat of an open question...

Gavagai problem

- Quine, Willard.
2013. Translation and meaning.
Word and Object, New edition.
MIT Press, pp: 23-72

Your native guide points to a rabbit and says “gavagai”. What does “gavagai” mean?



Gavagai problem: a mapping problem

- When something is explicitly labeled in the input ("Look! There's a goblin!"), how does the child know what specifically that word refers to?

Quine (1960): An infinite number of hypotheses about word meaning are possible given the input the child has. That is, the input underspecifies the word's meaning.



Gavagai problem: a mapping problem

- **Fast mapping**
 - Experimental evidence of fast mapping (Carey & Bartlett 1978, Dollaghan 1985, Mervis & Bertrand 1994, Medina, Snedecker, Trueswell, & Gleitman 2011)
 - Children begin by making an initial fast mapping between a new word they hear and its likely meaning. They guess, and then modify the guess as more input comes in.

Gavagai problem: a mapping problem

- **Syntactic Bootstrapping Hypothesis:**
 - primarily using the syntactic structure to get to meaning (Alishahi & Pyykkönen 2011): verbs- nouns
- In sum, children may benefit from a number of different sources of information, including social knowledge and knowledge of syntactic structure.

What do researcher study when they study L1 acquisition?

1. Acquisition of syntax, phonology, semantics, pragmatics
2. Acquisition of signed languages
3. the role of imitation, reinforcement, and analogy

How do researcher study L1 acquisition?

Experiments

- age of kid plus an adult control group
- for infants, study pacifier sucking and head turns
- for toddlers and older kids, play exciting “games” (iPad game)
- **Observation**
 - Detailed diaries from caregivers or transcribed videos of children ([CHILDES corpus](#))
 - Observe “natural experiments” when events happen that would be unethical to bring about for science
- **Computational modeling:**
 - Learnability
 - how kids develop and refine their “hypothesis space”



What is L2
acquisition?

Questions to think about:

1. When and why do people start second language acquisition?
2. What is the difference(s)/similariti(es) between first language acquisition and second language acquisition?
3. If one learned more than one language in addition to the first language, does that still count as second language acquisition?
4. What about heritage language acquisition? Does it count as second language acquisition?

[Cenoz et al. 2001](#)
[Bardel & Falk 2020](#)

Acquisition vs. Learning

- “Acquisition” – subconsciously “picking up” a language, perhaps without formal study
- “Learning” – consciously studying and practicing a language, perhaps with formal knowledge of rules
- **Explicit** knowledge vs. **Implicit** knowledge: e.g., “how to form a plural?”
- Roles of consciousness

Ellis 2008

Is first language the language you know the best?

- Not necessarily!!!
- Learn “heritage language” as first language but then attend school in language of your community – school language may ultimately become “best language”, language you’re most literate in
- Heritage speakers may experience “attrition” but still have a great advantage in learning/reactivating that language again later in life

Table 1. Characteristics of L1, L2, and Heritage Language Acquisition

L1 Acquisition	L2 Acquisition	
<i>Early exposure to the language. Abundant input in a naturalistic setting (aural input).</i>	Late exposure to the language. Varying amount of input in instructed and/or naturalistic setting (aural and written input).	
<i>Control of features of language acquired very early in life (phonology, some vocabulary, some linguistic structures).</i>	Grammar may be incomplete (no chance to develop other structures and vocabulary).	
Developmental errors. Outcome is successful and complete.	<i>Developmental and transfer errors. Outcome is variable proficiency. It is typically incomplete.</i> <i>Fossilization is typical.</i>	
Fossilization does not occur. No clear role for motivation and affective factors to develop linguistic competence.	<i>Motivation and affective factors play a role in language development.</i>	
More complex structures and vocabulary developed at school after age 5, when metalinguistic skills develop.	Experience with literacy and formal instruction.	(Montrul 2010)

What is different about L1 and L2 acquisition?

- Everyone (except some w/ disabilities) “succeeds” at learning L1 –but mostly NOT at learning L2!
 - Individual differences in success at L2 – why? (motivation, attitude....)
 - Child learning L1 may have MUCH stronger incentive than L2 earner; gets more hours of practice per day....
 - taught by caregiver vs. by school teacher or self-study....
- L1 learners (children) vs. L2 learners are interested in different topics, goals...

What is different about L1 and L2 acquisition?

- Child learning L1 has to learn about the (physical, mental, social) world at the same time – but L2 learner already knows this
- L1 learner has to learn even basic ideas like that words refer.... L2 learner already knows this
- L2 learner is influenced by knowledge of their L1, while L1 learner is not
- L1 learner learns to speak long before they learn to write; L2 learner may learn both at once

What is similar about L1, L2 acquisition as well as heritage language acquisition?

- Learn a language (start simple, with errors; grow in sophistication over time)
- More-frequent words/constructions learned first
- Similar patterns of errors
 - “Where she is going?”
 - “th” sound is difficult
- Comprehension precedes production (can understand more than you can say)
- Writing is not universal

The role of L1 transfer in L2 acquisition

- Some “transfer” is helpful! – and almost invisible because it results in success rather than (more “visible”) errors
 - “Alice and Bob smiled” <-> “Alice smiled, Bob smiled”; this is true in any language!
- Some “transfer” results in errors (especially when L1 rule does not extend to L2)
 - Negation markers
 - CV(N) syllables
 - [si] for “seed” or [sidə] for “seed”
 - “although...but...”
 - Tense marker

What do you have to learn to learn an L2?

- Articulatory phonetics
- Phonology
- Morphology
- Syntax
- Semantics
- Vocabulary
- Sociolinguistic knowledge (accents, formality, cultural references, social conventions...)

How to study L2 acquisition?

- often, dependent variable is language proficiency (measured by test scores?.... independent variables can be....
 - Teacher's self-reported curriculum or teaching style
 - L2 learners in "natural experiments" (kids in ESL classes vs. not in ESL classes; kids who do study abroad or not)
 - Biographical facts about L2 learners' lives (how long have they been in this country, what is their profession, have they ever taken courses, etc....)

How to study L2 acquisition?

- Corpora of speech or writing produced by L2 learners: what errors do they make?
- lab experiments on L2 learners
 - Reaction time, eye-tracking, judgments of whether a sentence

Check out
<https://uclouvain.be/en/research-institutes/ilc/cecl/learner-corpora-around-the-world.html>

- Explore! Find out something cool to report on the discussion board!
 - What errors are made by L2 learners? To what extent do these errors arise from “transfer” from the L1?

What leads to success in L2 learning?

- Not necessarily a lot of linguistic theory, but it helps to have some linguistic knowledge.
- Less (negative) anxiety on the part of learner
- Greater (intrinsic) motivation on the part of the learner
- L2 seen as useful, valuable
- L2 culture seen as aspirational
- Language class (if any) seen as interesting, valuable, doable
- Belief that it is valuable to learn (an) L2

What leads to success in L2 learning in the classroom?

- How much can instructor use L1?
- How much to teach explicitly / formally?
- How much to favor comprehension, production, reading, or writing? (in what proportions?)
- How to structure curriculum so old material is reinforced at the same time as new material is introduced? [spaced repetition; used in Duolingo]
- How much to emphasize “drills” and exact accuracy versus ability to communicate ideas (even with mistakes)?
- How much to correct mistakes?....

What leads to success in L2 learning?

- Idea from Stephen Krashen: main predictor of language learning is the quantity of comprehensible input at the “ $i+1$ ” level (where “ i ” is the student’s current level)
- Zone of proximal development
- **How can people understand material at “ $i+1$ ” level when they are at level “ i ”?**
 - Krashen: L2 learners draw on extralinguistic knowledge – knowledge of topic being discussed, discourse context, visual context – to understand at “ $i+1$ ” level
 - Use learner’s knowledge of the world – discuss topics they already know/care about; use visual aids such as videos, photos, puppets

• What leads to success in L2 learning?

- For beginner, classroom is most useful; For intermediate/advanced student, immersion is most useful
 - Krashen says: for a beginner, immersion yields very little comprehensible input at $i+1$ level. learner understands only a few minutes of the entire day, so gets very little $i+1$ input (can't learn from just "noise")
 - while for intermediate level, much more of the input is comprehensible at $i+1$ level – more comprehensible input leads to more learning (duration of time in a country)
- The true mechanism, Krashen says, is **the quantity of comprehensible input at $i+1$ level**
 - the actual mechanism is that more motivated people seek out more input at the " $i+1$ " level
- Comprehension over production??

What does it mean a success on L2 acquisition?

- ACTFL (American Council on the Teaching of Foreign Languages) standards – focused on functioning (in personal and professional interactions) in the L2 culture
 - Less focus on pronunciation/accent (as long as it's comprehensible), more focused on using the language to “do things”
 - equal focus on production, comprehension
 - How do you want to weight comprehension, production, accent, perceptible differences from a native speaker, reading, writing, “errors”, ability to function?

Questions to think about

- What L2s have you tried to learn?
- If you studied the language in a class, what teaching techniques were used? Were they helpful?
- How well did you succeed (or not) and why?
- How is your experience illuminated (or not) by what we learned today?

Homework!!!!

- Discussion board open for L1, L2 acquisition, due 09/05 11:59pm
- Prestntations for L1, L2 acquisition (09/08), billngulaism and education (09/13)
- Paper review #1 due by week 6

Applications of Linguistics

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09-01-2021



Gentle reminder

- Discussion board open for L1, L2 acquisition, due 09/05 11:59pm
- Prestntations for L1, L2 acquisition (09/08), billngulaism and education (09/13)
- Paper review #1 due by week 6

Gentle reminder

- **Inference-based Dialogue Management for Open-Domain Chats**
 - Jinho Choi, Associate Professor of Linguistics, Computer Science, and Quantitative Theory and Methods, Emory University
 - *Wednesday, September 29, 5-6pm; <https://bluejeans.com/4473252229> (Links to an external site.)*
- **Linguistic Fieldwork in Papua New Guinea**
 - Kate Lynn Lindsey, Assistant Professor of Linguistics, Boston University
 - *Wednesday, November 3, 5-6pm; <https://bluejeans.com/4473252229>*

Tech moving forward updates from the school meetings

- After first week of school, 7 Day Average positivity of COVID test is 1.13%.
- I highly recommend that you get tested as soon as possible this week just so that you are aware of your personal situation, and that you make this a part of your weekly routine this semester. Please protect yourself, and protect your fellow Jackets.
- If you need to ask for absence because of cautious move towards COVID-19 situation (I.e, go for a test, wait for test results, or self-quarantine etc.), you don't need to provide a doctor's note. Just an email saying you'll be absent for legitimate reasons is fine.
- If you need support during emergence situations, you may contact Dean of Students office.
- I'll record each session from now on, and the recordings will be available on Canvas. Feel free to let me know if you have any questions about the class.

What is Billngualism?

- **Bilingualism/Trilingualism/Multilingualism** is the ability to speak or write fluently in two (bilingualism) or more Languages;
- **Becoming bilingual or multilingual:**
 - by acquiring two or more languages at the same time in childhood
 - by learning a new language sometime after acquiring their first language (L1)

Bilingualism be defined at an individual or a societal level

- Individual Bilingualism - the use of two (or more) languages by an individual
 - E.g., an individual who speaks both English and Spanish as described by many of the informants in the Hinton article
- Societal Bilingualism - the use of two (or more) languages within a given community
 - E.g., the bilingual setting in India, Canada, Switzerland, Malaysia, etc.

Questions to think about regarding Billigualism

1. Do children acquiring two languages develop **two separate systems, or not?**
2. How does **bilingual acquisition** compare to **monolingual acquisition**, more importantly, how should we understand such comparisons?
3. Is there a (**biologically defined**) "**critical period**" for language acquisition?
4. What happens in cases of **developmental language impairment** in bilinguals?
5. What about cases where one of the languages takes over, and the other language is lost (due to lack of exposure, as in cases of **international adoptees**)?
6. Are there **cognitive benefits** associated with biligualism?

TRUE OR FALSE?

1. Learning more than one language confuses a child and lowers his/her IQ?
2. A child should learn one language properly before learning a second one.
3. A person cannot be a real bilingual if he learns a second language late.
4. Bilinguals translate from their weaker to their stronger language.
5. Learning two languages may cause cultural identity problems for a child.

Defining bilingualism:

What is the competence necessary to be considered bilingual?

- 1. Maximal bilingualism** - native like control of two or more languages (Bloomfield)
- 2. Incipient bilingualism** (Diebold) - minimal competence (tourist language)

What is the relation between two languages among bilinguals?

- 1. Balanced bilingual:** someone whose mastery of two languages is roughly equivalent.
- 2. Dominant bilingual:** someone with greater proficiency in one of his or her languages and uses it significantly more than the other language.
- 3. Semi-lingual:** someone with insufficient knowledge of either language (L1 undergoes attrition; L2 - has not been fully acquired - e.g., refugees, children of immigrants).

Defining bilingualism

- **Elite bilingual:** Individuals who choose to have a bilingual home, often **in order to enhance social status.**
- **Folk bilingual:** Individuals who develop second language capacity **under circumstances that are not often of their own choosing**, and in conditions where the society does not value their native language.

Defining bilingualism

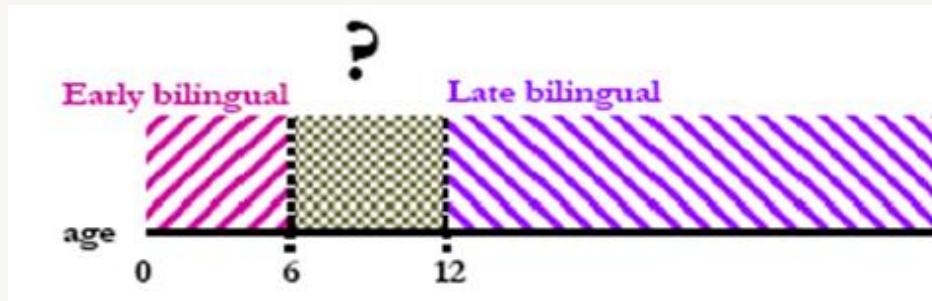
- **Sequential/Successive/Consecutive bilingualism:** Learning one language after already knowing another. This is the situation for all those who become bilingual as adults, as well as for many who became bilingual earlier in life. .
- **Simultaneous bilingualism: Learning two languages as "first languages".** That is, a person who is a simultaneous bilingual goes from speaking no languages at all directly to speaking two languages. **Infants who are exposed to two languages from birth will become simultaneous bilinguals.**

Questions

- Which of these types of bilinguals are you interacting with the most (at work/at home/in your community, etc)?
- **What kind of bilingual are you?**

Early bilingual and childhood bilingualism

- Bilingual language acquisition refers to the acquisition of two languages simultaneously from infancy
- About half the people in the world are bilingual or multilingual - In many parts of the world, bilingualism (or multilingualism) is the norm.



Bhatia & Ritchie, ch 4 (The bilingual child, now linked)

Genesee & Nicoladis 2006: Bilingual first language acquisition

Genesee 2009: Early childhood bilingualism: Perils and possibilities

Common myths about bilingual children

- Bilingualism in childhood brings cognitive disadvantages.
- Bilingual children lag behind their monolingual peers in schools.
- Bilingual children cannot learn the two languages completely.
- Bilingual children are confused: they often mix the two languages.

Theories of Bilingual Development

- **Unitary system hypothesis:**

- the child initially constructs only one lexicon and one grammar
- language mixing and codeswitching
- me a fait booboo (me made booboo)
- daddy pousse (daddy is pushing)
- the birdy fall là (the birdy fall there)
- I peux pas wash the cou me
(I can't wash my neck)
- he a eyes (he has eyes)

(Paradis & Genesee 1996)
English and French bilinguals

• Problems of Unitary system hypothesis:

- Vocabulary is not the best indicator of separate linguistic systems
- Pearson (1998) found that bilingual children have translation equivalents from the earliest productions.
- Code-switching is normal linguistic behavior, and not necessarily a sign of lack of knowledge or confusion
- Bilingual children are sensitive to the language of the interlocutor
- Even young infants are sensitive to the rhythmic properties of different languages: so bilingual children should be able to tell that they are receiving input in two different linguistic systems!
- Today, most researchers accept the ***Language Differentiation Hypothesis***

Theories of Bilingual Development

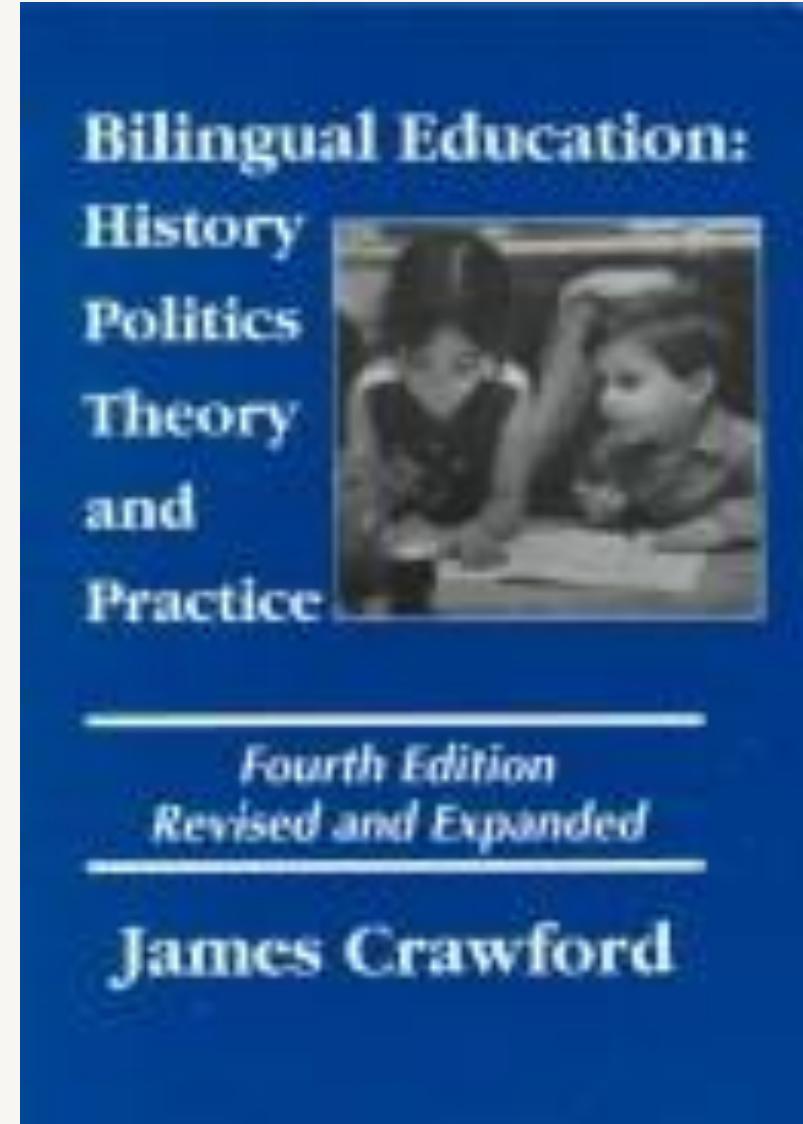
- **Separate systems hypothesis:**
 - the idea that the child builds a distinct lexicon and grammar for each language
 - Evidence:
 - where the two languages diverge grammatically, the child will acquire two different sets of rules
 - bilingual children select which language to use based on the context
 - children bilingual in sign language and a spoken language may say a word in one language and sign it in the other simultaneously
 - Bosch & Sebastian-Gallés (2003): discrimination of /e/ and /ɛ/: a contrast in Catalan but not in Spanish
 - Monolingual Catalan babies: perceive the distinction at 4 months, but then lose it by 8 months
 - Bilingual Spanish/Catalan babies: perceive the distinction at 4 months, lose it at 8 months, regain it at 12 month!

Questions and benefits of Billnguilism

1. It's unclear how much input in each language a child needs to become bilingual
2. one person-one language is the strategy where one parent speaks only language A to the child and the other speaks only language
3. Bilingual children tend to have better metalinguistic awareness than monolingual speakers, meaning they have more conscious knowledge about language
4. Can someone become a bilingual later than childhood (after age 12)?
5. Is there a "critical period" for language acquisition?

Educating bilingualism

1. Only by preserving our commonality--English--can we ensure that we will continue to live and work together as one Nation, one people. (Toby Roth, 1993)
2. Proficiency in two or more languages should be promoted for all American students. Bilingualism enhances cognitive and social growth, competitiveness in a global marketplace, national security, and understanding of diverse peoples and cultures. (Stanford report, 1993)
3. **Additive** bilingualism for English-dominant speakers and **subtractive** bilingualism for language minorities. (Crawford 1999)



Additive bilingualism vs Subtractive bilingualism

- **Additive bilingualism** is when a student's first language continues to be developed while they're learning their second language. These students often have opportunities to use both languages inside and outside of school, and they have a desire to maintain both. Additionally, if a child is from another culture, their first culture is also valued and respected in the classroom.
- **Subtractive bilingualism**, however, is when a student learns a second language at the expense of their first language. In this case, the child will usually lose the ability to speak their first language over time. Children who develop subtractive bilingualism may not have opportunities to practice their first language and may even feel like their first language or culture is unwelcome in class.

Types of Bilingual Education

- **Transitional**

- aims to prepare students to enter the mainstream classroom by using the home language to 'transition' into English instruction;
- English language learners may receive instruction in both English and their home language for 1-3 years, but the goal is to develop English language proficiency as soon as possible.
- supports subtractive bilingualism;

Types of Bilingual Education

- **Developmental**

- aims to maintain and develop the home language as students acquire English)
- Two-way bilingual education places two language groups together and promotes the learning of a second language while maintaining the home language.
- Promotes additive bilingualism



ELEMENTARY TO HIGH SCHOOL

California voters overturn English-only instruction law

Multilingual Education Act passes and revives bilingual education in one of nation's most diverse states

by LILLIAN MONGEAU

November 7, 2016



Language education questions and practice

- Who gets to set the “standard” of a language? (people with power....)
- Why do students who speak minoritized varieties have to learn Standardized American English (and learn to code-switch) but not vice versa?
- How to provide equal opportunities to linguistically and culturally diverse students?
- Who gets to be “the norm”? Who is “different” or “deficient” relative to that?
- What value is attributed to “Standard/Mainstream” American English? What value is attributed to other languages/varieties spoken by students?

Oakland School District Recognizes Black English



BY ELAINE WOO AND MARY CURTIUS

DEC. 20, 1996 12 AM PT

TIMES STAFF WRITERS

OAKLAND — Saying it has failed to adequately educate African American youngsters, the Oakland Unified School District has declared black English a second language, making it the first district in the nation to give the controversial dialect official status in programs targeting bilingual students.

The move to recognize the black vernacular--called "Ebonics" by some educators who consider it a distinct language spoken by the descendants of slaves--was approved unanimously Wednesday night by the Oakland school board.

The vote was called historic by some educators and policymakers, who said it opened the possibility that Oakland could vie for federal funding available to help students who speak languages other than English. But others sounded strong notes of caution, suggesting that the decision stood on weak ground educationally and could lead to a

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[Caldor fire marches closer to South Lake Tahoe as city evacuates, small towns threatened](#)

Language educators

- Teacher as Communicator; Educator; Evaluator; Educated Human Being; Agent of Socialization



Clearinghouse on Languages and Linguistics

Special Report

What Teachers Need to Know About Language

Lily Wong Fillmore
University of California at Berkeley

Catherine E. Snow
Harvard Graduate School of Education

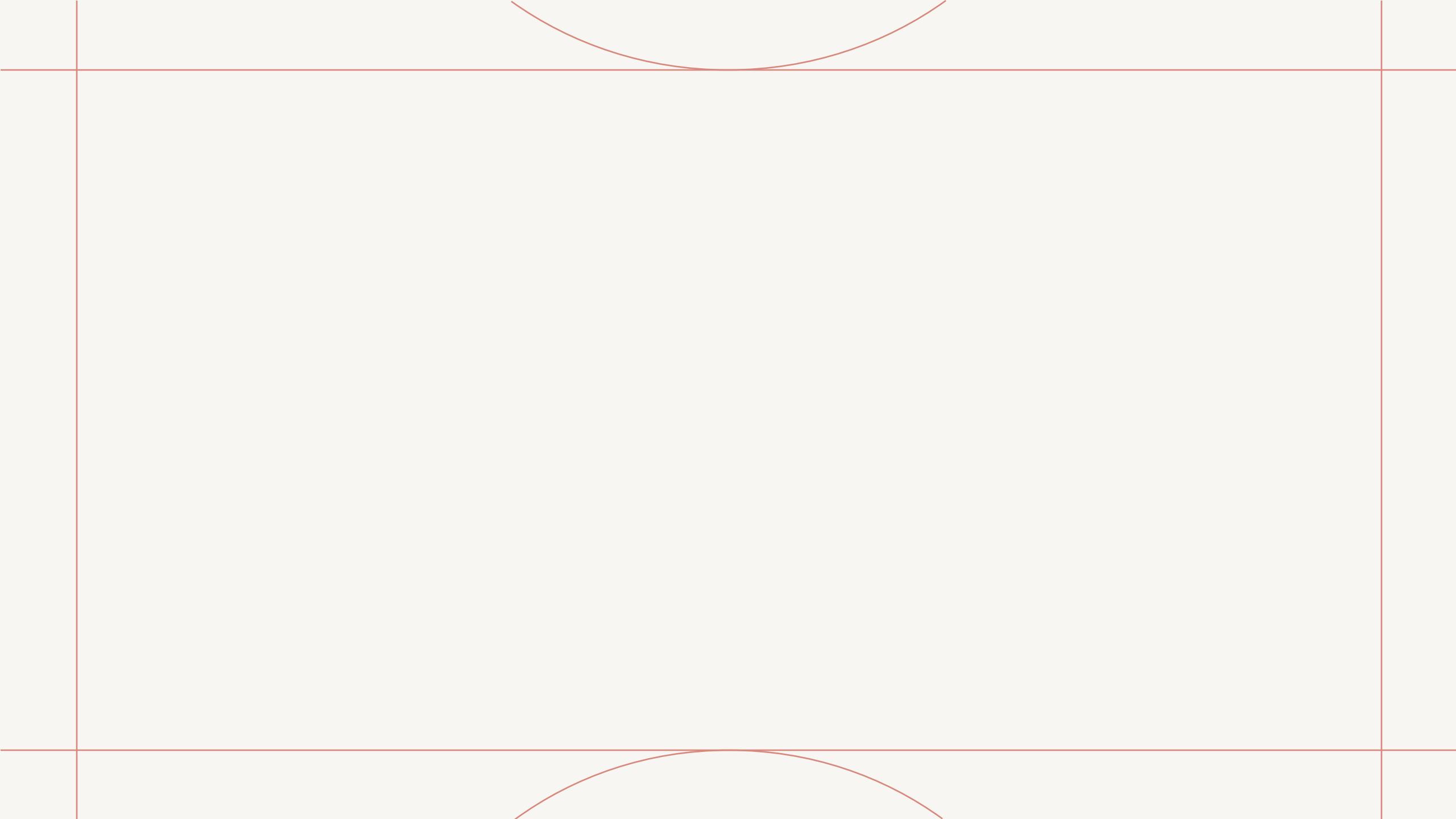
August 23, 2000

Think about it!

- What languages were used at your school – as the main language, as available L2? Why these specific languages?

HW 0901

- The discussion board is open. Please check **Canvas -> Discussions, due end of 09/05**
- The schedule for the next week is:
 - Monday 09/06 - Labor Day off
 - Wednesday 09/08 - **Presentations on L1, L2 acquisition**.
 - Presenters please prepare for a presentation of the reading, accompanied by electronic slides and/or handouts (approx. 10 minutes) and at least 2 questions based on the reading, which the students can discuss as a large group (approx. 10-15 minutes).
 - General audience should also read the papers selected for presentation, and get prepared for the discussions.
 - Paper review #1 due by end of week 6.



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

09-08-2021



Gentle reminder

- Prestntations for L1, L2 acquisition (09/08), bilingualism and education (09/13)
- Discussion board for Billingualism and education will be open by end of next Monday (09/13) and due by the end of (09/19)
- Paper review #1 due by week 6

Research paper presentation (Leading class discussion)

Paper info	Your name
<u>Adult reformulation of child errors as negative evidence</u>	Aaditya Reddy Anugu
<u>Using NLP for Enhancing Second Language Acquisition (Zilo et al. 2017)</u>	shakeeb shams
<u>The onset of syntactic bootstrapping in word learning: Evidence from a computational study (Alishahi & Pyykkönen-Klauck 2011)</u>	Aaditya Raghavan

Research paper presentation (Leading class discussion)

- The student should prepare the following:
 - a presentation of the reading, accompanied by electronic slides and/or handouts (approx. 10minutes)
 - at least 2questions based on the reading, which the students will work on in small groups, and then discuss as a large group (approx. 10 minutes).
- Students other than the presenter:
 - fill out an peer review form for the presentation, to provide your feedback and suggestions on the presentations.

LING 3100_Presentation
feedback for Aaditya
Reddy Anugu_09082021

- <https://forms.office.com/r/W68ppQL5q2>



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feedback for
Shakeeb Shams_09082021

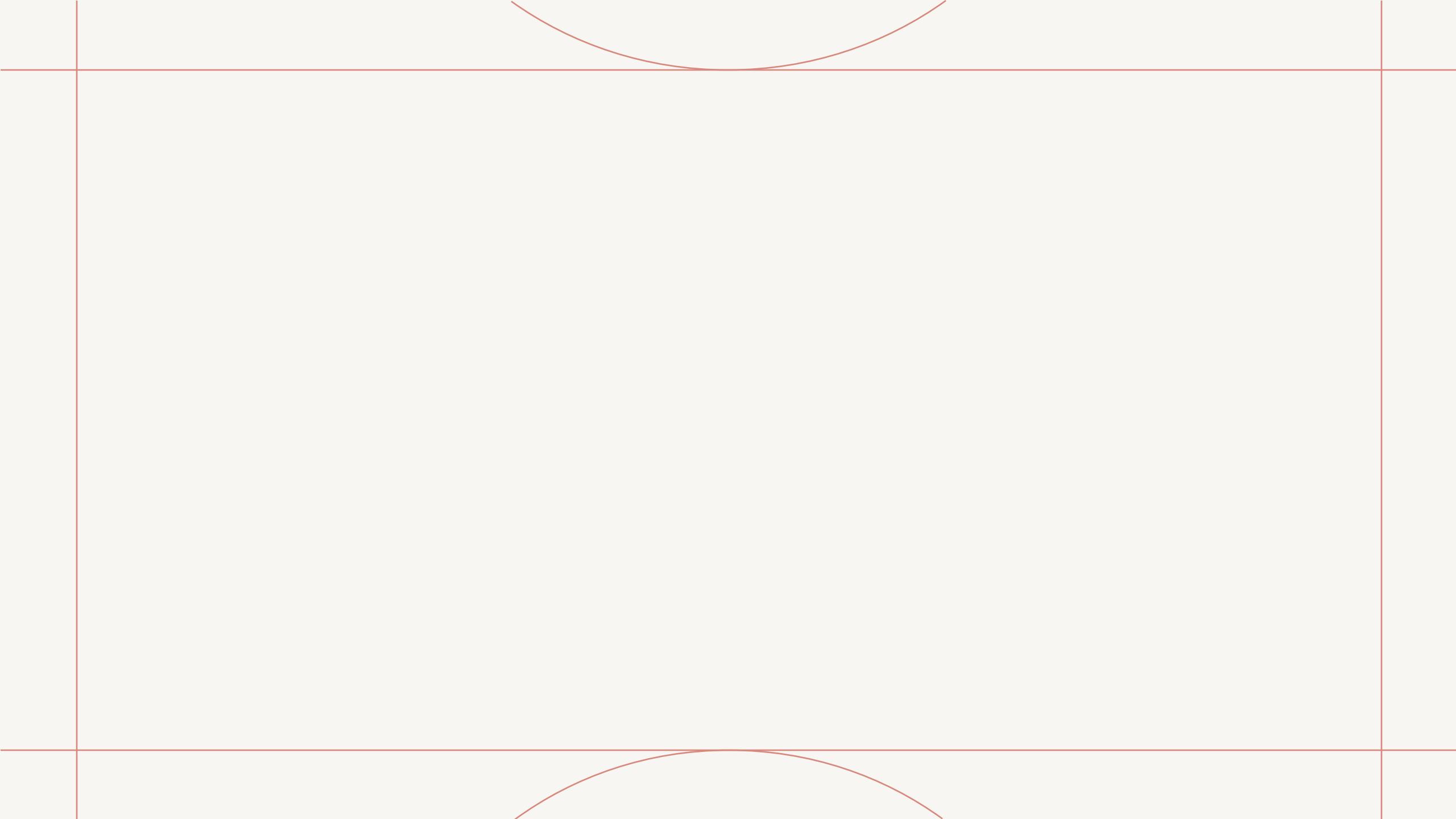
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DJvw](https://forms.office.com/r/vMCnRtDJvw)



LING 3100_Presentation
feedback for Aaditya
Raghavan_09082021

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FN



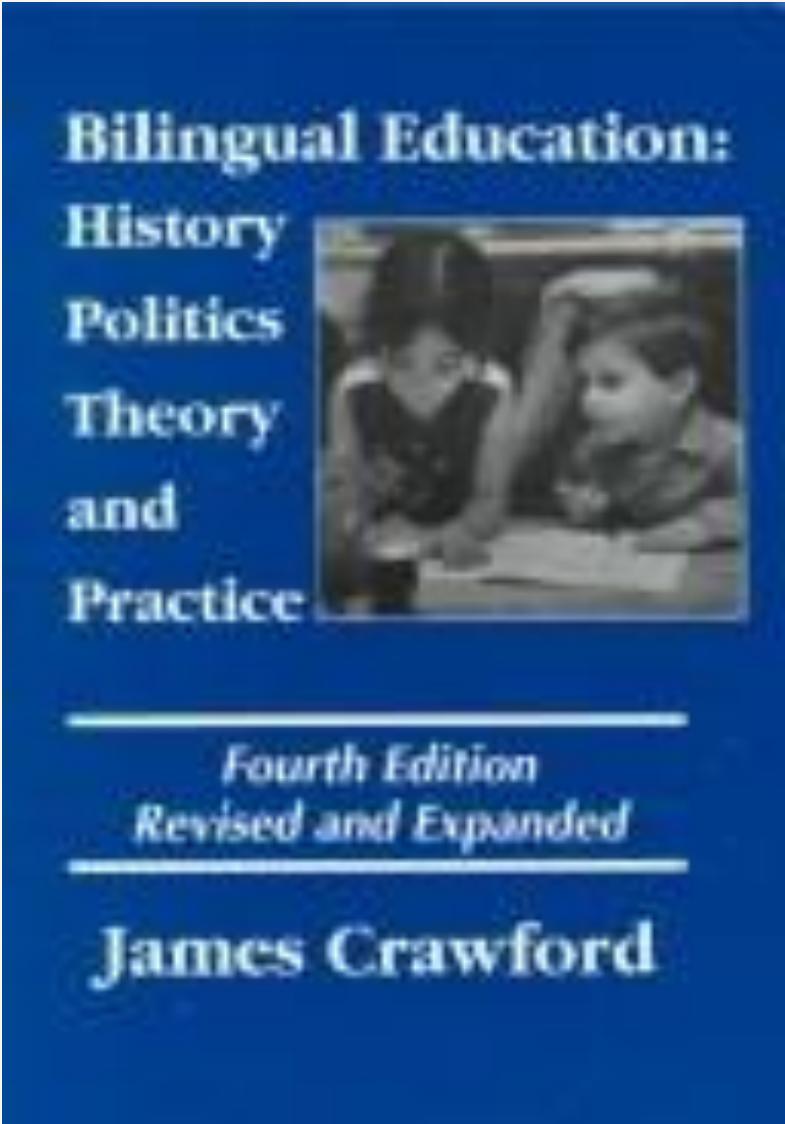


Questions and benefits of Billnguilism

1. It's unclear how much input in each language a child needs to become bilingual
2. one person-one language is the strategy where one parent speaks only language A to the child and the other speaks only language
3. Bilingual children tend to have better metalinguistic awareness than monolingual speakers, meaning they have more conscious knowledge about language
4. Can someone become a bilingual later than childhood (after age 12)?
5. Is there a "critical period" for language acquisition?

Educating bilingualism

1. Only by preserving our commonality--English--can we ensure that we will continue to live and work together as one Nation, one people. (Toby Roth, 1993)
2. Proficiency in two or more languages should be promoted for all American students. Bilingualism enhances cognitive and social growth, competitiveness in a global marketplace, national security, and understanding of diverse peoples and cultures. (Stanford report, 1993)
3. **Additive** bilingualism for English-dominant speakers and **subtractive** bilingualism for language minorities. (Crawford 1999)



Additive bilingualism vs Subtractive bilingualism

- **Additive bilingualism** is when a student's first language continues to be developed while they're learning their second language. These students often have opportunities to use both languages inside and outside of school, and they have a desire to maintain both. Additionally, if a child is from another culture, their first culture is also valued and respected in the classroom.
- **Subtractive bilingualism**, however, is when a student learns a second language at the expense of their first language. In this case, the child will usually lose the ability to speak their first language over time. Children who develop subtractive bilingualism may not have opportunities to practice their first language and may even feel like their first language or culture is unwelcome in class.

Types of Bilingual Education

- **Transitional**

- aims to prepare students to enter the mainstream classroom by using the home language to 'transition' into English instruction;
- English language learners may receive instruction in both English and their home language for 1-3 years, but the goal is to develop English language proficiency as soon as possible.
- supports subtractive bilingualism;

Types of Bilingual Education

- **Developmental**

- aims to maintain and develop the home language as students acquire English
- Two-way bilingual education places two language groups together and promotes the learning of a second language while maintaining the home language.
- Promotes additive bilingualism

hechingerreport.org/california-voters-poised-gut-english-instruction-law/



The Hechinger Report is a national nonprofit newsroom that reports on one topic: education. Sign up for our [weekly newsletters](#) to get stories like this delivered directly to your inbox.

Californians voted yes on that state's Proposition 58, known as the Multilingual Education Act.

Based on a measure proposed by State Sen. Ricardo Lara (D), the new law largely eliminates the red tape involved in creating a bilingual education program. The vote signals a major shift in thinking for a state that effectively outlawed bilingual education in 1998. The evolution in thinking on the value of bilingual education and the specifics of the voter proposition was covered in depth by The Hechinger Report in this story from our archives.



Derrick Fields, 9, works on his assignment during a Spanish-language history lesson at Sherman Elementary School in San Diego, California. Credit: Lillian Mongeau

Language education questions and practice

- Who gets to set the “standard” of a language? (people with power....)
- Why do students who speak minoritized varieties have to learn Standardized American English (and learn to code-switch) but not vice versa?
- How to provide equal opportunities to linguistically and culturally diverse students?
- Who gets to be “the norm”? Who is “different” or “deficient” relative to that?
- What value is attributed to “Standard/Mainstream” American English? What value is attributed to other languages/varieties spoken by students?

Oakland School District Recognizes Black English



BY ELAINE WOO AND MARY CURTIUS

DEC. 20, 1996 12 AM PT

TIMES STAFF WRITERS

OAKLAND — Saying it has failed to adequately educate African American youngsters, the Oakland Unified School District has declared black English a second language, making it the first district in the nation to give the controversial dialect official status in programs targeting bilingual students.

The move to recognize the black vernacular--called "Ebonics" by some educators who consider it a distinct language spoken by the descendants of slaves--was approved unanimously Wednesday night by the Oakland school board.

The vote was called historic by some educators and policymakers, who said it opened the possibility that Oakland could vie for federal funding available to help students who speak languages other than English. But others sounded strong notes of caution, suggesting that the decision stood on weak ground educationally and could lead to a

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Langauge educators

- Teacher as Communicator; Educator; Evaluator; Educated Human Being; Agent of Socialization



Clearinghouse on Languages and Linguistics

Special Report

What Teachers Need to Know About Language

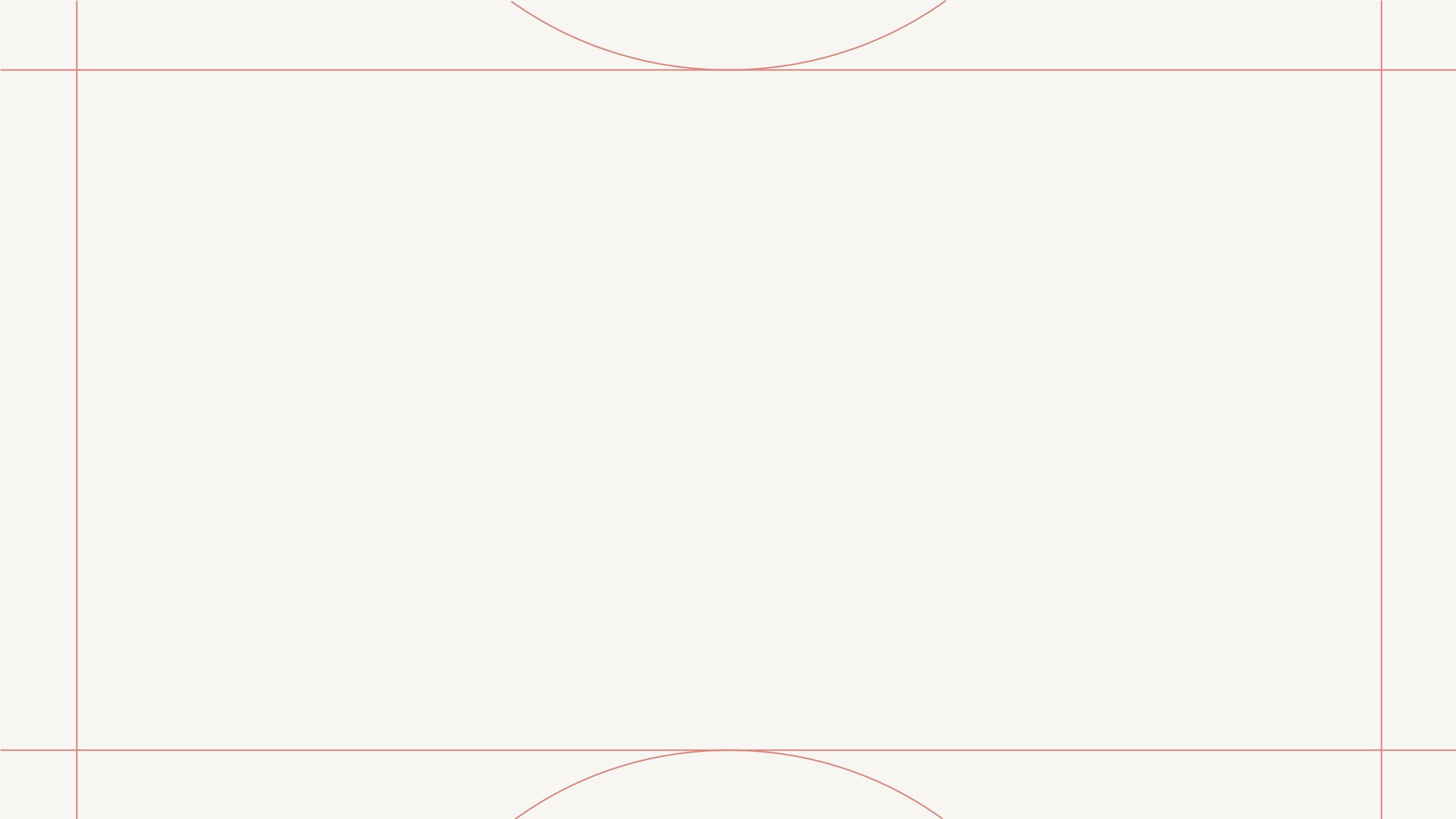
Lily Wong Fillmore
University of California at Berkeley

Catherine E. Snow
Harvard Graduate School of Education

August 23, 2000

Think about it!

- What languages were used at your school – as the main language, as available L2? Why these specific languages?



Applications of Linguistics

Hongchen Wu

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09-13-2021



Gentle reminder

- Discussion board for **Bilingualism and education** will be open at 6pm Monday (09/13) and due by the end of 09/19.
- Paper review #1 due by end of week 6

Research paper presentation (Leading class discussion)

Paper info	name
Adult reformulation of child errors as negative evidence	Aaditya Reddy Anugu
Age of first bilingual language exposure as a new window into bilingual reading development (Kovleman et al. 2008)	Akhil Goel
Applications of Natural Language Processing in Bilingual Language Teaching: An Indonesian-English Case Study (Maxwell-Smith et al. 2020)	Mehul Kalia
Principles of instructed language learning (Ellis 2005)	Nok Sam Leong

Research paper presentation (Leading class discussion)

- The student should prepare the following:
 - a presentation of the reading, accompanied by electronic slides and/or handouts (approx. 10minutes)
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LING 3100_Presentation
feedback for Aaditya
Reddy Anugu_09132021

- <https://forms.office.com/r/W68ppQL5q2>



LING 3100_Presentation
feedback for Nok Sam
Leong_09132021

[https://forms.office.com/r/KsxkqzUEw
N](https://forms.office.com/r/KsxkqzUEwN)



Applications of Linguistics

Hongchen Wu

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09-15-2021



Gentle reminder

- Discussion board for **Bilingualism and education:** due by the end of 09/19.
- Paper review #1 due by end of week 6

LING 3100_Presentation
feedback for Akhil
Goel _09132021

<https://forms.office.com/r/CG9pufk4W>



Research paper presentation (Leading class discussion)

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What is Advertising?



Think about it!

- How much time, money and effort have we spent naming our products and companies?
- Is it worth it?
- Does a name really matter?
- Any brand name that you really like? Why?

Lexicon Branding

- David Placek.
- "Nothing will be used more often or for a longer period of time than your brand name."



Lexicon Branding

lexiconbranding.com/tech-names-apple-powerbook



(Apple)

Problem.

Notebook computers had been impractical: they were cumbersome, heavy and lacked the processing power of a desktop. But Apple had developed a solution. They asked us for a name that would leave the baggage associated with notebooks behind and still be believable.

Solution.

With PowerBook, Lexicon made a promise Apple could deliver on. Two common words were welded to create a powerful marketing tool: Powerbook - a groundbreaking notebook that was smaller and lighter without sacrificing processing power. The first series was hugely successful, capturing 40% of all laptop sales. First year sales exceeded \$1 billion, and in 2001 PowerBook earned a "Gold" designation from the international Design Excellence Awards.



Lexicon Branding

BlackBerry

(Research In Motion)

Problem.

RIM had developed a revolutionary device. At the time, however, constant email access was not the most calming proposition for consumers. The company needed a name that would assuage these concerns and allow the brand offering to expand as technology advanced.

Solution.

Be unpredictable. Surprising someone almost always works, especially when you make a relevant connection. BlackBerry signaled a more natural, engaging way to communicate, and the name didn't box in the brand's potential for growth. The name also made a subtle connection to the device's signature keyboard through the small drupelets found on the fruit.



Lexicon Branding

lexiconbranding.com/product-names-pg-febreze

LEXICON.

PORTFOLIO WHY LEXICON SERVICES ABOUT US INSIGHTS JOIN US

Get Started (415) 943-4136

Febreze
(Procter & Gamble)

Problem.

Most consumers believe air and fabric fresheners just mask odors. P&G asked Lexicon to develop a name to help make a superior product claim believable. According to one consumer, "P&G's new product is remarkably different. It actually breaks down the odor molecules, makes them disappear."

Solution.

Be relevant, but unexpected. Starting with the basic idea of a "fresh breeze" led to an unexpected and distinctive new name that helped fuel one of P&G's most successful product launches of the last twenty years.



Linguistic devices to form effective brand names

- **Phonetic devices** pertain to vocal sounds and the letters that represent sounds in a given language.
 - Phonetic alliteration (same initial word sounds or phonemes): **Coco-Cola**
- **Orthographic devices** include unusual or incorrect spellings:
 - **Kool-Aid**



Lowrey et al. 2003

Linguistic devices to form effective brand names

- **Morphology** deals with word formation through the combination of prefixes, roots, and suffixes.
 - Morphological affixation which involves the addition of letters or groups of letters (morphemes) to words: **Swiffer; Jell-O**
- **Semantics** deals with underlying meanings of linguistic units (i.e., words, sentences, texts).
 - metaphor, which occurs when a word pertaining to one kind of idea is used in place of another to suggest likeness between them: **Arrid** to imply dryness

Lowrey et al. 2003

Compare the new name and the old name:

- **Facebook** actually started out as “FaceMesh”
- **Amazon** was first named “Cadabra”, as in “abracadabra”

The characteristics of successful brand names

Meaningful, distinctive, memorable, recognizable, recallable

- **BlackBerry** – small, fits in your hand, black in color, making technology “approachable” by giving it a name from the natural world; alliteration; fruits are pleasant;
 - The second B was capitalized because a linguistic study funded by Lexicon suggested that the letter "B" is, in *The New Yorker*'s words, "one of the most 'reliable' in any language". Lexicon research also suggested that repetition of the B would promote relaxation in users.

Relation between sound and meaning is arbitrary?

- In Sapir's 1929 study, holding consonants constant, a word using the vowel sound /ɪ/ (i.e., mal) was perceived as larger than a word using the vowel sound /i/ (i.e., mil).
- It found that initial plosives in general (stop consonants such as the *k*, along with *p*, *t*, *b*, *d*, *g* sounds) are very effective for brand recall, recognition, and awareness that names starting with the letter *k* occur more frequently in brand names compared to their relative usage in the English language

Read more at <https://daily.jstor.org/whats-brand-name-sounds-persuasion/>

Read more at Bentley and Varon 1933; Taylor 1963; Lowrey and Shrum 2007; Lowrey et al. 2003

In-class survey

- Which brand of laptop seems bigger, Detal or Dutil?
- Which brand of vacuum cleaner seems heavier, Keffi or Kuffi?
- Which brand of ketchup seems thicker, Nellen or Nullen?

STANFORD MAGAZINE

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FARM REPORT

Why Ice Cream Sounds Fat and Crackers Sound Skinny

Words carry weight. A linguist explains.

JULY/AUGUST 2013

READING TIME 4 MIN



Graphic: Jerico Santander

by Dan Jurafsky

Do the names of some foods make them sound heavier or lighter than others? This seems unlikely; after all, as Shakespeare said in *Romeo and Juliet*:

What's in a name? That which we call a rose/By any other name would smell as sweet....

Sift through the layers of history with Stanford scholars.

Stanford TRAVEL/STUDY

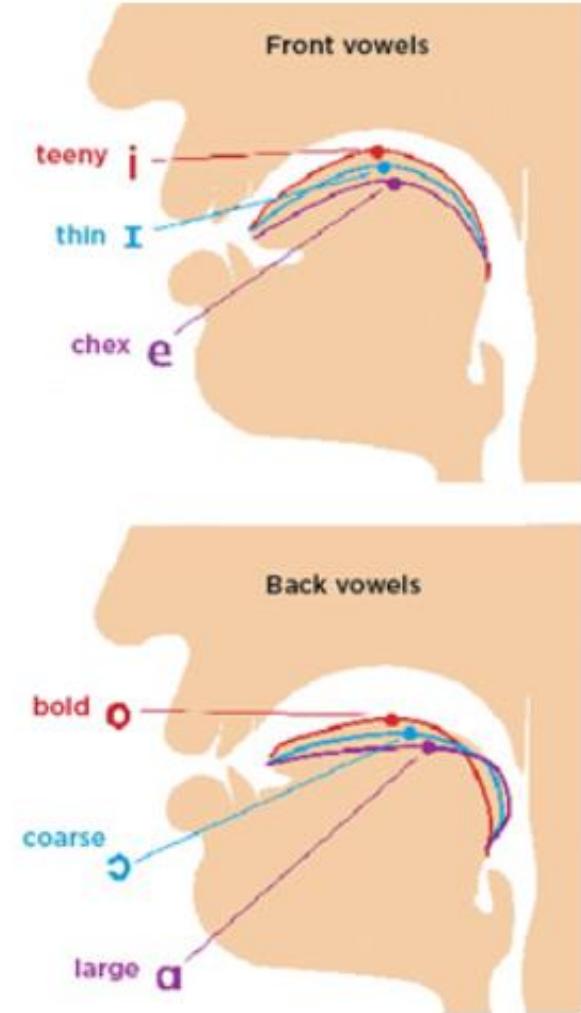
alumni.stanford.edu/goto/travelstudy

Stanford ALUMNI

- More back vowels in ice cream names—Rocky Road, Jamoca Almond Fudge, Chocolate, Caramel, Cookie Dough, Coconut—and
- more front vowels in cracker names: Cheese Nips, Cheez-It, Wheat Thins, Pretzel thins, Ritz, Krispy, Triscuit, Chicken in a Biskit, Ritz bits.

Why are front vowels associated with small, thin, light things, and back vowels with big, solid, heavy things?

Frequency Code (John Ohala)



TELLTALE TONGUE: The author's survey found that cracker names tend to have thin front-vowel sounds, and ice cream the heavier back-vowel sounds.

Linguistic strategies used in advertisement slogan

- Presuppositions
 - **Pantene – Stop seeing broken hair everywhere**
 - **Perfectil – Why do leading beauty experts and models use and recommend Perfectil?**
- Assuming / presuming Common Ground
 - **Pepsi – Get that Pepsi feeling**
- Using Polysemy
 - **T-Mobile – Thanks to T-Mobile you can always have office in your pocket**
- Negation (not like those OTHER products/people)
 - **PopChips: NOT greasy, NEVER fried**

Linguistic strategies used in advertisement slogan

- Implicit content
 - **Apple – Think different. (from what?)**
 - **Diet Coke – Because I can (what?)**
- Exploit underspecification – say things “off-the-record”

Use indirect speech in advertising

- Avoid negativity of overtly denigrating other products
- Avoid face threat or desperation of just telling/begging people to buy your product

(Pinker et al, 2008)

Why are the following slogans successful?

- McDonalds – i'm lovin it (in French, J'M) – loving what?
- KFC – Today Tastes So Good
- Taco Bell – Think outside the bun.
- Burger King – Aren't You Hungry for Burger King now?
- Verizon – Can You Hear Me Now? Good.
- Nike – Just do it (do what?)
- Nike – There Is No Finish Line (where?)
- Adidas – Impossible is Nothing

Gricean Cooperative Principle



Gricean Cooperative Principle

- **Quality:** do not say that for which you lack adequate evidence or you know it is false, A) do not say what we know to be false; B) do not say something for which you lack adequate evidence; therefore, lie, guess, and surmise are considered as the violation of quality maxim.
- **Quantity:** Quantity means making our contribution as informative as is required; A) provide information as required, B) do not provide more information as required. Therefore, reticence and verbosity are considered violation of quantity maxim.

Gricean Cooperative Principle

- **Relevance:** Be relevant, that is talk about the related topic. If the speaker is not bound to the topic, the relevance maxim is violated.
- **Manner:** Avoid obscurity and ambiguity of meaning; be brief, that is avoid unnecessary prolixity and talk in an orderly manner. A) avoid ambiguity, B) avoid unnecessary complications, C) talk in an orderly manner; Therefore, disordered and sarcastic expressions full of metaphors and descriptions are considered violation of the maxim of manner (Grice, 1975: 45).

Which Cooperative Principle does the ad violate?

- Ad of Golrang MultiVita Shampoo: **Complete Food of Hair**
- Detergent Ads: **CLOTHES FALL IN LOVE**
- Latifi Sporting Goods and Equipments: **BRING THE GYM INTO YOUR HOME** (Jame Jam Newspaper)

Language, advertising and law

- A lot of the time, language is used to inform.... but in advertising, language is used to persuade (Geoffrey Leech) – making it an interesting case study
 - incentive to stretch the truth to make the product sound best
- Federal law says that ad must be truthful, not misleading, and, when appropriate, backed by scientific evidence





Think about it

- Which slogans are the best ones in your opinion? Why?
- Which slogans are the worst ones in your opinion? Why?
- Research advertisements (slogans, print ads, website, Instagram presence, video ads) of your favorite product to find out:
 - What linguistic strategies are used, from the sound level up to the discourse level?

Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

09-20-2021



Gentle reminder

- Paper review #1 due by end of week 6 (**by end of 10/03**)

LING 3100_Presentation
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Taye _09202021

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LING 3100_Presentation
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Chitanand _09202021

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Research paper presentation (Leading class discussion)

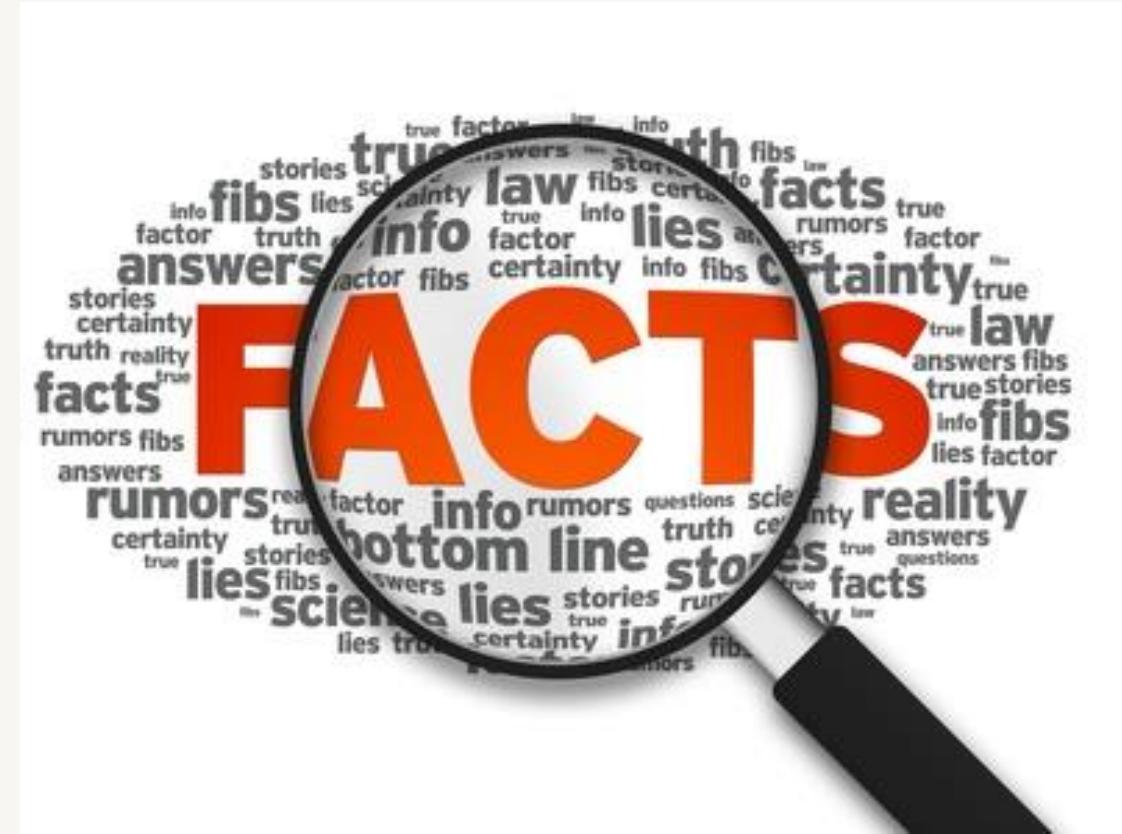
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Language and Law

language evidence
of criminal and civil
law cases

statutory language
and how it is used
in the courtroom

What is Forensic Linguistics?



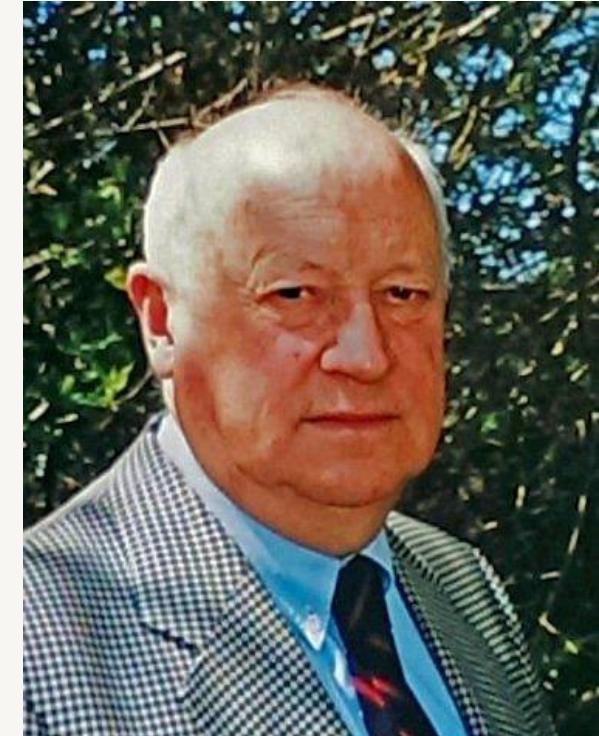
The Evans Statements: A case for Forensic Linguistics.

- T. J. Evans, a 25 year old London van driver charged with the murder of his wife Beryl and of his 14 month old daughter Geraldine, was found guilty of the murder of Geraldine and hanged in 1950.
- More than three years later, R. J. Christie, who lived in the same house as Evans and confessed to have strangled Beryl, was hanged after having been found guilty of the murder of his own wife.



The Evans Statements: A case for Forensic Linguistics.

- Jan Svartvik analyzed four statements that Timothy Evans.
- Using both qualitative and quantitative methods Svartvik demonstrated considerable stylistic discrepancies between the statements, thus raising serious questions about their authorship.
- Thanks to Svartvik's work, in 1966 the Home Secretary gave a posthumous free pardon to T. J. Evans.
- Svartvik's work is considered today to be one of the first major cases in which Forensic Linguistics was used to achieve justice in a court of law.



stylistic discrepancies and clause relation

- two types of time indication (**the 12.55 a.m. train – the five to one train**),
- analyzed all **finite verb clauses** according to a system evolved at the Survey of English Usage, University College London: free clauses, clauses with mobile relator (**then, also**), clauses with immobile relator (**and, or, but, so**), clauses with elliptic subject linkage, conjunctival clauses, relative clauses.
- In the internal analysis of the crucial statement, divided for this purpose into three parts, **the central part differs from the other two particularly in having a considerably higher frequency of clauses with mobile relator and elliptic subject linkage**.
- One of Christie's statements (where he confesses the murder of Beryl Evans) is analyzed in the same way, and its general picture of **clause type usage** is vastly different from Evans' crucial statement.

Word that matters

- Investigation Discovery (2008, October 23). Solved - Wife's Murder.



To find the guilty, and to protect the innocent

- HumanRightsWatch (2016, August 17). You Have the Right to Remain Silent - California Bill Strengthens Miranda for Kids

Miranda Warnings

Miranda Rights



Applications of Linguistics

Hongchen Wu

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09-22-2021



Gentle reminder

- Paper review #1 due by end of week 6 (**by end of 10/03**)

- **Forensic Linguistics** is considered an area in which the research, principles, and methods of the discipline of linguistics are applied to **legal contexts that deal with various areas of language and the law** such as:
 - (1) **statutory language**, courtroom discourse, translation, and interpretation in multilingual contexts;
 - (2) **language and the criminal justice system**, including police interviews, undercover sting operations, courtroom testimony, and confessions;
 - (3) **language evidence in civil cases** such as trademarks, contracts, copyright, discrimination, and product warning labels; and
 - (4) **other legal cases in which language is often the primary evidence**, such as authorship analysis and speaker identification

The case of Ted Kaczynski

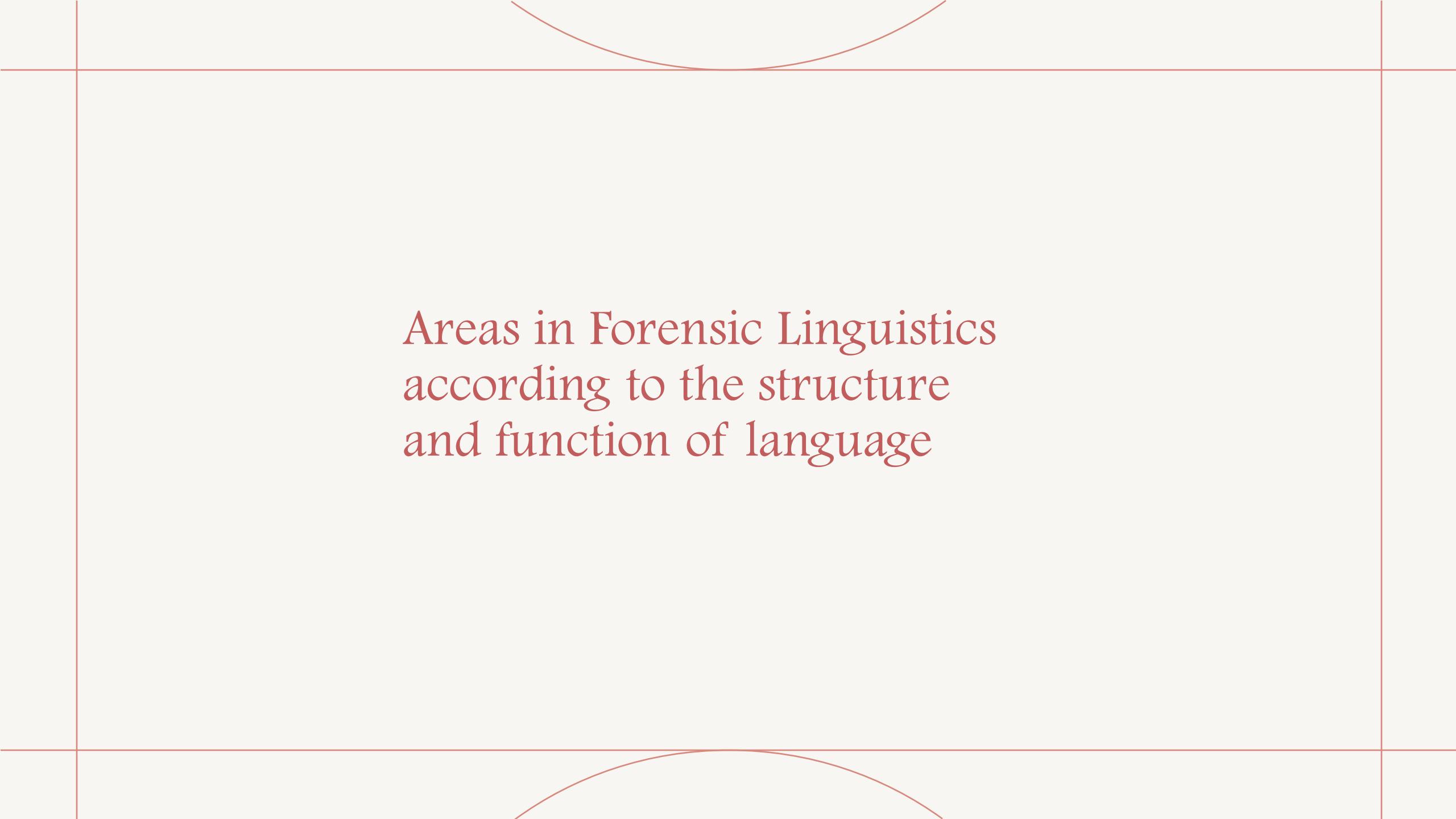
- the "Unabomber" who killed and injured people by mailing them bombs.
- He wrote a long essay about his anti-technology beliefs, and sent it to newspapers. He said if his essay was published by a major newspaper, he would stop his bombing campaign. Eventually it was published in the *New York Times* and the *Washington Post*.
- What the "Unabomber Manifesto" said sounded familiar to Ted Kaczynski's brother David, who retrieved some of Ted's writings from his attic and gave them to the FBI.

- FBI agent James Fitzgerald compared the language used in the “manifesto” with the material provided by David Kaczynski.
- **The Unabomber used language in some unusual, quirky ways.** The writings from David’s attic had the same sorts of usages. Fitzgerald identified **hundreds of similarities between the documents with a known author (Ted K.) and the one with an unknown author.**
- This was enough to get a search warrant for Kaczynski’s cabin, and he was arrested a short time later.

Disappearance of Jenny Nicholl

- A famous case in the U.K., the disappearance of Jenny Nicholl, has a similar story. A 19-year-old woman went out one night, not telling her parents where she was going.
- She didn't return. Nobody heard from her for several days. Then some of her friends and her father received text messages from her phone saying that she was fine. But they were still worried.
- Linguist Malcolm Coulthard analyzed the texts, comparing them to texts known to be sent by Jenny Nicholl.

- His stylistic analysis showed that she (almost certainly) did not send them. The style was instead similar to that of her much older married lover, David Hodgson.
- Partly because of this analysis, Hodgson was convicted of murdering Nicholl, even though her body was never found.



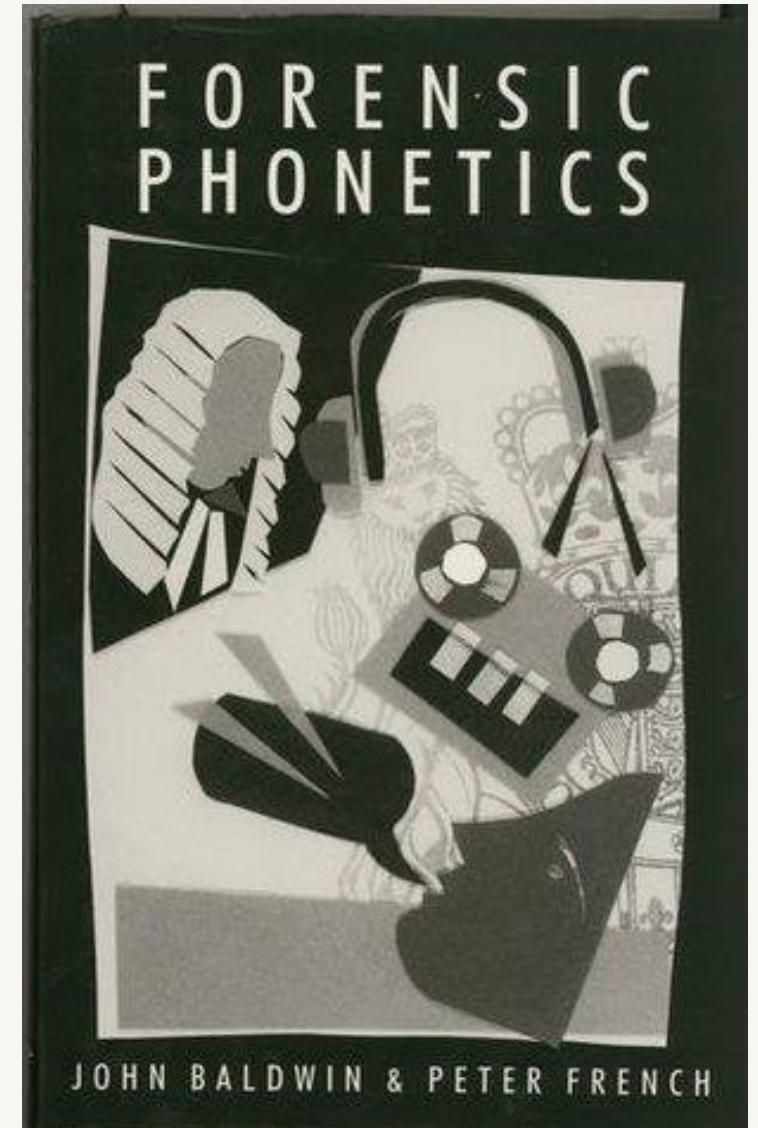
Areas in Forensic Linguistics
according to the structure
and function of language

1. Forensic Phonetics

draws on the applications of phonetics, the scientific study of speech, in court cases.

- speaker recognition, tape authentification, disputed/non-disputed utterances
- recorded speech, over the phone, mobile or chatting rooms,

human voice is as unique as his DNA
-- Baldwin



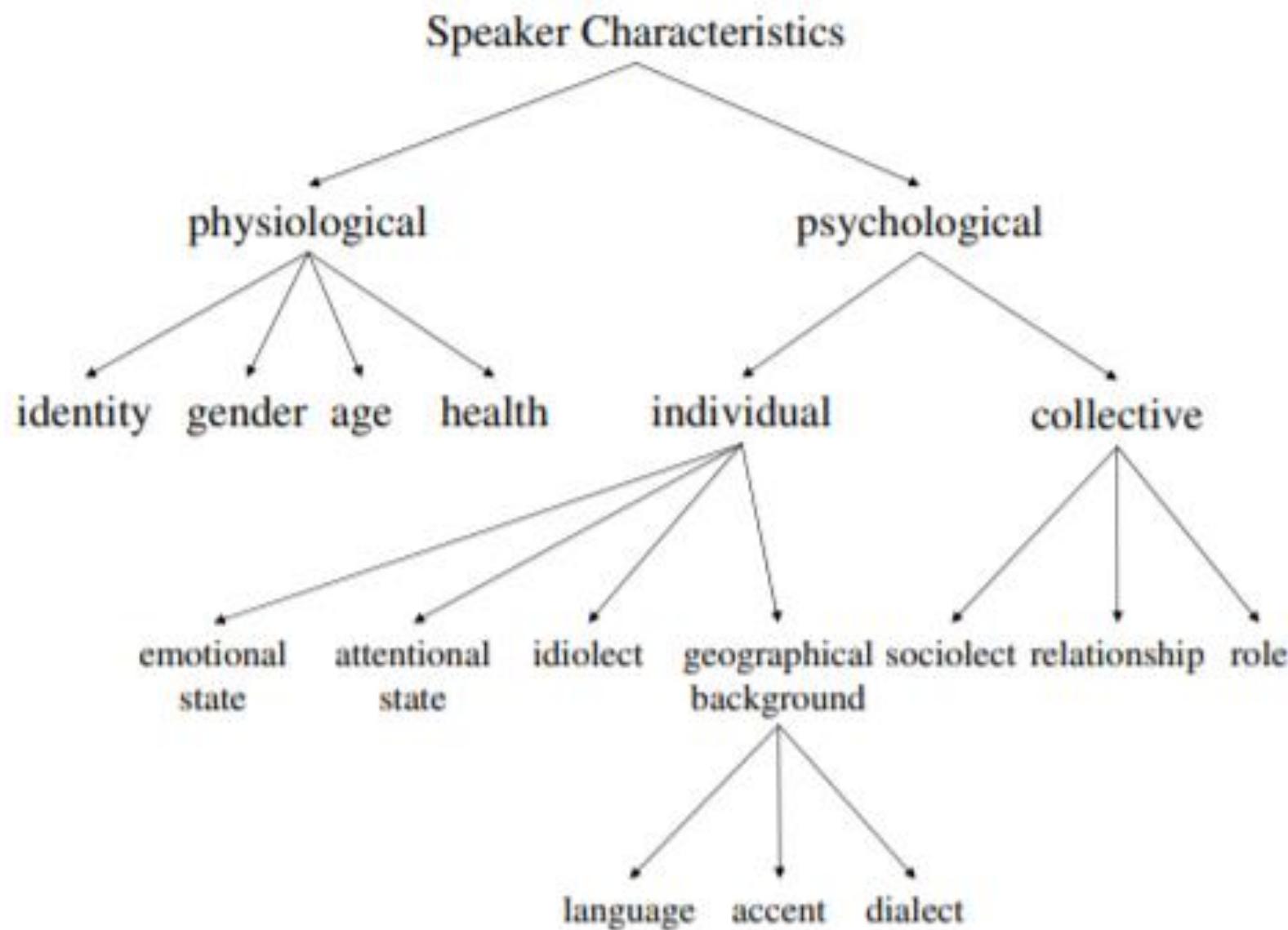


Fig. 1. Taxonomy of Speaker Characteristics

The secret life of Lord Buckingham

For years, he lived as a British aristocrat. His family crest was proudly embossed on his stationary. He was Lord Buckingham – educated at Cambridge and an IT consultant, with a flawless British accent. But as NBC's Dawna Friesen reports, it was all a lie.

May 8, 2006, 6:30 PM EDT

By Dawna Friesen

Sponsored Stories

by Taboola

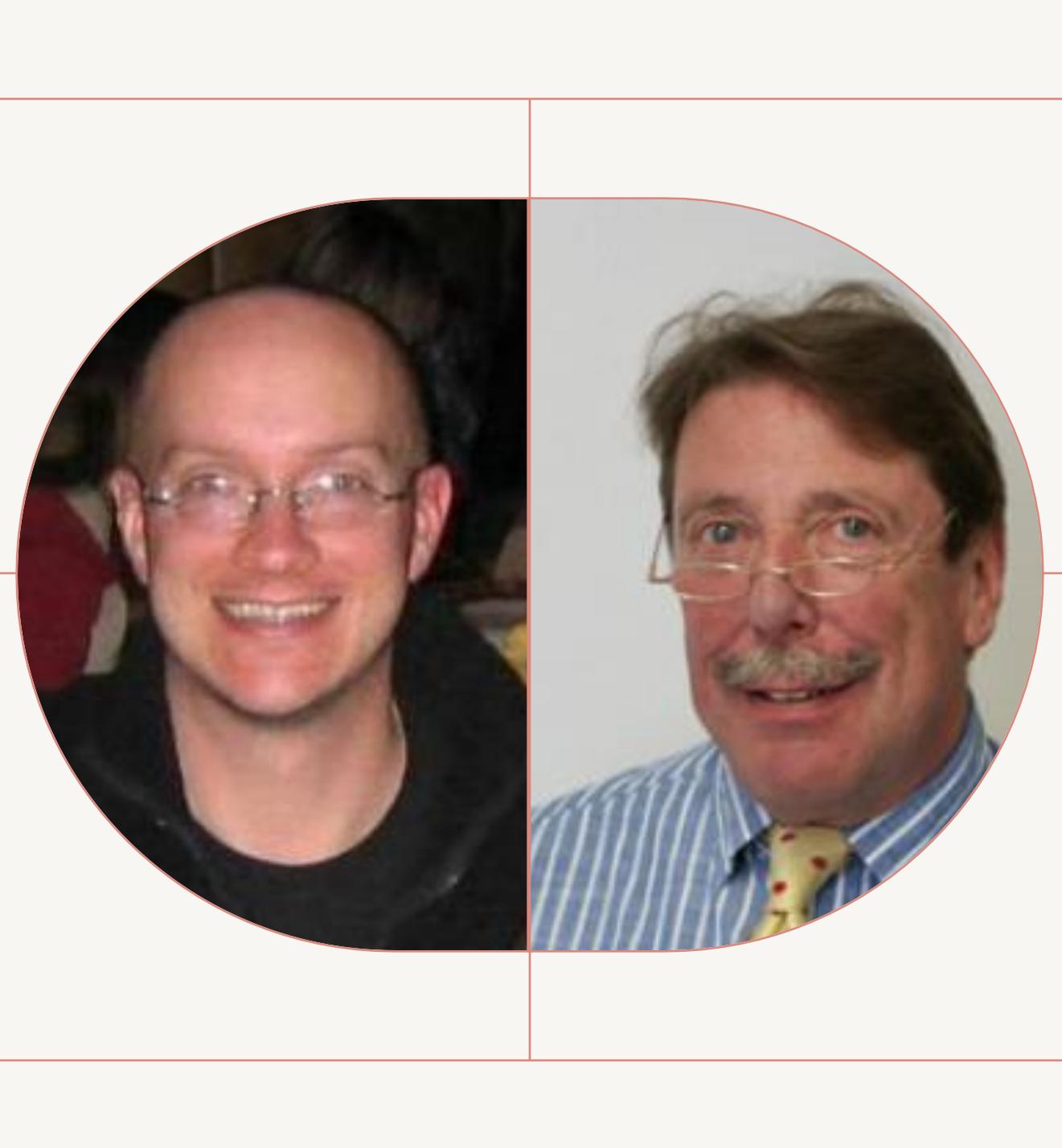
Story of "Lord Buckingham" and his flawless British accent

- In 2005 Stopford was arrested entering the UK using a fake passport in the name of Christopher Edward Robert Buckingham, further claiming to be a British Lord.
- The name and personal details in fact matched information on the Register of Deaths, belonging to a child who had died in 1963.
- When confronted with these details he refused to answer any further questions from the interviewing police officer.
- He was charged with providing false information on a passport application and was sentenced to 21 months in prison (reduced to 9 months on appeal).
- On his release from prison the authorities faced a problem: he could not be released into the UK as his identification papers were fake, but nor could he be deported as there was no information about his true origins.

- His ex-wife and two children all believed the story he had given to the police: he was the son of British diplomats who had been killed in a plane crash; he was educated at Harrow and Cambridge; and held the hereditary title of Earl of Buckingham (a title which, in fact, became extinct in 1687).
- Further investigation revealed even more intrigue: he possessed letters in the name of Alexei Romanoff sent to an address in Switzerland, prompting 12 speculation that he might in fact be an Eastern European spy.
- The police posted appeals to the public for information about the man's true identity, but, just as with the Yorkshire Ripper hoaxter, no useful information was forthcoming. Further theories developed (on what grounds we do not know) that he might be Australian or South African.

Who he is????

- **Paul Foulkes, and Peter French** were contacted in this case by a television company producing a film about the story.
- They were asked to examine 'Buckingham's' police interview recording in order to carry out **verification analyses** in respect of three specific hypotheses: **that he was Australian, South African, or Eastern European.**
- In the event that none of the hypotheses could be supported, they were asked to undertake **a classification profile of his likely origins.**



- Paul Foulkes, and Peter French analysed in detail the **segmental and suprasegmental material** available in the recording, and **cross-referred our observations to the extensive published literature on English dialects.**
- They found:
 - No compelling evidence in support of a non-native speaker hypothesis
 - No evidence of the well documented typical phonetic or phonological feature to be expected of Australian or South African speakers of English.
 - The recording was characterised mainly by phonetic and phonological patterns consistent with the standard accent of south-eastern England.
 - However, there were also several recurrent features at odds with this general pattern:

- the **phonetic patterns found in "Lord Buckingham":**
 - pronounced the /r/ in words such as *car*;
 - did not pronounce post-consonantal /j/ in words such as *news*
 - pronounced the /l/ in the name **Palmer**, which in almost all British dialects is phonologically /pa:mə(r)/
 - had a strikingly non-British English pronunciation of his assumed name Buckingham, the final syllable of which he pronounced as [-hʌm] or [-hæm] rather than typical British [-əm] (with no /h/).

- After consulting with three Australian phoneticians, one South African sociolinguist/phonetician, one Canadian sociolinguist, and two other British phoneticians – as well as non-linguist native speakers of southern hemisphere Englishes, Paul Foulkes, and Peter French concluded:
 - **that the most frequent association of regional features was North American, and most likely the US.**
- Literally a few days after Paul Foulkes, and Peter French submitted our report, a photograph of the mystery man was identified by "Lord Backingham" 's sister in Florida, and his identity as **Charles Stopford** was later confirmed by fingerprints.



Take-away messages from this profiling analysis

1. This was a case in which the speaker's dominant variety was standard British English, through which a number of North American traits surfaced.
2. No language varieties in the world are better documented than **British and American English**, and yet, due to the phonetic complexities of the material, a large team of highly experienced linguists – all native speakers of the language – found it extremely difficult to reach a clear and consensual conclusion.
3. As is usual in profiling tasks, **rejecting the candidate hypotheses regarding specific origins** was considerably easier than **answering the open classification question**.

POLICY

Voice Analysis Should Be Used with Caution in Court

Although voice recognition is often presented as evidence in legal cases, its scientific basis can be shaky

By Michele Catanzaro, Elisabetta Tola, Philipp Hummel, Astrid Vicoso on January 25, 2017

- **Accent**

- French (1990) investigate a case where a Greek doctor, living in the UK, has been accused of prescribing drugs. The different accent of the Greek doctor made it difficult for acoustic analysts to transcribe the recorded conversation.

- **Authorship**

- Stanely Ellis (1994) analyzed tape-recordings to identify the place where one serial killer lived, and analysis showed that the man lived in a particular region but was changed later as Ellis realized that the recordings were sent by a hoaxer, not the criminal himself (Hickey 2015, 193).
- Jerome Prieto, a man who spent 10 months in prison because of a controversial police investigation that erroneously identified Prieto's voice in a phone call claiming credit for a car bombing.



mesa redonda

open science: the case of forensic phonetics

(⌚) Live in 4 days
September 26, 7:00 AM

Reminder on



<https://www.youtube.com/watch?v=lgqM--kZLj0>

Open Science: The Case of Forensic Phonetics

Scheduled for Sep 26, 2021

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SHARE

SAVE

...

2. Forensic Semantics

Focuses on the comprehensibility and interpretation of language that is difficult to understand.

- Words, phrases, sentences, and texts
- Ambiguity, vagueness in texts and laws
- Interpretation of meaning in spoken discourse
 - Reading of rights and police warnings, police interviews, and jury instructions



RETAIL

LIVE AUDIO

Tiffany, Costco settle 8-year lawsuit over fake ‘Tiffany’ rings

PUBLISHED MON, JUL 19 2021 3:12 PM EDT



REUTERS

LATEST VIDEOS

SHARE



KEY POINTS

- Tiffany & Co has settled its more than eight-year-old lawsuit accusing Costco Wholesale of trademark infringement and counterfeiting for selling generic diamond engagement rings bearing the “Tiffany” name.
- Monday’s settlement came after the federal appeals court Manhattan in August threw out a \$21 million judgment that Tiffany won in 2017 following a jury trial.

TRENDING NOW

- Costco sold “Tiffany” rings
- Costco: “The word Tiffany is a generic term for ring settings comprising multiple slender prongs extending upward from a base to hold a single gemstone.”
- Tiffany: “The TIFFANY trademark.... has been continuously used for over 175 years and enjoys worldwide fame and recognition as designating superior goods from Tiffany & Co.... When Costco used that trademark to refer to goods that had nothing whatsoever to do with Tiffany & Co., they infringed Tiffany’s trademark, while damaging both their own customers and the Tiffany brand.”

January 17, 1998 - William Jefferson Clinton, 42th US President, answering a question during his deposition in a sexual harassment lawsuit stated that he “[had] never had sexual relations with [Monica Lewinski]”. Seven months later, during his grand jury testimony, he acknowledged “inappropriate intimate contact” with her but explained that it did not constitute part of a sexual relationship in his understanding of the term.



- Is it a lie to say of Lewinsky that "**there is absolutely no sex of any kind, of any manner, shape, or form with President Clinton**"
 - If '**is**' means '**is and never has been**', that is not.
 - What about it means, '*there is none*'?

What's the intended scope?

- The Second Amendment of the United States Constitution reads: "**A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.**" Such language has created considerable debate regarding the Amendment's intended scope.
- **Is this an “individual” right or a “collective” right?...**
 - Does this mean that individual people have a right to keep/carry weapons?
 - Does it mean that groups of people have a right to form well-regulated militias?
 - Is it at all relevant that weapons are far more dangerous today than they were at the time this amendment was written?

3. Forensic Pragmatics

Focuses on analysis of a speaker/writer's intended meaning in actual language

- Discourse of specific contexts (conversations, hearings,)
- Language of the courtroom (questioning)
- Language of specific speech acts (threats, promises, warnings)



- Lawyer: Do you have any back accounts in Swiss banks, Mr. Bronston?
 - Bronston: No, sir.
 - Lawyer: Have you ever?
 - Bronston: The company had an account in Zurich for about six months.
-
- turns out, Bronston himself ALSO used to have Swiss bank accounts
 - did he lie? did he commit perjury?
 - why is this statement misleading?
 - did the lawyer mess up by not following up?

Applications of Linguistics

Hongchen Wu

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09-27-2021



LING 3100_Presentation
feedback for Erin
Wienke_09272021

<https://forms.office.com/r/A6ZMFwyKft>



Gentle reminder

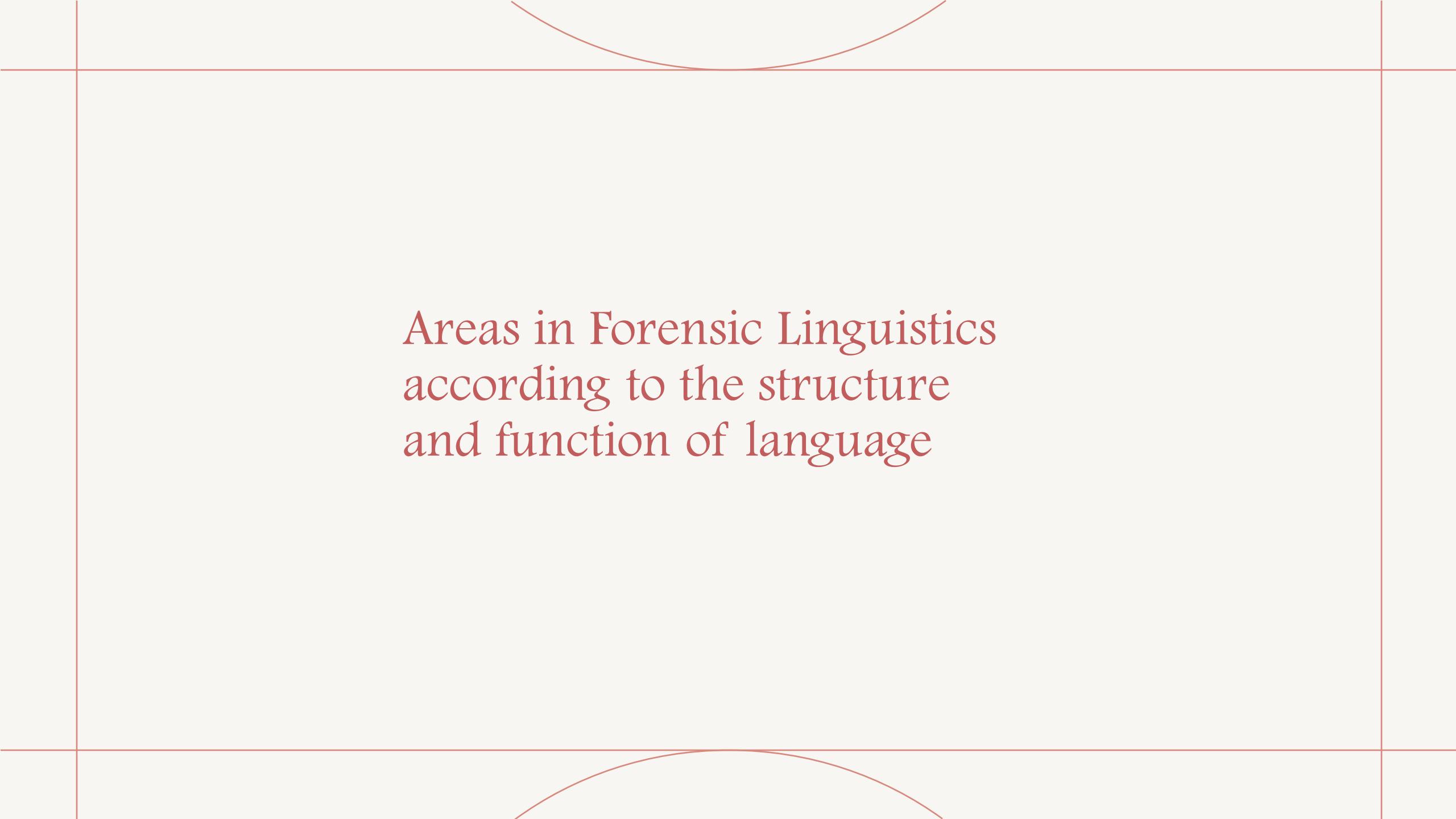
- Paper review #1 due by end of week 6 (**by end of 10/03**)

Plan for 09/29: presentations on Language and Law

Leading questions and the eyewitness report (Loftus 1975)	Andrew Asper
Can the law imply more than it says? On some pragmatic aspects of strategic speech (Marmor 2009)	Akhil Turaga
Amicus Brief in re George K. Young, Jr., v. State of Hawaii, et al., submitted to the Supreme Court of the United States, by amici curiae Dennis Baron, Alison LaCroix, Stefan Gries, Jason Merchant. 2020.	Gary Ross Johnson

Sign up for paper presentations for week 8 to week 13

- https://gtvault-my.sharepoint.com/:x/g/personal/hwu480_gatech_edu/ES0IN1J-VLZHrvnak3Vo42QBqZo_Zo7J2o1qCeUYh2Y_Lw
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- **Please sign up by the end of 10/10**



Areas in Forensic Linguistics
according to the structure
and function of language

What counts as "probable cause"/ "consent"?



What counts as a consent?

- Are the following interpreted as refusable requests, or commands, or something else? (especially in light of the police officer's authority)
- Are the responses interpreted as "consent" to a search?
 - "Does the trunk open?" / yeah
 - "You don't mind if I take a look around, do you?" / shrug

The **4th Amendment** protects your right to refuse search requests, but it doesn't require police to tell you about your right to refuse.

- The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

What counts as a request?

- "I won't say anything until I have an attorney present"
- "Maybe I should talk to an attorney"
- "I think I should talk to an attorney"

Many requests/ refusals in real life are **somewhat indirect**, but the legal system only legitimize requests when made directly

1. Why do many people who heard of Miranda rights but still answer questions without an attorney present?
2. Why do many people do not make requests/ refusals directly and explicitly?

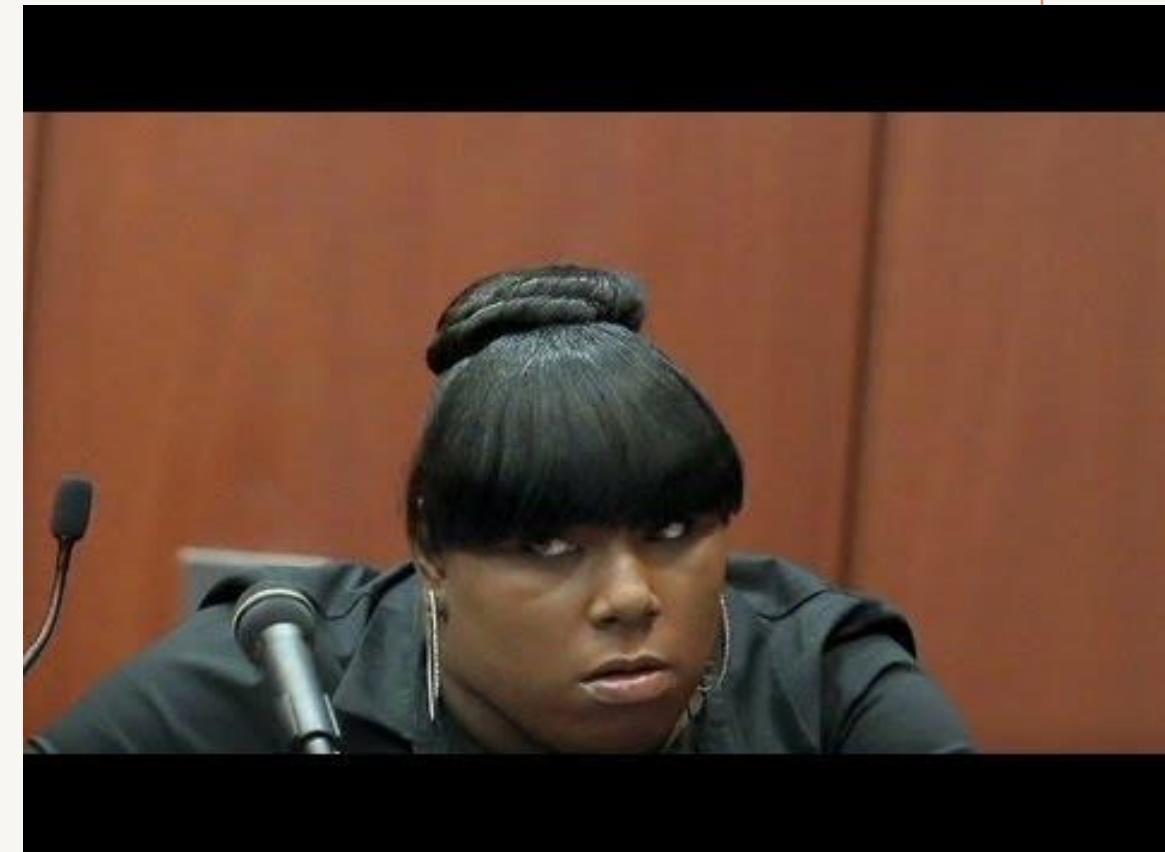
What counts as a request?

- Henry II – who allegedly complained, “Will no one rid me of this turbulent/meddlesome priest?”
- and then some of his knights took it upon themselves to murder that priest, Thomas Becket, in 1170
- **Was Henry II guilty of incitement of the murder?**



"Being ignorant and not credible"???

- Rachel Jeantel – star witness in trial of George Zimmerman for the murder of Trayvon Martin; was on the phone with Martin during part of the confrontation
- In the courtroom and in the media, people did not understand her – and further, criticized her as being ignorant and not credible



- **Rickford and King (2017)** describe Jeantel's speech as consistent with previously-described AAE patterns as well as influence from Haitian Creole, and show how Jeantel's speech was not understood by attorneys or jurors, which arguably caused jurors and others to view her as less credible
- They argue that **speakers of stigmatized varieties in general face barriers in the courtroom (non-English speakers get interpreters; maybe need staff to correct transcriptions of stigmatized varieties of English.**

LANGUAGE AND LINGUISTICS ON TRIAL: HEARING RACHEL JEANTEL
(AND OTHER VERNACULAR SPEAKERS)
IN THE COURTROOM AND BEYOND

JOHN R. RICKFORD

Stanford University

SHARESE KING

Stanford University

Linguistics for justices

- Taylor Jones et al, 2019
 - Court reporters transcribe Standard American English with 95% accuracy
 - Experiment asking Philadelphia court reporters to transcribe African American English – about 59% accuracy, and could only correctly paraphrase these sentences 33% of the time



Language in the courtroom — mis-transcription can have serious consequences!

- "He a delivery man" transcribed as "He's a leery man"
- "When I hear de pop! pop!, I drop a groun' and run away" (Jamaican Eng.) was transcribed as: "I drop the gun and run away".
 - He meant: *I drop to the ground and run away* (luckily corrected by a Jamaican English-speaking editor)
- "Properly his father" ("his biological father") mis-transcribed as "probably his father"

What is the meaning of "harbor an alien"?

- **United States v. Costello, No. 11-2917 (7th Cir. 2012)**
- Defendant, a U.S. citizen, had a romantic relationship and lived with an illegal alien, who was later arrested on drug charges. After being deported to Mexico, he returned illegally and again lived with defendant.
- When he was again arrested on drug charges, defendant was convicted under 8 U.S.C. 1324(a)(1)(A), (iii), as one who knowingly or in reckless disregard of the fact that an alien was in the U.S. in violation of law, concealed, harbored or shielded such alien.
- The statute also covers attempts and transportation. The district judge sentenced her to two years' probation and to pay a \$200 fine.

8 U.S. Code § 1324 - Bringing in and harboring certain aliens

[U.S. Code](#) [Notes](#) [State Regulations](#)

[prev](#) | [next](#)

<https://www.law.cornell.edu/uscode/text/8/1324>

(a) CRIMINAL PENALTIES

(1)

(A) Any person who—

(i) knowing that a person is an alien, brings to or attempts to bring to the United States in any manner whatsoever such person at a place other than a designated port of entry or place other than as designated by the Commissioner, regardless of whether such alien has received prior official authorization to come to, enter, or reside in the United States and regardless of any future official action which may be taken with respect to such alien;

(ii) knowing or in reckless disregard of the fact that an alien has come to, entered, or remains in the United States in violation of law, transports, or moves or attempts to transport or move such alien within the United States by means of transportation or otherwise, in furtherance of such violation of law;



violation of law;

(iii) knowing or in reckless disregard of the fact that an alien has come to, entered, or remains in the United States in violation of law, conceals, harbors, or shields from detection, or attempts to conceal, harbor, or shield from detection, such alien in any place, including any building or any means of transportation;

(iv) encourages or induces an alien to come to, enter, or reside in the United States, knowing or in reckless disregard of the fact that such coming to, entry, or residence is or will be in violation of law; or

(v)

(I) engages in any conspiracy to commit any of the preceding acts, or

(II) aids or abets the commission of any of the preceding acts,

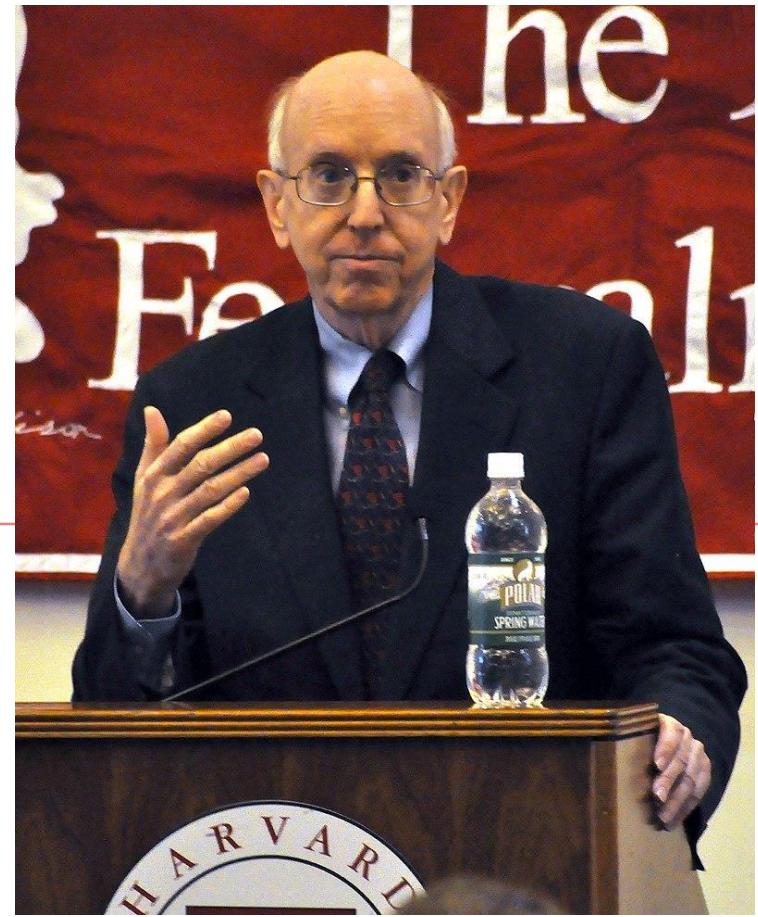
shall be punished as provided in subparagraph (B).

Does Costello "harboring certain aliens"?

- She picked him up at a bus stop and took him to her house, where he stayed for 7 months until he was caught
- Did this count as she concealing him or shielding him from detection?

All that's left is "harboring," which if defined broadly enough describes her action in having permitted the boyfriend to live with her. The government argues that "to harbor" just means to house a person, a meaning that it claims to derive from dictionaries that were in print in 1952 or today; surprisingly the government omits dictionaries that were current in 1917, when concealing and harboring aliens were added to the prohibition of smuggling aliens into this country. Immigration

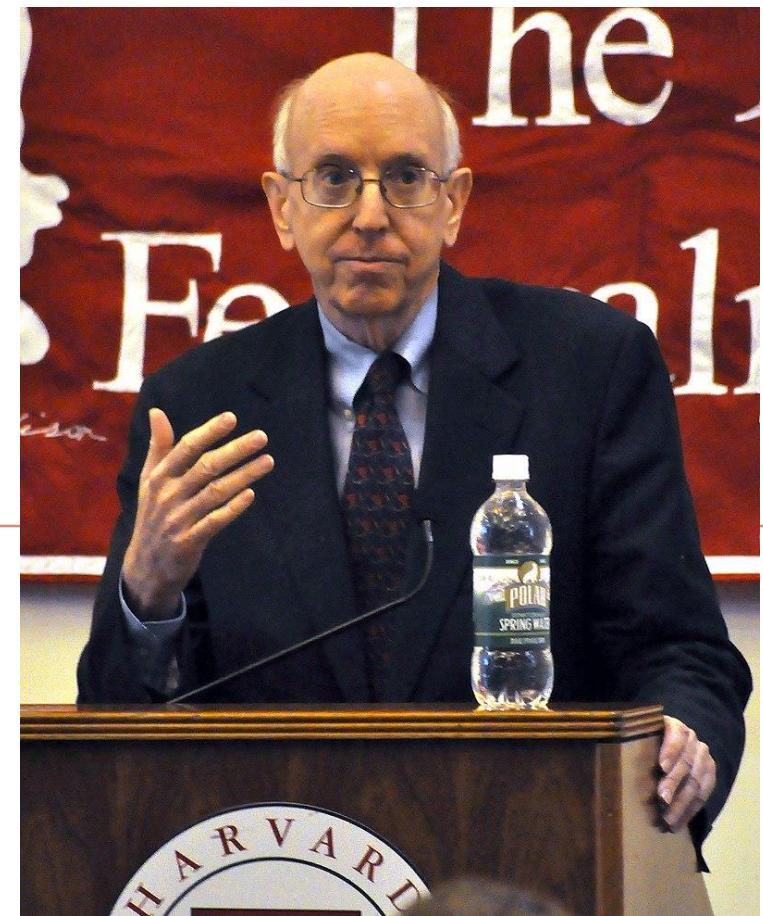
The actual definition of "to harbor" that the government has found in these dictionaries and urges us to adopt is "to shelter," which is not synonymous with "to provide a place to stay." "To shelter" has an aura of protectiveness, as in taking "shelter" from a storm. To shelter is to provide a refuge. "Sheltering" doesn't seem the right word for letting your boyfriend live with you.



Judge Posner (7th circuit)

So the government's reliance on the dictionary definition of "harboring" is mistaken, though a point of greater general importance is that dictionaries must be used as sources of statutory meaning only with great caution.

Dictionary definitions are acontextual, whereas the meaning of sentences depends critically on context, including all sorts of background understandings. *In re* "[O]ne can properly attribute to legislators the reasonable minimum intention 'to say what one would ordinarily be understood as saying, given the circumstances in which it is said.' This principle, it should be noted, does not direct interpreters to follow the literal or dictionary meaning of a word or phrase. To the con-



Judge Posner (7th circuit)

A Google search (conducted on December 13, 2011, rather than in 1952 or 1917, but the government implies by its reliance on current dictionaries that the word means the same today as on the date of the statute's enactment, an implication consistent with *Black's Law Dictionary*) of several terms in which the word "harboring" appears—a search based on the supposition that the number of hits per term is a rough index of the frequency of its use—reveals the following:

"harboring fugitives": 50,800 hits
"harboring enemies": 4,730 hits

Read more:
<https://cases.justia.com/federal/appellate-courts/ca7/11-2917/11-2917-2012-01-31.pdf?ts=1411040995>

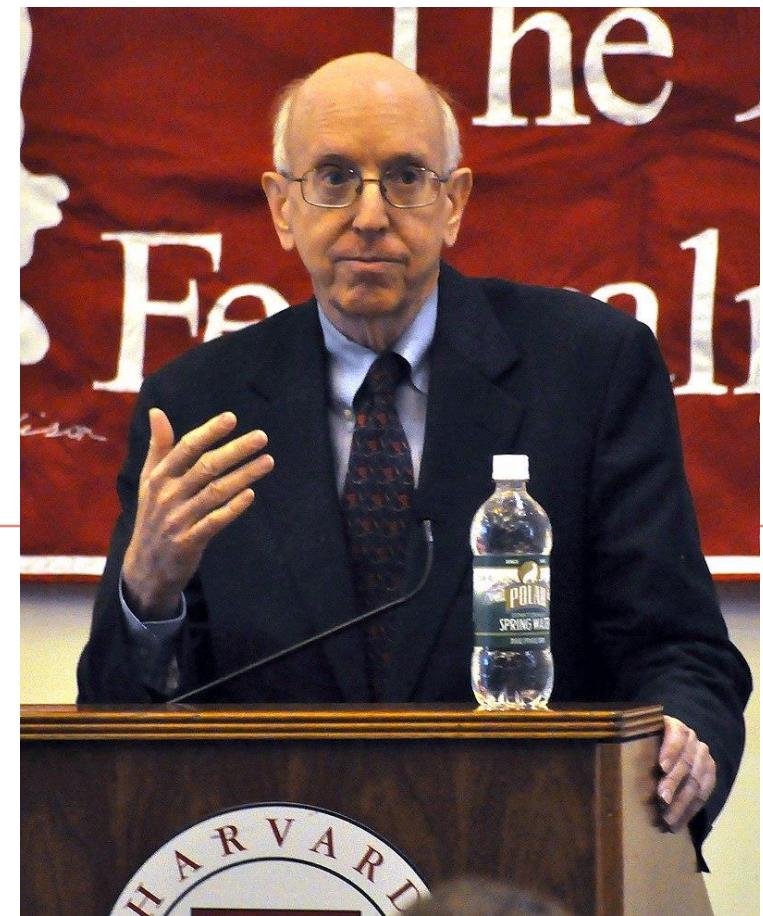
"harboring refugees": 4,820 hits
"harboring victims": 114 hits
"harboring flood victims": 0 hits
"harboring victims of disasters": 0 hits
"harboring victims of persecution": 0 hits
"harboring guests": 184 hits
"harboring friends": 256 hits (but some involve harboring Quakers—"Friends," viewed in colonial New England as dangerous heretics)
"harboring Quakers": 3,870 hits
"harboring Jews": 19,100 hits



Judge Posner (7th circuit)

It is apparent from these results that “harboring,” as the word is actually used, has a connotation—which “sheltering,” and *a fortiori* “giving a person a place to stay”—does not, of deliberately safeguarding members of a specified group from the authorities, whether through concealment, movement to a safe location, or physical protection. This connotation enables one to see that the emergency staff at the hospital may not be “harboring” an alien when it renders emergency treatment even if he stays in the emergency room overnight, that giving a lift to a gas station to an alien with a flat tire may not be harboring, that driving an alien to the local office of the Department of Homeland Security to apply for an adjustment of status to that of lawful resident may not be harboring, that inviting an alien for a “one night stand” may not be attempted harboring, that placing an illegal alien in a school may not be harboring (cf. *Plyler v. Doe*, 457 U.S. 202 (1982)), and finally that allowing your boyfriend to live with you

may not be harboring, even if you know he shouldn’t be in the United States.



Judge Posner (7th circuit)

Think about it

- How would you determine what “harbor” means and whether Costello is guilty of it?
- To what extent might your answer be influenced by your own beliefs about the normative value of enforcing immigration laws?
- Would Google search results be more reliable than dictionary definition?

Read more about language and law

- Coulthard, Malcolm, and Alison Johnson. 2007. *An introduction to forensic linguistics: Language in evidence*. New York: Routledge.
- Olsson, John, and June Luchjenbroers. 2014. *Forensic linguistics*. 3d ed. New York: Bloomsbury.
- Gibbons, John. 2003. *Forensic linguistics: An introduction to language in the justice system*. Malden, MA: Wiley.
- Solan, Lawrence, and Peter Tiersma. 2005. *Speaking of crime: The language of criminal justice*. Chicago: Univ. of Chicago Press.
- Forensic Linguistics: Using Language Analysis to Solve Crimes with the FBI (<https://www.youtube.com/watch?v=7HCGob75xGQ>)
- <https://tale-forensiclinguistics.org/>

Applications of Linguistics

Hongchen Wu

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09-29-2021



Sign up for paper presentations for week 8 to week 13

- https://gtvault-my.sharepoint.com/:x/g/personal/hwu480_gatech_edu/ES0IN1J-VLZHrvnak3Vo42QBqZo_Zo7J2o1qCeUYh2Y_Lw
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- **First come, first serve.**
- **Please sign up by the end of 10/10**

Gentle reminder

- **Discussion board open for Language and Law, due 10/03 11:59pm**
- **Paper review #1 due 10/03 11:59pm**
 - Please do not write paper review on the paper which you selected for oral presentation

Gentle reminder

- **Inference-based Dialogue Management for Open-Domain Chats**
 - Jinho Choi, Associate Professor of Linguistics, Computer Science, and Quantitative Theory and Methods, Emory University
 - Wednesday, **September 29**, 5-6pm; <https://bluejeans.com/4473252229>
- **Linguistic Fieldwork in Papua New Guinea**
 - Kate Lynn Lindsey, Assistant Professor of Linguistics, Boston University
 - Wednesday, November 3, 5-6pm; <https://bluejeans.com/4473252229>

Extra Credit (up to 5%) through research practicum (due 12/06 11:59pm)

- You have many opportunities to earn extra credit throughout this semester.
- The most important ways are to Attend a talk or participate in a language-related study on campus.
- You need to submit a report on what you learn.
- Each event/research engagement... is one “practicum” and earns you 2 points on top of your total grade.
- In your practicum report (about 150-250 words), you will need to keep the record of the time and place of each practicum, briefly introduce what the practicum is about, and list specifically what you learn through the practicum.

Week 7 10/04/2021-10/08/2021	Language & politics/power	Language & politics/power	Sign up for article presentations for next 5 weeks
Week 8 10/11/2021-10/15/2021	<i>Fall Break</i>	Student presentations [politics/power]	Discussion due [politics/power]
Week 9 10/18/2021-10/22/2021	Language & gender	Student presentations [gender]	Discussion due [gender]
Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine (<u>speech pathology</u>)	Paper review #2 due
Week 11 11/01/2021-11/05/2021	Student presentations [medicine]	Language & technology	Discussion due [medicine]
Week 12 11/08/2021-11/12/2021	Student presentations [technology]	Language & names	Discussion due [technology] Outline of final project due
Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

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feedback for Andrew
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feedback for Akhil
Turaga_09292021

[https://forms.office.com/r/
AxdKzWngi2](https://forms.office.com/r/AxdKzWngi2)



LING 3100_Presentation
feedback for Gary Ross
Johnson_09292021

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X82swsu75](https://forms.office.com/r/X82swsu75)



Applications of Linguistics

Hongchen Wu

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10-04-2021



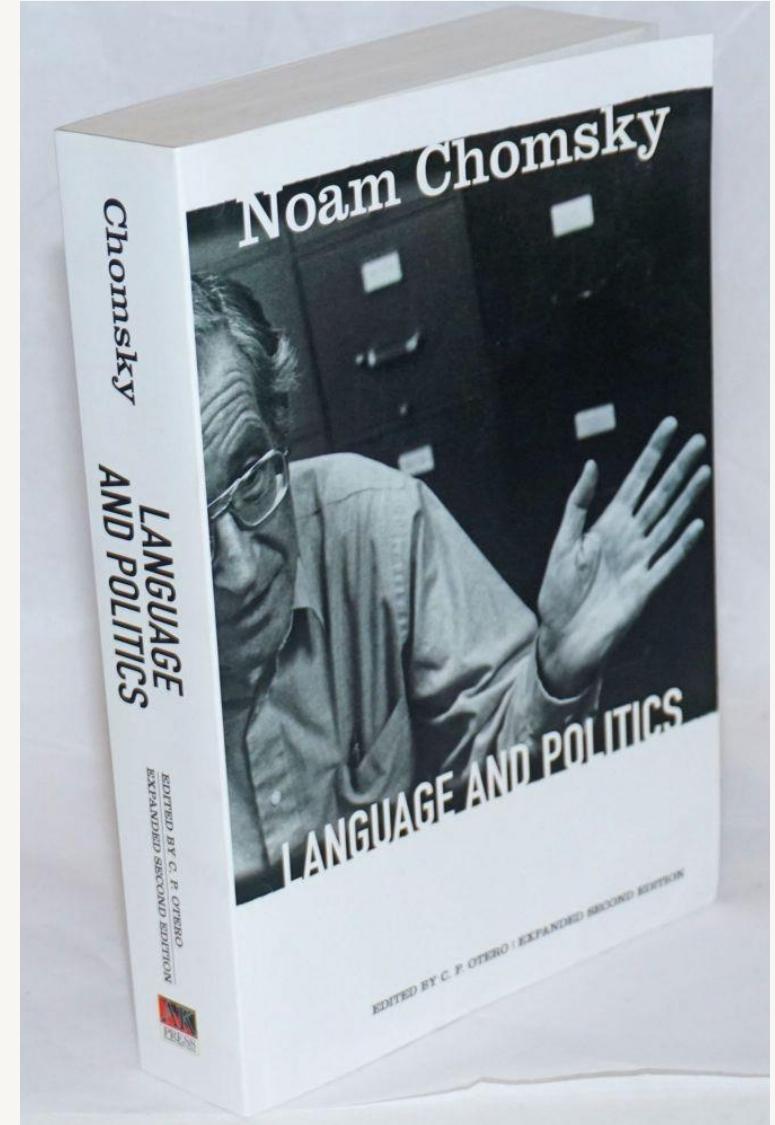
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Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

Language and Politics/Power

Words are the currency of power in elections.



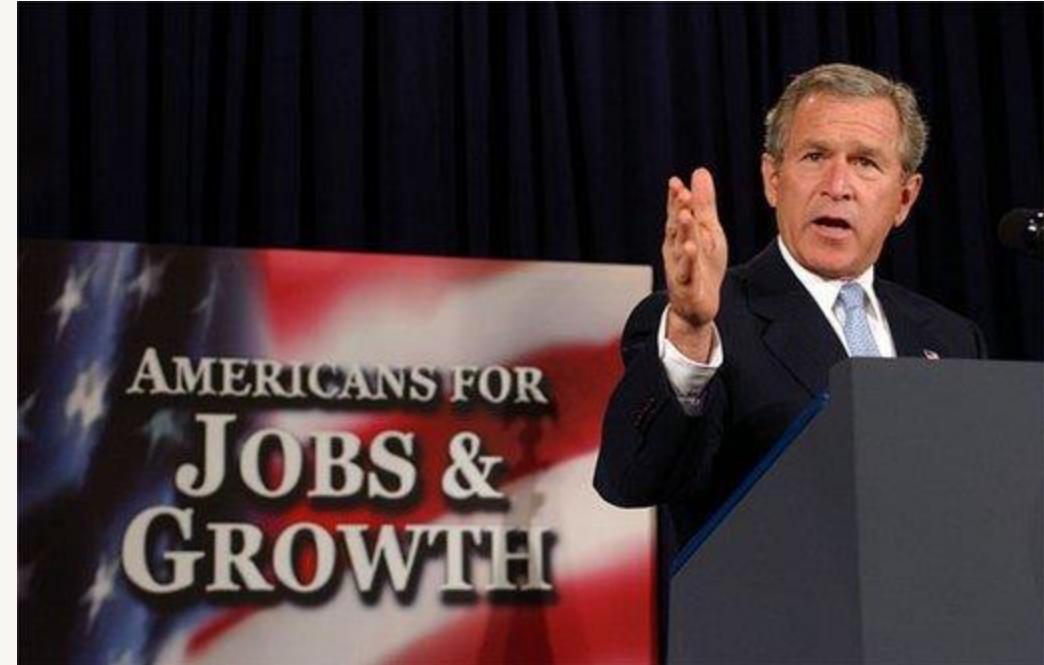
Pay attention to how the two different directors at NASA define “the situation here and now” in completely different terms.

1. Which view inspires more confidence?
2. Which director would you rather have as your leader? Why?



“tax relief”

- When the word “tax” is added to “relief”, the result is a metaphor: taxation is an affliction.
- And the person who takes it away is a hero, and anyone who tries to stop him is a bad guy.
- **This is a frame.**



Framing

- Framing is about getting language that fits your worldview.
- It is not just language. The ideas are primary and the language carries those ideas, evokes those ideas.

The power of framing: It's not what you say, it's how you say it

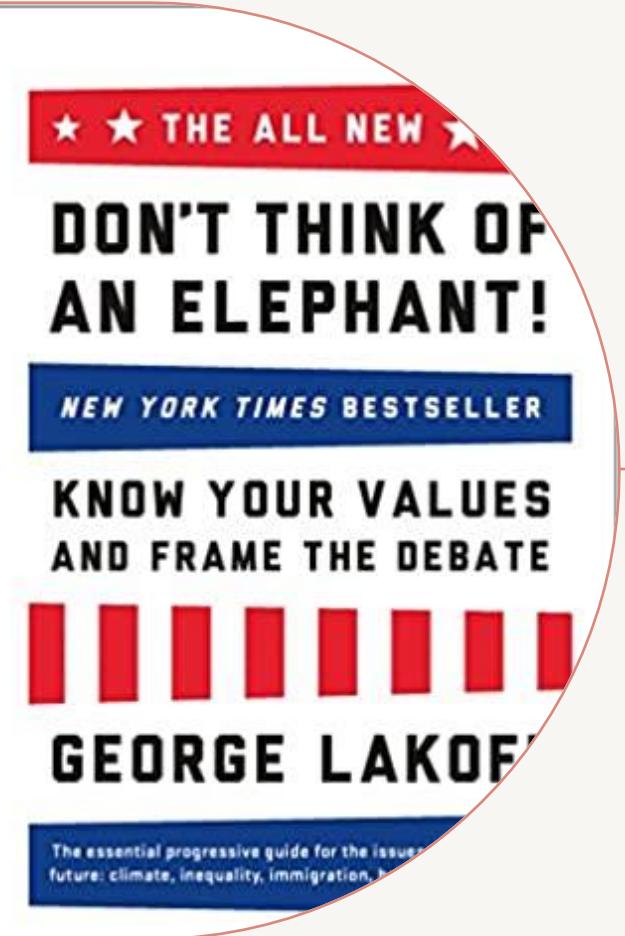
The 2016 election and a wealth of psychological data show how much our reasoning can be influenced by how information is framed



▲ People tend to frame political arguments in terms of their own values, but when arguing across party lines, it is much more effective to frame your argument in terms of your opponent's values. Photograph: Mladen Antonov/AFP/Getty Images

Frame the debate

- If you negate a frame, you strengthen a frame.
- If you say “don’t think of an elephant,” you can’t help but think of one.



- **Every word, like elephant, evokes a frame**, which can be an image or other kinds of knowledge: Elephants are large, have floppy ears and a trunk, are associated with circuses, and so on. The word is defined relative to that frame.
- **When we negate a frame, we evoke the frame.**

a basic principle of framing for when you are arguing against the other side: **Do not use their language.** Their language picks out a frame — and it won't be the frame you want.



Some critics have said our duties in Iraq must be internationalized. This particular criticism is hard to explain to our partners in Britain, Australia, Japan, South Korea, the Philippines, Thailand, Italy, Spain, Poland, Denmark, Hungary, Bulgaria, Ukraine, Romania, the Netherlands, Norway, El Salvador, and the 17 other countries that have committed troops to Iraq. As we debate at home, we must never ignore the vital contributions of our international partners, or dismiss their sacrifices. From the beginning, America has sought international support for our* operations in Afghanistan and Iraq, and we have gained much support. There is a difference, however, between leading a coalition of many nations, and submitting to the objections of a few. America will never seek a permission slip to defend the security of our country.

George W. Bush

Think about it

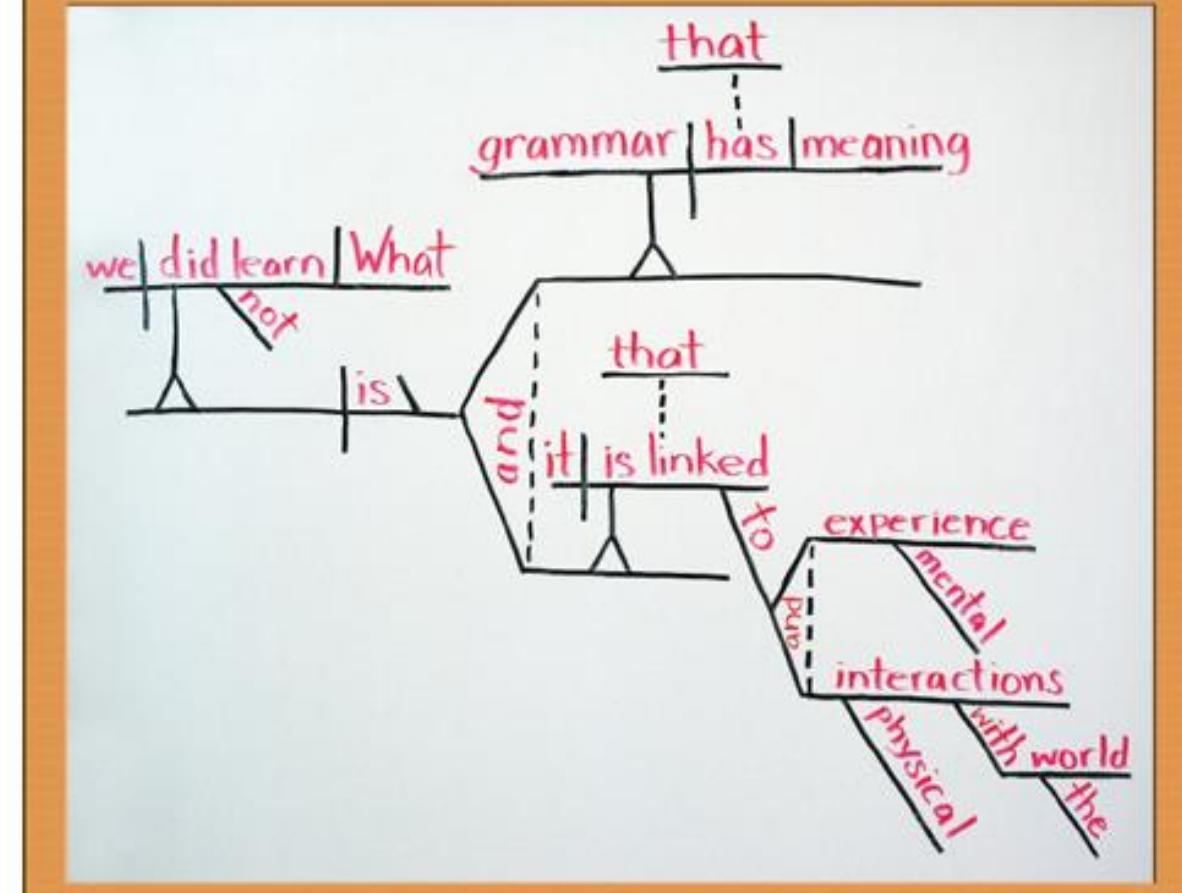
- When was the last time you needed a permission slip?
- Who has to ask for a permission slip and who is being asked, and the relationship between them.
- What kind of political image did Bush create through this sentence?

In the middle of his remarks, someone from the crowd yelled that they can't hear him. Notice his spontaneous framing of **"the situation here and now"** from that point, and think about the following questions:

1. What is President Bush's task at hand? More generally, in times of crisis, what are the core framing tasks of a leader?
2. Does his framing accomplish that task? What is good or bad about it?
3. Does Bush have more than one audience in this speech? If so, who might also be making attributions of leadership?
4. How does President Bush use that information to frame his message?



Framing with Grammar



How will you describe a past tense?

- You see your friend Maria cycling one evening across campus,
- and the next morning you report:
 - “Maria was riding her bike last night”
 - “Maria rode her bike last night.”
- **What's the difference in between the sentences?**

Political Psychology, Vol. 32, No. 4, 2011

doi: 10.1111/j.1467-9221.2010.00802.x

Can Grammar Win Elections?

Caitlin M. Fausey

Indiana University

Teenie Matlock

University of California, Merced

Fausey and Matlock 2011

- Participants in the study read a passage about a fictitious politician named Mark Johnson. Mark was a Senator who was seeking reelection. The passage described Mark's educational background, and reported some things he did while he was in office, including an affair with an assistant and hush money from a prominent constituent.
- Some participants read a sentence about actions framed with past progressive (was VERB+ing): "**Last year, Mark was having an affair with his assistant and was taking money from a prominent constituent.**"
- Others read a sentence about actions framed with simple past (VERB+ed): "**Last year, Mark had an affair with his assistant and took money from a prominent constituent.**"

Take a guess

- Which group were quite confident that the Senator would not be reelected?
- For question on how much hush money they thought could be involved, which group gave reliably higher dollar estimates?

Fausey and Matlock 2011

Conclusion:

- Information framed with **past progressive** caused people to reflect more on the action details in a given time period than did information framed with **simple past**.

Framing with Metaphor

- Metaphor is often used as a literacy device.

"How Heavy Do I Journey on the Way,"

"My grief lies onward and my joy behind."

- Any examples of metaphor you can think of?

Framing with Metaphor

- Metaphor is much more than a literary device.
- Metaphor is in fact **a basic mechanism that enables people to understand one kind of thing**, particularly something abstract, **in terms of another thing that is more familiar and based on direct experience.**

-- Linguist George Lakoff and philosopher Mark Johnson

Campaigns as races

- Right after the 2012 Olympics, Barack Obama shared his thoughts on the campaign ahead:
- “This is not going to be a race like Usain Bolt, where we’re like 40 yards ahead and we can just kind of start jogging 10 feet before the finish line,”
- “We’re going to have to run through the tape.”



Around that same time, Paul Ryan, who had just been chosen as Mitt Romney’s running mate, commented,

- “We’re going to win this campaign. We’ve got the wind behind us. I’m really excited about this race.”



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-04-2021



Sign up for paper presentations for week 8 to week 13

- https://gtvault-my.sharepoint.com/:x/g/personal/hwu480_gatech_edu/ES0IN1J-VLZHrvnak3Vo42QBqZo_Zo7J2o1qCeUYh2Y_Lw
- **If you haven't done paper presentations yet, please check the tab "list of papers" in this excel file, go over the paper title or the paper abstract and choose one for oral presentation.**
- **Once you know which paper you'd like to present, please copy the paper info and put down your name.**
- **First come, first serve.**
- **Please sign up by the end of 10/10**

Week 7 10/04/2021-10/08/2021	Language & politics/power	Language & politics/power	Sign up for article presentations for next 5 weeks
Week 8 10/11/2021-10/15/2021	<i>Fall Break</i>	Student presentations [politics/power]	Discussion due [politics/power]
Week 9 10/18/2021-10/22/2021	Language & gender	Student presentations [gender]	Discussion due [gender]
Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine (<u>speech pathology</u>)	Paper review #2 due
Week 11 11/01/2021-11/05/2021	Student presentations [medicine]	Language & technology	Discussion due [medicine]
Week 12 11/08/2021-11/12/2021	Student presentations [technology]	Language & names	Discussion due [technology] Outline of final project due
Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

Political campaign slogans



PresidentsUSA.net

Presidential Campaign Slogans

YEAR	CANDIDATE	SLOGAN
1840	William Henry Harrison	Tippecanoe and Tyler Too
1844	James K. Polk	54-40 or Fight
1844	James K. Polk	Reannexation of Texas and Reoccupation of Oregon
1844	Henry Clay	Who is James K. Polk?
1848	Zachary Taylor	For President of the People
1856	John C. Fremont	Free Soil, Free Labor, Free Speech, Free Men, and Fremont
1860	Abraham Lincoln	Vote Yourself a Farm
1864	Abraham Lincoln	Don't Swap Horses in the Middle of the Stream
1884	Grover Cleveland	Blaine, Blaine, James G. Blaine, The Continental Liar from the State of Maine
1884	James Blaine	Ma, Ma, Where's my Pa, Gone to the White House, Ha, Ha, Ha

2008	John McCain	Country First
2008	Barack Obama	Change We Can Believe In
2008	Barack Obama	Change We Need
2008	Barack Obama	Hope
2008	Barack Obama	Yes We Can!
2012	Barack Obama	Forward
2012	Mitt Romney	Believe in America
2016	Donald Trump	Make America Great Again
2016	Hillary Clinton	I'm With Her
2016	Hillary Clinton	Stronger Together
2020	Donald Trump	Keep America Great
2020	Donald Trump	Promises Made, Promises Kept
2020	Joe Biden	Build Back Better
2020	Joe Biden	No More Malarkey
2020	Joe Biden	Unite for a Better Future

Political campaign slogans

- Which slogan(s) left you the deepest impression? Why?
- What makes a campaign slogan hit - or miss?
- What are the linguistic properties that you think must be met to make a phrase memorable and repeatable?

"Yes, we can"

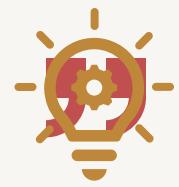
- It enters into specific contexts of situation, draws from previous contexts, and resonates with a candidate's larger campaign theme.
- Senator Obama first introduced this slogan in a speech to supporters on the evening of the New Hampshire primary in January 2008. In that speech, he tapped into the slogan's rich intertextual history and connected that history to his own campaign's focus on hope and change.



Adam Hodges 2019 : aesthetic appeal plus intertextual resonance with historical usages and the campaign's own central message.

- Obama utters the slogan in the same breath as **historical precedents of struggle and inspiration**,
 - the nation's founding,
 - the abolitionist and suffragette movements
 - the struggle for equality
 - struggles for social change.
- That association paralleled Obama's central campaign theme, codified in campaign materials through his other slogan, "Change we can believe in."





What if it was
"Yes, we will"

or

"Yes, we are
able to"?

Any difference from "Yes, we can"?

Which one do you like better or do you think would be more effective? Why?

Jackboson 1960: leveraging the poetic function of language.

Richard Bauman and Charles Briggs (1990): parallelism, repetition, and dramatic pauses, all elements that play a key role to rendering discourse extractable

*Annu. Rev. Anthropol. 1990. 19:59–88
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Closing Statement: Linguistics and Poetics

ROMAN JAKOBSON

Fortunately, scholarly and political conferences have nothing in common.
The success of a political convention depends on the general agreement
of the totality of its participants. The use of votes and vetoes,

POETICS AND PERFORMANCE AS CRITICAL PERSPECTIVES ON LANGUAGE AND SOCIAL LIFE

Richard Bauman

Folklore Institute, Indiana University, Bloomington, Indiana 47405

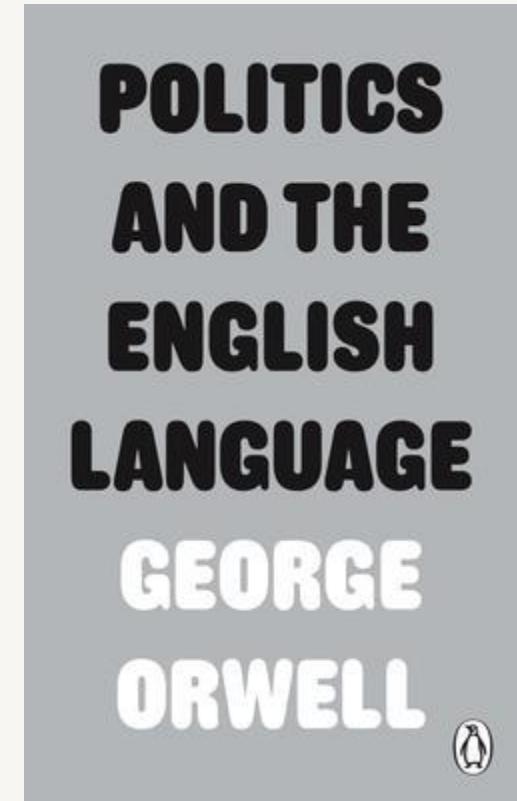
Charles L. Briggs

Department of Anthropology, Vassar College, Poughkeepsie, New York 12601

KEY WORDS: text, context, verbal art, political economy of language, folklore

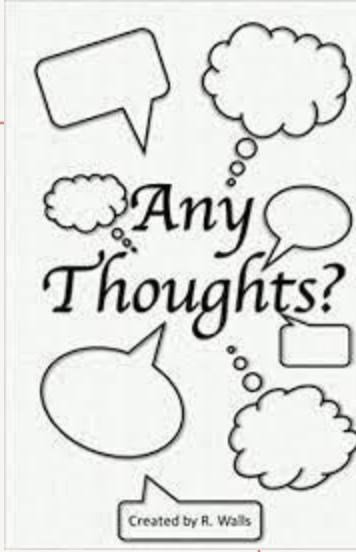
Orwell (1946) criticized the "ugly and inaccurate" written English of his time and examines the connection between political orthodoxies and the debasement of language.

- political language "is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind".
- Orwell believed that the language used was necessarily vague or meaningless because it was intended to hide the truth rather than express it.
- Orwell encourages **concreteness and clarity** instead of **vagueness, and individuality** over political conformity.



Remedy of Six Rules by Orwell (1946)

1. Never use a metaphor, simile, or other figure of speech which you are used to seeing in print.
2. Never use a long word where a short one will do.
3. If it is possible to cut a word out, always cut it out.
4. Never use the passive where you can use the active.
5. Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent.
6. Break any of these rules sooner than say anything outright barbarous.

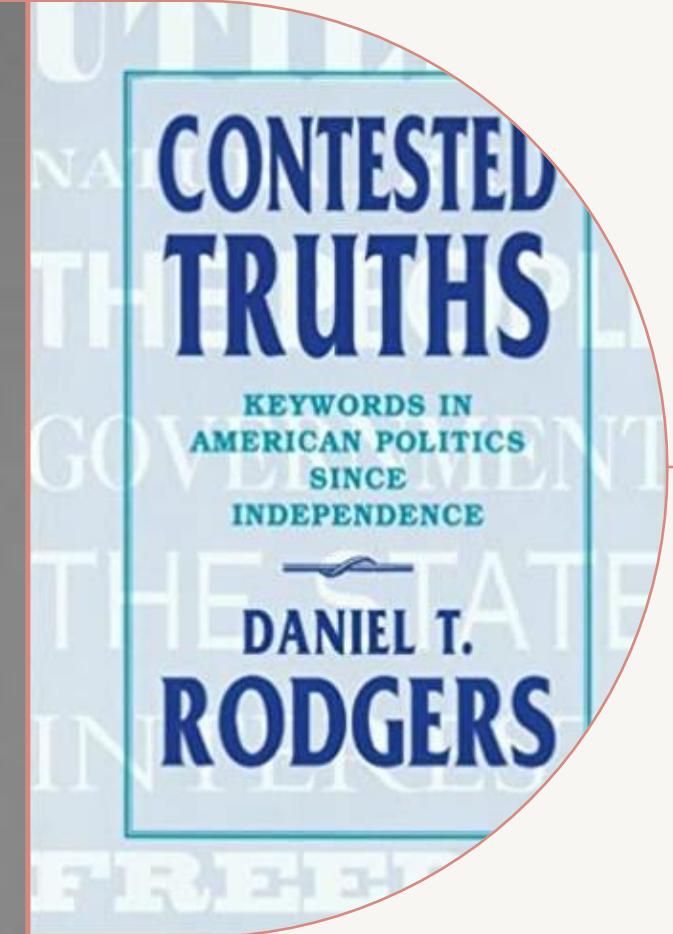


Do you think the following political slogans fit the six rules proposed by Orwell?

1916	Woodrow Wilson	He Kept Us Out Of War
1920	Warren G. Harding	Return to Normalcy
1920	Warren G. Harding	Cox and Cocktails
1924	Calvin Coolidge	Keep Cool With Coolidge
1928	Herbert Hoover	A Chicken in Every Pot and a Car in Every Garage
1952	Dwight Eisenhower	I Like Ike

Achieve mass persuasion with language

- "Language is an important force in shaping the political,"
- American political language throughout history is "**a field of combat: words are weapons to be used, battlegrounds to be conquered or defended.**"



Negative campaigning/ Mudslinging

- In the matter of swaying public opinion, political rhetoric can get pretty vicious.
 - Attack
 - Contrast

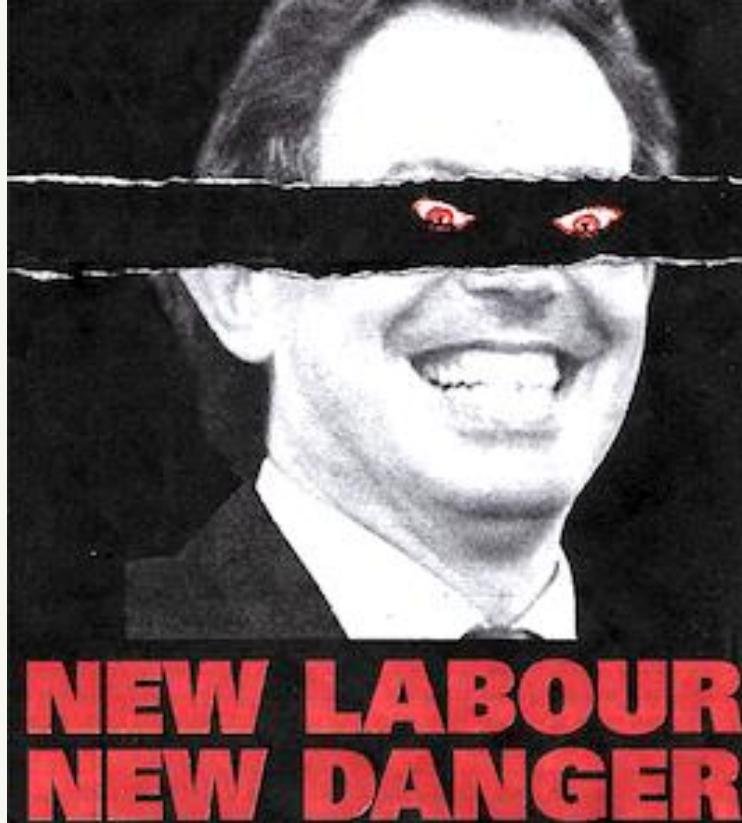




1964: The [Daisy ad](#) used by [Lyndon Johnson](#) against [Barry Goldwater](#) in the [1964 United States presidential election](#).

The "Daisy" ad has been used or referenced in multiple political campaigns since being shown and was an important turning point in political and advertising history.

- During the run up to the 1997 general election, the Conservative Party of UK ran a campaign that stated that the Labour Party was dangerous.
- This ad used posters of Labour leader Tony Blair with "demon eyes" on them titled "New Labour, New Danger" (in reference to the New Labour slogan).
- But this ad failed.



new Labour
new Britain



- "Black baby of John McCain" slur in the George W. Bush primary campaign.

- In 2000, John McCain took the New Hampshire primary and was favored to win in South Carolina.
- Voters were asked through phone calls, "**Would you be more or less likely to vote for John McCain...if you knew he had fathered an illegitimate black child?**"
- McCain was at the time campaigning with his dark-skinned daughter, Bridget, adopted from Bangladesh.
- It worked. Owing largely to the whispering campaign, Bush prevailed in South Carolina and secured the Republican nomination.



GODLESS AMERICANS PAC WANTS TO REMOVE "UNDER GOD" FROM THE PLEDGE OF ALLEGIANCE.



AND NOW, THEY WANT KAY HAGAN IN THE U.S. SENATE...

- <https://www.wral.com/news/local/politics/video/3877142/>

Elizabeth Dole's ad against Democratic challenger Kay Hagan in her 2008 Senate re-election campaign:

- stated the leader of the Godless Americans PAC had held "**a secret fundraiser in Kay Hagan's honor.**"
- showed sound bites of group members espousing their views
- then stated Kay Hagan "**hid from cameras, took Godless money... what did Hagan promise in return?**"
- It ended with a photo of Hagan and a female voice saying, "**There is no God.**"

Hagan's victory was partially attributed to anger over the "Godless" ad.

Think about it!

Why do politicians use negative campaigns especially attack type of negative campaigns?

What are the risks and consequences of using negativ campaigns?

Think about it!

- Should negative campaigns including slurs be used in political campaigns?
- If so, should such campaigns be regulated?
- If so, who should regulate such campaigns? What are the regulations that you think be included?

The Advertising Standards Authority (ASA) of UK received 150 complaints about the "New Labour. New danger" ad in 1997. The ASA upheld the complaints and instructed the Conservatives to withdraw the poster.

However, in 1999, the ASA decided to stop regulating political advertising, citing this advert as a particularly difficult case and saying: "**The free flow of argument in the cut and thrust of open debate is the best antidote to political advertising that misleads or offends.**"

Negative campaign: a double-edge sword

American Political Science Review

Vol.88, No. 4 December 1994

DOES ATTACK ADVERTISING DEMOBILIZE THE ELECTORATE?

STEPHEN ANSOLABEHHERE *Massachusetts Institute of Technology*

SHANTO IYENGAR, ADAM SIMON, and

NICHOLAS VALENTINO *University of California, Los Angeles*

We address the effects of negative campaign advertising on turnout. Using a unique experimental design in which advertising tone is manipulated within the identical audiovisual context, we find that exposure to negative advertisements dropped intentions to vote by 5%. We then replicate this result through an aggregate-level analysis of turnout and campaign tone in the 1992 Senate elections. Finally, we show that the demobilizing effects of negative campaigns are accompanied by a weakened sense of political efficacy. Voters who watch negative advertisements become more cynical about the responsiveness of public officials and the electoral process.

Negative campaign: a double-edge sword

American Political Science Review

Vol. 93, No. 4 December 1999

Replicating Experiments Using Aggregate and Survey Data: The Case of Negative Advertising and Turnout

STEPHEN D. ANSOLABEHÈRE *Massachusetts Institute of Technology*

SHANTO IYENGAR *Stanford University*

ADAM SIMON *University of Washington*

Experiments show significant demobilizing and alienating effects of negative advertising. Although internally valid, experiments may have limited external validity. Aggregate and survey data offer two ways of providing external validation for experiments. We show that survey recall measures of advertising exposure suffer from problems of internal validity due to simultaneity and measurement error, which bias estimated effects of ad exposure. We provide valid estimates of the causal effects of ad exposure for the NES surveys using instrumental variables and find that negative advertising causes lower turnout in the NES data. We also provide a careful statistical analysis of aggregate turnout data from the 1992 Senate elections that Wattenberg and Brians (1999) recommend. These aggregate data confirm our original findings. Experiments, surveys, and aggregate data all point to the same conclusion: Negative advertising demobilizes voters.

Negative campaign: a double-edge sword

The Sleeper Effect and Negative Political Advertising

Ruth Ann Weaver Lariscy and Spencer F. Tinkham

The sleeper effect phenomenon is examined to explain how the impact of negative political advertising persists—and even increases—over time. Using a true experimental design with attack and defensive message treatments, adult subjects were asked to report their vote and its certainty immediately after message exposure and in a delayed telephone callback. Results indicate that a defensive advertisement following the attack is initially effective; however, over the next few weeks, the impact of the attack ad increases substantially. Similarly, an initial perception that the assailant has low credibility has only a temporary suppressive impact on the effectiveness of the attack ad. Our documentation of both an order-driven and a credibility-driven sleeper effect poses strategic challenges for those candidates who are attacked. Further, these results offer theoretical insights into the determinants and the pervasiveness of the sleeper effect in political campaigns.

Negative campaign: a double-edge sword

PSYCHOPHYSIOLOGICAL AND MEMORY EFFECTS OF NEGATIVE POLITICAL ADS

Aversive, Arousing, and Well Remembered

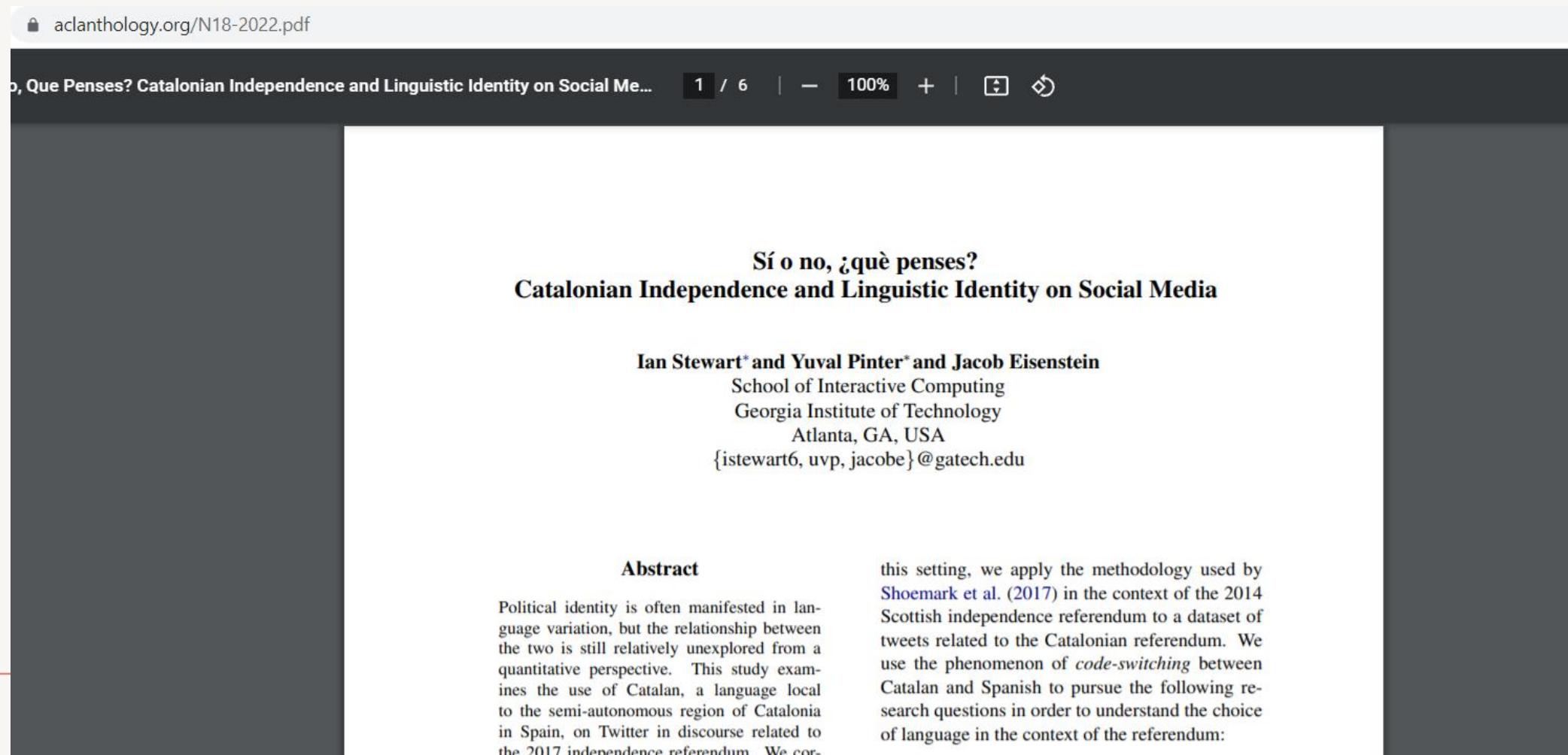
Samuel D. Bradley, James R. Angelini, and Sungkyoung Lee

ABSTRACT: This study examines whether negative political advertisements elicit automatic activation in the aversive motivational system among viewers. A measure is introduced—the eyeblink startle reflex—that provides evidence that negative ads do activate the aversive motivational system. As these participants watched negative political ads, physiological responses indicated that their body was reflexively preparing to move away. Negative ads also elicited more physiological and self-reported arousal than moderate ads. Recognition data show that detailed information from negative ads is better recognized; however, participants were also more likely to incorrectly report that they recognized information from negative ads they did not see.

Negative campaign: a double-edge sword

- Angelini, Bradley and Lee (2007) used ads that aired during the 2000 presidential election. During the study, the researchers placed electrodes under the eyes of willing participants and showed them a series of 30-second ads from both the George W. Bush and Al Gore campaigns
- The electrodes picked up on the "startle response," the automatic eye movement typically seen in response to snakes, spiders and other threats.
- Compared to positive or neutral messages, negative advertising prompted greater reflex reactions and a desire to move away.

Language choice as a political choice



acanthology.org/N18-2022.pdf

1 / 6 | - 100% + | ☰

Sí o no, ¿qué piensas? Catalonian Independence and Linguistic Identity on Social Media

Ian Stewart* and Yuval Pinter* and Jacob Eisenstein
School of Interactive Computing
Georgia Institute of Technology
Atlanta, GA, USA
{istewart6, uvp, jacobe}@gatech.edu

Abstract

Political identity is often manifested in language variation, but the relationship between the two is still relatively unexplored from a quantitative perspective. This study examines the use of Catalan, a language local to the semi-autonomous region of Catalonia in Spain, on Twitter in discourse related to the 2017 independence referendum. We cor-

this setting, we apply the methodology used by Shoemark et al. (2017) in the context of the 2014 Scottish independence referendum to a dataset of tweets related to the Catalonian referendum. We use the phenomenon of *code-switching* between Catalan and Spanish to pursue the following research questions in order to understand the choice of language in the context of the referendum:

Stewart, Pinter & Eisenstein 2018

- Pro-independence tweets are more often in **Catalan or Spanish?**
- pro-unified-Spain tweets more often in **Catalan or Spanish?**
- A given (bilingual) user is more likely to use **Catalan or Spanish** in tweets related to referendum than other tweets

Shoemark et al 2017

- Pro-independence tweets are more likely to be in **Scots or English?**
- pro-unified-UK tweets more likely to be in **Scots or English?**
- A given (bilingual) user is **LESS likely** to use **Scots or English** in tweets related to the referendum than other tweets?
 - why?

Read more

- **Journal of Language and Politics**, <https://benjamins.com/catalog/jlp>
- <http://www.leadershipframing.com/index.php>
- https://youtu.be/S_CWBjylERY
- Lakoff, G., and M. Johnson. 1980. *Metaphors We Live By*. Chicago, IL: University of Chicago Press.
- Bizer, G. Y., and R. E. Petty. 2005. How we conceptualize our attitudes matters: The effects of valence framing on the resistance of political attitudes. *Political Psychology* 26:553-568.

FESTIVAL VIDEO PERFORMANCE EDUCATION GLOBAL ABOUT



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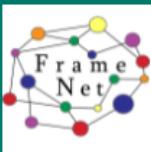
MIND YOUR LANGUAGE: METAPHOR, THOUGHT AND IMAGINATION

THURSDAY, SEPTEMBER 30, 2021 | 3:00 PM - 4:30 PM EDT



Mind Your Language: Thought, Metaphor and Imagination





FrameNet maps meaning to form in contemporary English through the theory of Frame Semantics.

Recent News

- Multilingual FrameNet software and data RELEASE!
- Fall 2020: Constructicon Annotation Workshop
- ACL 2020 paper: "Language (Re)modelling: Towards Embodied Language Understanding" by Tamari Ronen, Chen Shani, Tom Hope, Miriam R L Petrucc, Omri Abend, Dafna Shahaf
- Revised FrameNet data distribution policy, especially for commercial users.
- June 2020: International FrameNet Workshop

GET THE DATA

Welcome to FrameNet!



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-13-2021



Week 7 10/04/2021-10/08/2021	Language & politics/power	Language & politics/power	Sign up for article presentations for next 5 weeks
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Week 16 12/06/2021	Q&A session		

paper presentations for week 8 to week 13

- https://gtvault-my.sharepoint.com/:x/g/personal/hwu480_gatech_edu/ES0IN1J-VLZHrvnak3Vo42QBqZo_Zo7J2o1qCeUYh2Y_Lw

Gentle reminder

- **Discussion board for Language and Politics, Language and Gender:**
 - Open by end of 10/14 and due 10/24 11:59pm
- **Paper review #2 due 10/31 11:59pm**
 - Please do not write paper review on the paper which you selected for oral presentation
 - Please do not write paper review on the paper which you selected for paper review #1

Paper review #1: summary statistics

Count of papers selected for each topic



Pediatric Speech-Language Pathologists' Use of Mobile Health Technology: Qualitative..

Individual Differences in Second Language Learning

Ethical Questions in NLP Research: The (Mis)-Use of Forensic Linguistics

The Contribution of Morphological Awareness and Vocabulary Knowledge to Chinese as a Second..

Evaluating Gender Bias in Machine Translation

Examining the Verbal Environments of Children From Different Socioeconomic Backgrounds

The Causes and Consequences of Distinctively Black Names

Using NLP for Enhancing Second Language Acquisition

Analyzing the Language of Food on Social Media

Evidence that Gendered Wording in Job Advertisements Exists and Sustains Gender Inequality

No Country for Old Members: User Lifecycle and Linguistic Change in Online Communities

What's in a Brand Name? A Note on the Onomastics of Brand Naming

Pokémonastics: a study in sound symbolism and Pokémon names

Count of papers reviewed

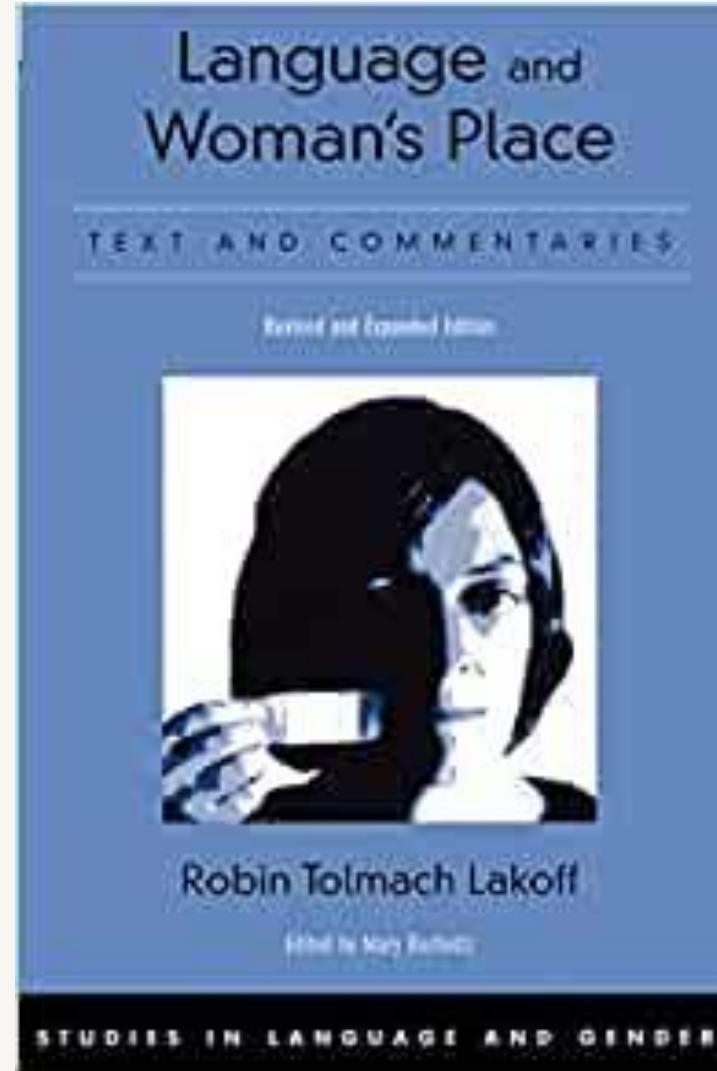


Think about it

- Consider current popular ads. Can you think of examples that contain gender signifiers?

Language and Gender

- the presence of gender bias in languages
- the differences between genders while using the language.



Who speaks more standardly?

- Working-class
 - “Men speak less standardly”
 - “Women speak more standardly”
- Why might this be?
- Is it related to the occupations that men and women take within the working class
 - Factory worker, bus driver vs. nurse, secretary
 - Who has to speak more “standardly” to advance?
 - In societies where only men have had access to education /institutions where prestige variety is used, would men speak more standard / prestigious forms than women?

- Possibly the educational patterns put women more in the standard language market than men
- Men use reductions more often than women
- Socio-economic difference is greater among women than among men

Lakoff 1975

- the marginality and powerlessness of women is reflected in both the ways men and women are expected to speak and the ways in which women are spoken of.
- to speak "like a lady": women tend to use linguistic forms that reflect and reinforce a subordinate role.
 - Minimal response: mm, yeah
 - Tag question: you know?
 - Turn-taking: isn't it? What do you think?

Lakoff 1975

- More hedges ("kind of"; "I think that"); effusive/empty adjectives
- ("gorgeous!") & intensifiers ("soo")
- Apologize more; more polite ("Sorry to bother you, but....")
- Use more tag questions ("you don't mind do you?")
- Less direct orders; more indirect suggestions

Conclusion: "**Women are doing it wrong**" / **should act more like men if they want to be taken seriously.**

Work on courtroom dialog (O'Barr and Atkins)

- Not only women, but people without power used these features
- (Female) judges & expert witnesses: direct, authoritative speaking style, less “polite”
- (Male) defendants: indirect, hedged speaking style, more “polite”
- **Are Lakoff's features really features of WOMEN's speech, or features of POWERless speech?**

Deborah Tannen: “cross-cultural communication”

- Men & women come from two different cultures (like USA and Japan): neither is better (no one is “doing it wrong”), but they have different norms
- Men think complaints should be followed by suggestions for how to fix things
- Women think complaints should be followed by sympathy
- Cross-cultural misunderstandings...
 - Men’s culture: talk to “score points”
 - Women’s culture: talk to “build community”

Evaluating Tannen's claims

- Treats men, women's speech as equally valid
- But do men, women in the USA really come from two different cultures?
- Does this "separate but equal" analysis obscure real differences in power between men, women?

Judith Butler: Gender as performance

- Gender as socially constructed
- Similar(ish) to age for example – there's a biological basis but CULTURE dictates what it MEANS to be a certain age group
- Biology, sexual orientation/desire, social roles, personality traits, clothing, hair/makeup, speech
 - “Gendered” coherence between these is dictated by culture (even if people THINK that it is natural/essential)
- “Woman” is not an ahistorical natural kind; it's specific to culture & history, like “high-schoolers”
- Asking “how do men/women talk” presupposes existence of men, women, difference between them – which Butler questions

Judith Butler: Gender as performance

- Distinction between “women” and “men” is still hugely important in our society and in language variation
 - How to study that if we reject this distinction?
 - Are women marginalized when the category of “women” is questioned? [not really a language question, a political question]

Four models of language and gender

- **“Deficit model”**
 - women are doing it wrong!, should be more like men
- **“Difference model”**
 - women, men come from two different (but equally valid, perhaps equally powerful?) cultures (“men compete, women collaborate”)

Four models of language and gender

- **“Dominance model”**
 - cannot understand (language &) gender without realizing that historically men have had much more power
- **“Dynamic model”**
 - gender as a socially constructed performance; question is no longer “how do women/men talk differently” but “how do people use language to perform aspects of a gendered identity in a context”

Gal 1978



1 = to god

2 = grandparents and their generation

3 = bilingual clients in black market

4 = parents and their generation

5 = friends and age-mate neighbors

6 = brothers and sisters

7 = spouse

8 = children and their generation

9 = bilingual government officials

10 = grandchildren and their generation

11 = doctors

**Peasant men can't get wives: language change and sex
roles in a bilingual community¹**

SUSAN GAL

University of California, Berkeley

TABLE I. *Language choice pattern of women*

TABLE 2. *Language choice pattern of men*

- the young women, even those with heavily peasant networks refuse, in most situations, to present themselves as peasants by using H.
 - This contrasts with the language choices of older women and has the general effect that more German is used in more interactions in the community.
 - It also contrasts with the choices of young men, who use Hungarian in more interactions than the young women and who are constrained by the peasantness of their social networks so that those with heavily peasant networks choose local Hungarian in more interactions than those with nonpeasant networks.
- young women's marriage preferences are also having a linguistic effect. They refuse to marry local peasant men, preferring workers instead.
 - As a result, exactly that small group of young men most likely to be using Hungarian in many situations, that is the ones engaged in peasant agriculture, are the ones who have married German monolingual women with the greatest frequency in the last decade or so.

Zhang 2005

- professionals in foreign businesses employ linguistic resources from both local and global sources to construct a new cosmopolitan variety of Mandarin, whereas their counterparts in state-owned businesses favor the use of local features.

Language in Society 34, 431–466. Printed in the United States of America
DOI: 10.1017/S0047404505050153

A Chinese yuppie in Beijing: Phonological variation and the construction of a new professional identity

QING ZHANG

Language and gender

- Yuanren Chao (1956/76:339) has noted the possibility of women using *mm*, the weak form of *women* 我們 'we, us', more frequently than men. Now a feature of Beijing Mandarin, uttered as *m3me* by He Ping's mother in the sitcom *I Love My Family* (1994).



Constructing gender

- Gender: social elaboration of biological sex
- By the (different) treatment and expectations from others, children learn to adapt to their gender role - a child learns to be male or female
- **Any linguistic examples on children learning to adapt to their gender role?**

Learning to be gendered

Learning asymmetry

- Males are more engaged in enforcing gender difference than females
- **Result:**
 - behavior and activities of boys are more valued than that of girls, and boys are discouraged from having interest in girl's behavior or activities
 - Tomboy vs. Sissy

“

The word snowwoman is obviously gender-neutral and refers to ALL snowwomen, both female and male versions. If you insist on being awkward and making a male version, you can call it a male snowwoman.



”



Kelly, linguist.



#thisboycan

it be sweet?

Man Who Has It All
manwhohasitall.tumblr.com

“ I would really like to hear the reasoning behind men who won't take their wife's last name. ”

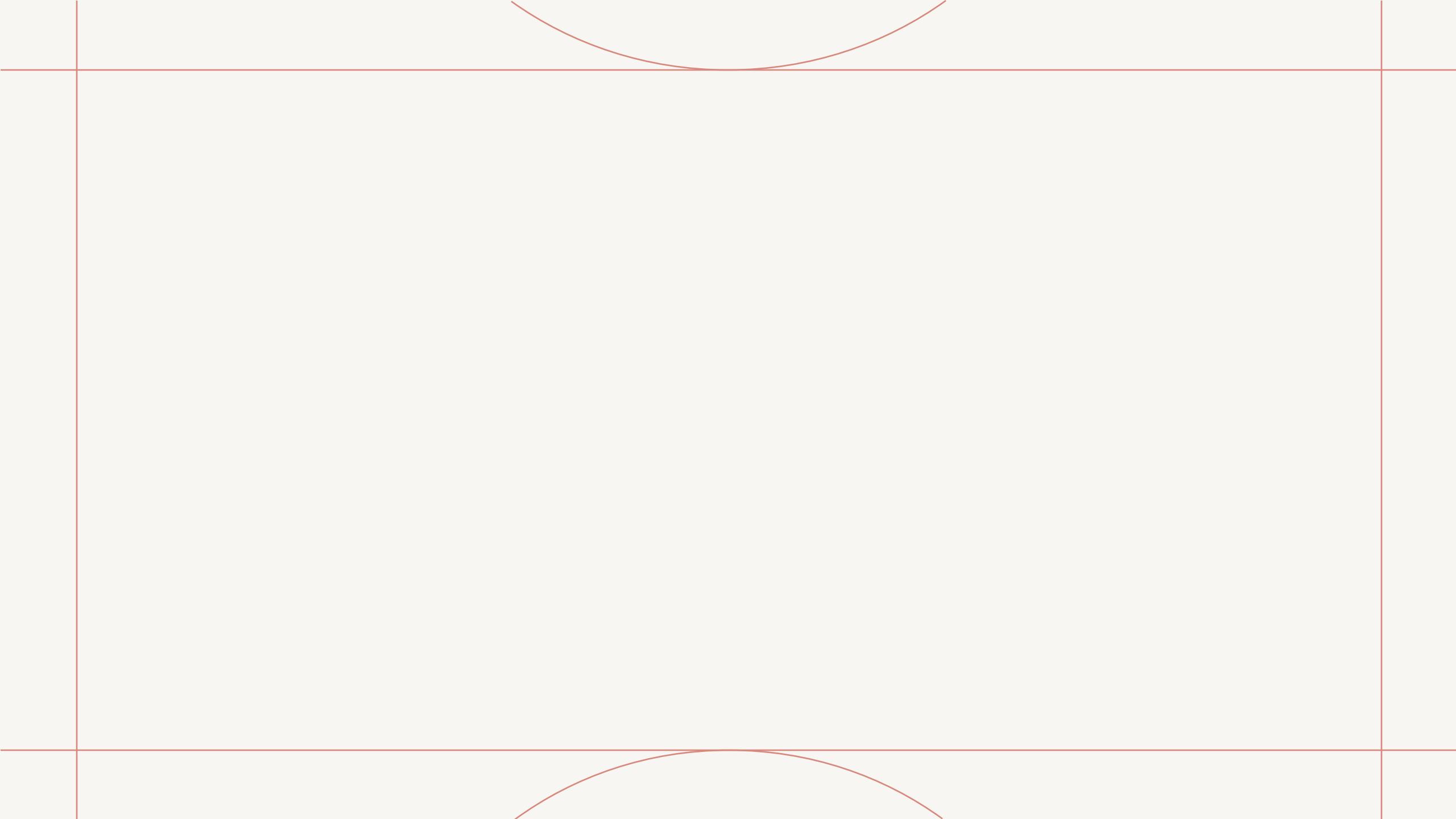
says genuinely curious Becky, CEO.

@manwhohasitall

Gender in grammar

- Some languages force the speaker to specify gender
 - e.g. English: third person pronoun
- Grammatical gender: when a language has noun classes that are relevant for certain kinds of agreement patterns
 - In many Indo-European languages grammatical gender has complex connections to social gender
 - BUT: no perfect correspondence

- Especially problematic when referring to nouns with a pronoun
 - e.g. “le professeur” can refer to a woman, even if it is a masculine form, but one tends to switch to a feminine pronoun (elle)
- In English, cats are usually referred to as “she” and dogs as “he”
 - Speakers assign masculine respectively feminine attributes according to grammatical gender



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-18-2021



Inference-based Dialogue Management for Open-Domain Chats

Jinho Choi

**Associate Professor of Computer Science, Linguistics, and
Quantitative Theory and Methods, Emory University**

Recording of the talk

<https://bluejeans.com/playback/s/YXwqNPsK36uSesYpa9f2frlspvJVx9NZgfUw5jaTRhCukZQR7MSsEr3E46ey34Ge>

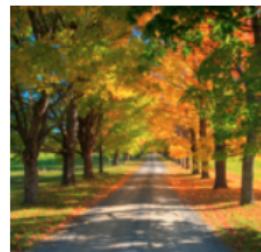
Find a Therapist (City or Postcode)

Verified by Psychology Today

Life as a Bilingual

The reality of living with two (or more) languages.

Francois Grosjean Ph.D.



Life as a Bilingual: Au Revoir

This blog tells readers what it means to live with two or more languages, and constitutes an online resource on the bilingual adult and child. Writing it has been a pleasure.

Life as a Bilingual

The reality of living with two (or more) languages.



François Grosjean, Ph.D., is an emeritus professor of psycholinguistics at the University of Neuchâtel, Switzerland and the author of *Bilingual: Life and Reality*, among other books.



Giving up on Bilingualism, for a While at Least

Making sure that children in a family become bilingual and stay that way can be hard work. This tale started with linguistic disappointment and ended with linguistic success.

Gentle reminder

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 - Open by end of 10/14 and due 10/24 11:59pm
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Our plan for Nov. 10th

- Dr. Hadas Kotek has confirmed that she will be giving a talk titled "Linguistics in Tech" on Nov. 10th, from 4pm-5pm EST time.
- Flyers of this talk along with Bluejeans link to this virtual talk will be shared with you shortly.
- Two options:
 - Meet at 3:30pm in the classroom, talking a bit about Language and Technology, then join the virtual talk together (you may bring your own laptops)!!!
 - Meet at 3:30pm in the library event hall, then join the virtual talk together (but depending on whether the event hall can be reserved).

Week 7 10/04/2021-10/08/2021	Language & politics/power	Language & politics/power	Sign up for article presentations for next 5 weeks
Week 8 10/11/2021-10/15/2021	<i>Fall Break</i>	Student presentations [politics/power]	Discussion due [politics/power]
Week 9 10/18/2021-10/22/2021	Language & gender	Student presentations [gender]	Discussion due [gender]
Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine (<u>speech pathology</u>)	Paper review #2 due
Week 11 11/01/2021-11/05/2021	Student presentations [medicine]	Language & technology	Discussion due [medicine]
Week 12 11/08/2021-11/12/2021	Student presentations [technology]	Language & names	Discussion due [technology] Outline of final project due
Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

paper presentations for week 8 to week 13

- https://gtvault-my.sharepoint.com/:x/g/personal/hwu480_gatech_edu/ES0IN1J-VLZHrvnak3Vo42QBqZo_Zo7J2o1qCeUYh2Y_Lw
- On 10/18 (Monday):
 - What's wrong with truth-conditional accounts of slurs (Cepollaro & Tromman 2019) (Presenter: **Melak Alemu**)
- On 10/20 (Wednesday):
 - Men's Identities and Sociolinguistic Variation: The Case of Fraternity Men (Kiesling 2002) (Presenter: **Andrew Romanchik**)
 - Content Analysis of Textbooks via Natural Language Processing: Findings on Gender, Race, and Ethnicity in Texas U.S. History Textbooks (Li et al. 2020) (Presenter: **Kevin Qi**)

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 - fill out a peer review form for the presentation, to provide your feedback and suggestions on the presentations.

LING 3100_Presentation
feedback for Melak
Alemu_10182021

<https://forms.office.com/r/eTARh4fuL1>



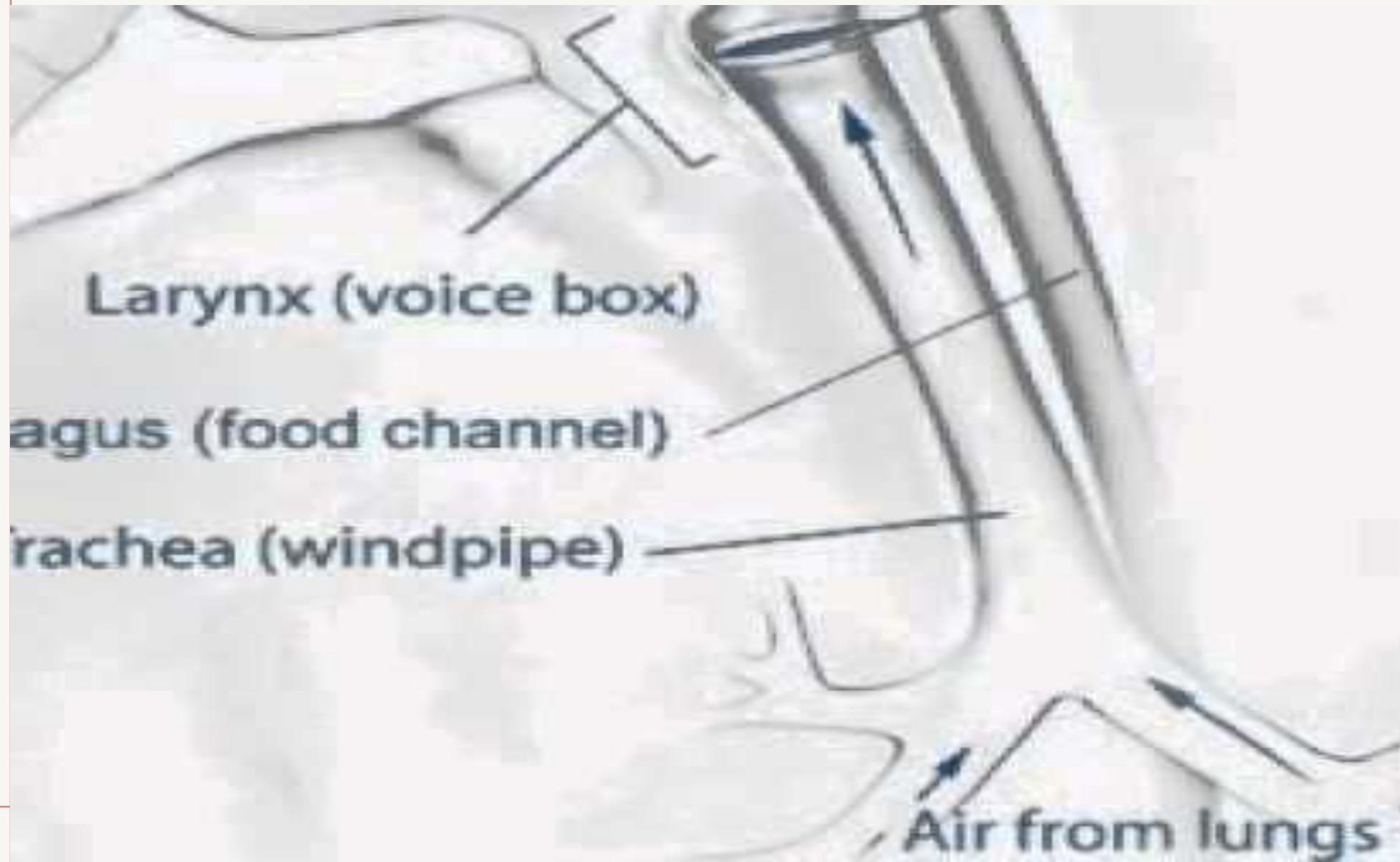
How a sound is produced?

the international phonetic alphabet (2005)

consonants (pulmonic)	LABIAL		CORONAL				DORSAL			LARYNGEAL		
	Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Retroflex	Alveolo-palatal	Palatal	Velar	Uvular	Pharyngeal	Glottal
Nasal	m	m̪		n	ɳ		ɳ̪	ɳ̥	ɳ̫	N		
Plosive	p b			t d	t̪ d̪	c j	k g	q g	q̪ g̪	ʔ	ʔ̪	
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ɬ	xɣ	xɣ̪	ħ	ħ̪	h h̪
Approximant		v		ɹ	ɻ	j	w					
Tap, flap		v̚		r̚	r̚							
Trill	B		r						R	H	ħ	
Lateral fricative			ɸ̚ ɺ̚	ʈ̚ ɭ̚	χ̚	ɻ̚						
Lateral approximant			l̚	ɭ̚	ɻ̚		L					
Lateral flap			ɶ̚	ɻ̚								

Where symbols appear in pairs, the one to the right represents a modally voiced consonant, except for murmured ħ.

Shaded areas denote articulations judged to be impossible. Light grey letters are unofficial extensions of the IPA.

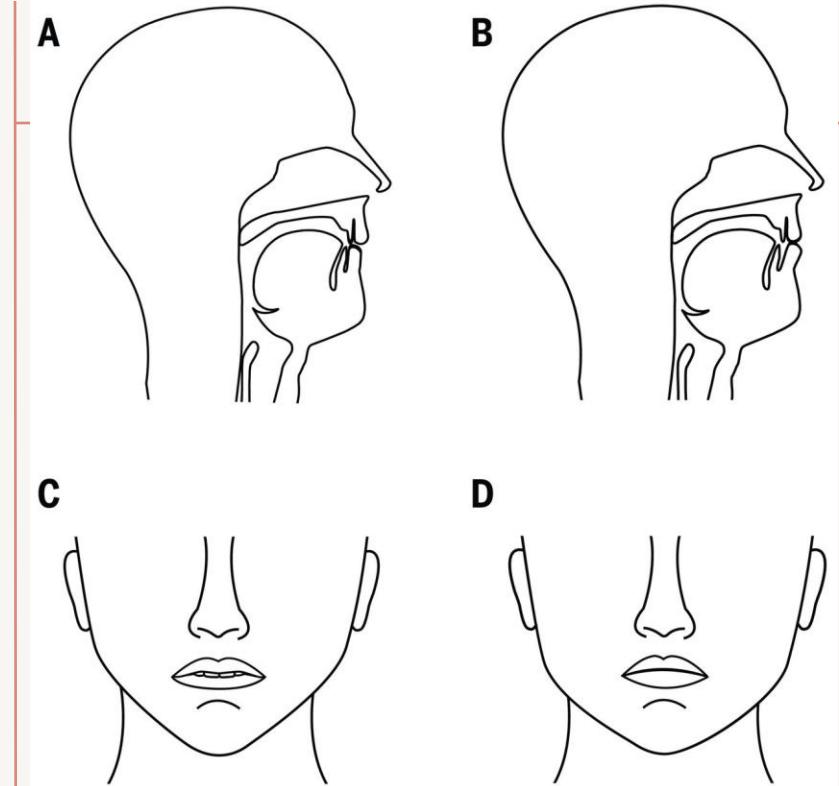


Uniformitarian principle

- It is the assumption that the same natural laws and processes that operate in our present-day scientific observations have always operated in the universe in the past and apply everywhere in the universe
- humans' ability to use language has not significantly changed since language itself first appeared.
- It's hard to say when exactly humans started speaking, but most estimates place the date at least 50,000 years ago.

A conjecture

- In 1985, the linguist Charles Hockett conjectured that labiodentals—speech sounds including “f” and “v”—are overwhelmingly absent in languages whose speakers live from hunting and gathering, because the associated heavy-wear diet induces an edge-to-edge bite that makes the articulation of labiodentals effortful.
- He thus conjectured that these sounds were a recent innovation in human language.



(A) In the labiodental stricture, the bottom lip raises to make contact with the upper teeth. (B) In the bilabial stricture, both lips make contact to form closure. (C) Labiodental is visually distinctive by the presence of the upper teeth. (D) True bilabial in which the upper and lower lips are aligned and make contact; the teeth are not visible.

How would you conduct a research to testify or falsify this conjecture???

- Linguistics
- Biology
- Paleoanthropology
- Geography



RESEARCH ARTICLE

Human sound systems are shaped by post-Neolithic changes in bite configuration

D. E. BLASI , S. MORAN , S. R. MOISIK , P. WIDMER , D. DEDIU , AND B. BICKEL [Authors Info & Affiliations](#)

SCIENCE • 15 Mar 2019 • Vol 363, Issue 6432 • DOI: 10.1126/science.aav3218

81 34



The first fricatives

In 1985, the linguist Charles Hockett proposed that the use of teeth and jaws as tools in hunter-gatherer populations makes consonants produced with lower lip and upper teeth (“f” and “v” sounds) hard to produce. He thus conjectured that these sounds were a recent innovation in human language. Blasi *et al.* combined paleoanthropology, speech sciences, historical linguistics, and methods from evolutionary biology to provide evidence for a Neolithic global change in the sound systems of the world’s languages. Spoken languages have thus been shaped by changes in the human bite configuration owing to changes in dietary and behavioral practices since the Neolithic.



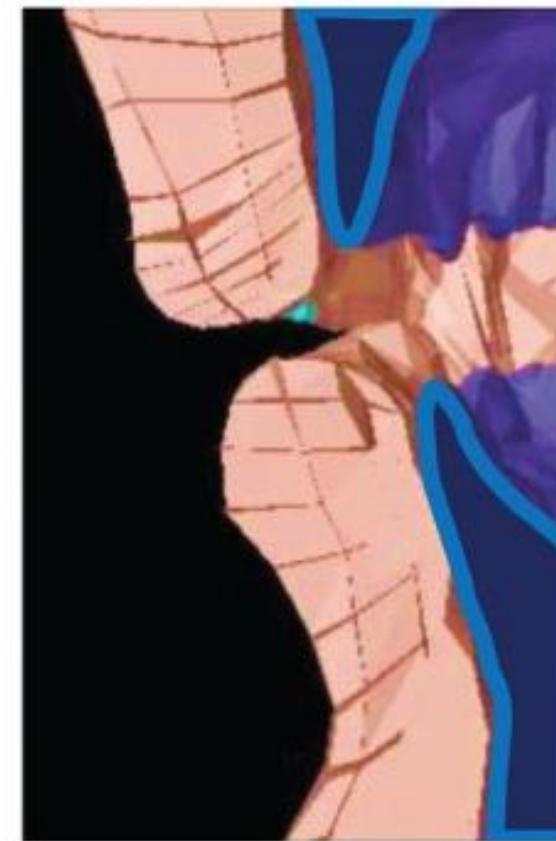
Language and biology

<https://www.science.org/lookup/doi/10.1126/science.aav3218>

A Overjet/overbite model



B Edge-to-edge model



C Pre-Neolithic edge-to-edge bite
(Jomon Period, Japan)



Biomechanical modeling of labiodental production

- Hockett's hypothesis suggests that the more recent bite configuration (with overbite and overjet) eases and makes more likely the articulation of labiodentals.
- To assess the cost of articulation, they adapted a biomechanical simulation of the orofacial structures and musculature to compare overbite and overjet with the edge-to-edge bite configuration using ArtiSynth

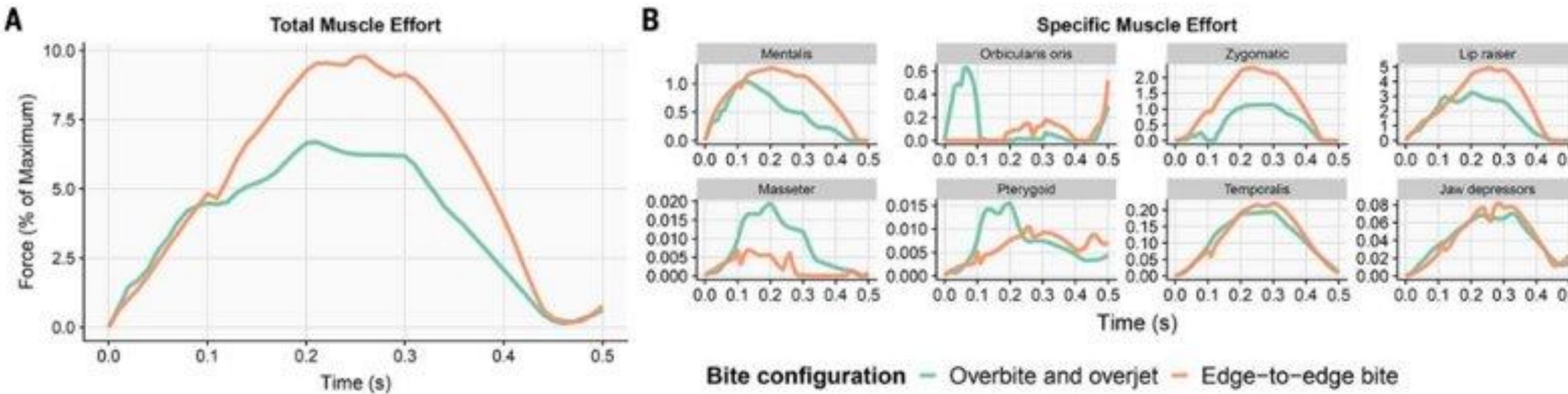


Fig. 3 Relative muscle effort in the production of labiodentals between the edge-to-edge and the overbite and overjet bite configurations. (A) Sum of the total muscle force expressed as a percentage of the total maximum force of all muscles in the model. (B) Specific effort by muscle. Overall, labiodental articulation incurs less muscular effort in the overbite and overjet configuration than in the edge-to-edge configuration.

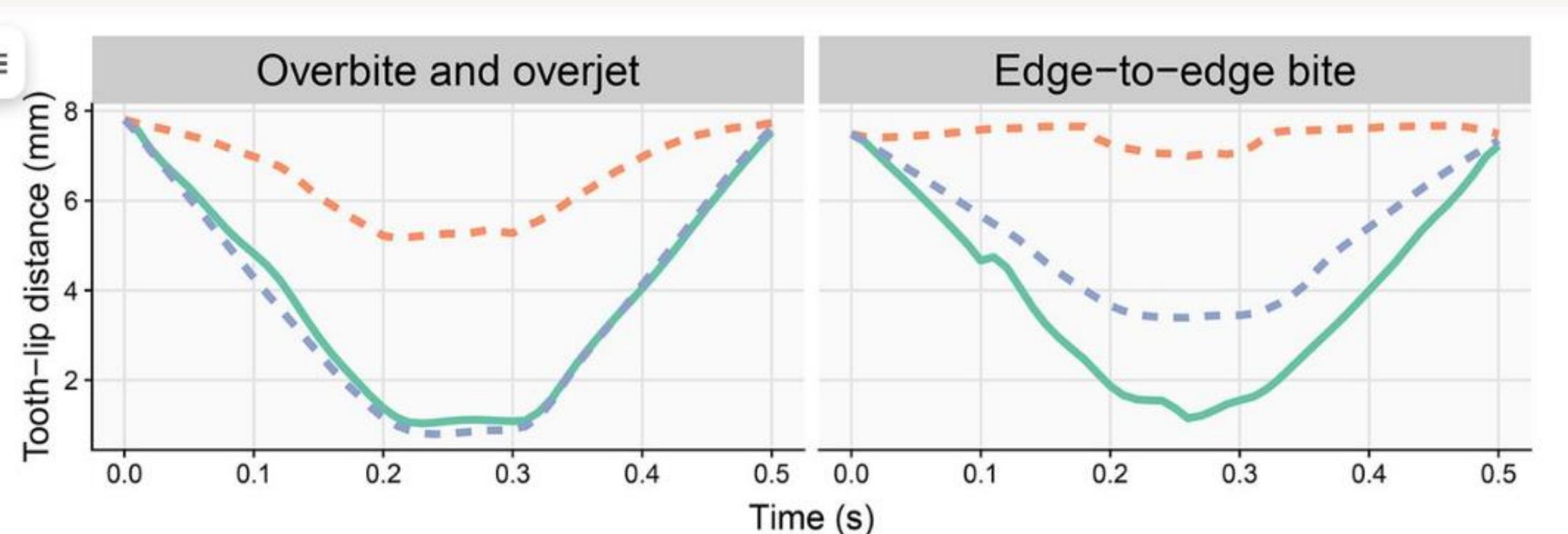
SPEECH SOUND	CONFIGURATION	
	OVERBITE AND OVERJET	EDGE-TO-EDGE
LABIODENTAL FRICATIVE	0.7	1
BILABIAL STOP	0.5	0.25
BILABIAL APPROXIMANT	0.7	0.5

Collapse ^

Table 1 Relative total muscle effort of labiodental fricatives, bilabial stops, and bilabial approximants in the biomechanical model under the overbite and overjet configuration and the edge-to-edge configuration. The total cost of a labiodental fricative in the edge-to-edge bite is used as the unit of comparison, with estimates rounded to the nearest decimal. Labiodentals require more effort than bilabials in either bite configuration, but the effort increases more in the edge-to-edge configuration than in the overbite and overjet.

- labiodentals incur about 30% less muscular effort in the overbite and overjet configuration than in the edge-to-edge bite configuration.
- This difference is not present in similar articulations that place the upper lip, instead of the teeth, against the lower lip (as in bilabial "m," "w," or "p")
- Together, these results suggest that the transition to an overbite and overjet configuration has a distinct effect on the ease of labiodentals, while bilabials become more difficult.

- bilabial strictures in the overbite and overjet condition display greater incidental labiodental stricture (i.e., less distance between the lower lip and the central maxillary incisors) than in the edge-to-edge case.
- This suggests that bilabial targets may be more prone to accidental realization as labiodentals under the overbite and overjet condition



Biomechanical effects on language change

- As in other aspects of language production, relative differences in effort and error lead to systematic biases in production frequencies that in turn shape the probability of perceptual recategorization and change over time, especially when errors are perceptually salient.
- The biomechanical models suggest that such processes were likely to have affected labiodentals.
- The post-Neolithic emergence of overbite and overjet persistence led to reduced effort when producing labiodentals, and at the same time it increased the risk of accidental labiodental articulation.

- Given this, we hypothesize that labiodentals became likely to establish themselves and spread in populations with overbite and overjet persistence.
- Bilabials are a common source of labiodentals.
- Bilabials are present in the vast majority of languages [in the PHOIBLE database, 95% have "m," 87% have "p," 71% have "b"], a transition to labiodentals is therefore expected to be frequent in populations with overbite and overjet persistence.

Does it mean bilabials are expected to be all transitioned to labiodentals ?

- Why do bilabial articulations remain abundant in the overbite and overjet condition, despite the emergence of labiodentals?

- Bilabials incur less effort overall, under either bite configuration.
- Bilabials benefit from positive biases arising from biomechanical saturation of lip contact and other physical domains of speech, such as quantal effects in articulatory-acoustic relations and acoustic-auditory properties

Then where do bilabials develop to labiodentals?
Where do bilabials remain as it is?

A hypothesis of transition of bilabials to labiodentals

- to happen only in certain positions (e.g., only word-internally), leaving other bilabials (e.g., word-initially) in place; wholesale replacement is expected to be compensated by new bilabials derived from other sources.

- food-producing populations are more prone to develop and maintain labiodentals than hunter-gatherer populations
- Labiodentals in the sample include fricatives ("f," "v"), affricates ("pf," "bv"), a nasal ("m"), a tap ("ɾ"), and an approximant ("ɹ").
- The distribution of these sounds is heavily skewed globally: 49% of languages sampled have "f," 37% "v," and 2% "pf," while the rest ("bv," "m," "ɾ," "ɹ") occur in no more than 1% of languages ($n = 1672$)

- on average, hunter-gatherer societies have only about 27% the number of labiodentals exhibited by food-producing societies
- The results indicate that the first two models leverage more than 90% of the total weight (see fig. S3), thus lending support to the notion that subsistence plays a role in accurately predicting labiodental counts.

- we also examined in more detail the languages spoken by native populations of Greenland, southern Africa, and Australia because for these groups, heavy anterior tooth wear and concomitant edge-to-edge bite are particularly well documented , while at the same time they represent vastly different areas and cultural traditions.
- We expect that the languages spoken in these three areas will either lack labiodentals, or in the cases where labiodentals do exist, they will be attributable to recent contact—for example, by borrowing words from populations that are less exposed to masticatory exertion.

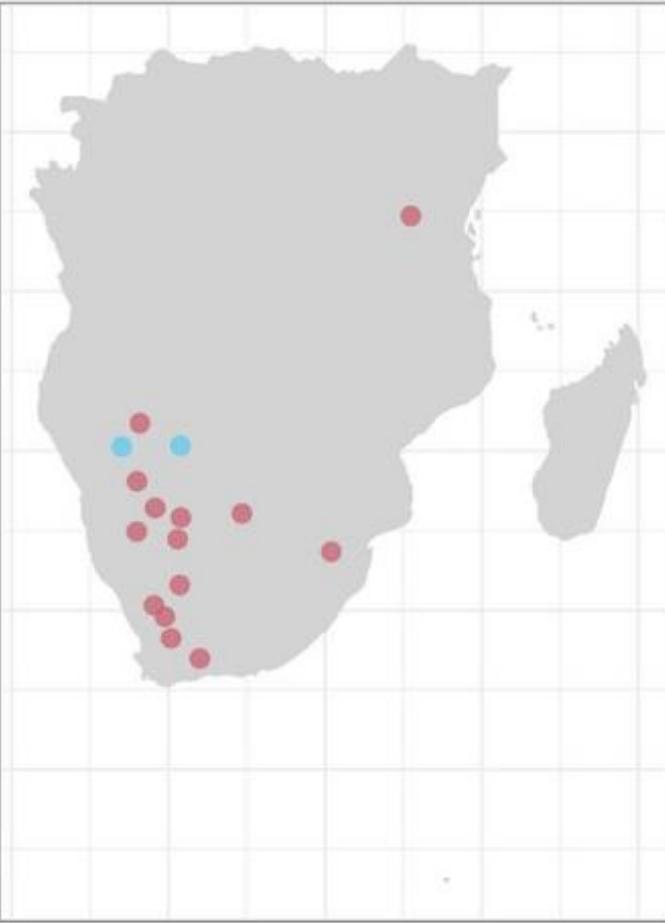
Explanation for exceptions

- In some cases, labiodentals are reported, but closer inspection shows that these are artifacts of orthographic practices and not confirmed by closer scrutiny (58) (see supplementary text). In the few cases where labiodentals do exist, they tend to be the result of recent borrowings through contact with European languages that have them ([Fig. 6](#)).

A Greenland



B Southern Africa



C Australia



Labiodentals • has labiodental • none

Fig. 6 Languages spoken in Greenland, southern Africa (Khoisan), and Australia that have gained labiodentals through language contact. (A) West Greenlandic has acquired a labiodental through contact with Danish. (B) Some Khoisan languages have labiodentals through contact with Germanic languages such as Afrikaans. (C) Two languages in Australia have labiodentals (3), Kunjen and Ngan'gikurrungkurr, the latter through contact with English.

Increase of labiodentals during the history of Indo-European

- Was the spread of overbite and overjet persistence influenced by the development of agricultural and food processing technology over historical time?
- Our prediction was that over the past few thousand years, the increase in the production and availability of softer diets caused a gradual rise in the probability of developing and maintaining labiodentals.

- To test this prediction, we reconstructed the evolution of labiodentals in high-resolution phylogenies of the Indo-European language family.
- Why choose this language family to study?

- We observe a steady increase of the reconstructed probability of labiodental sounds, from a median estimate of about 3% in the proto-language (6000 to 8000 years ago) to a presence of 76% in extant languages.



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-20-2021



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Minor in Linguistics

Certificate in Linguistics

<https://modlangs.gatech.edu/degrees/minors-and-certificates/minor-linguistics>

- LING 2100 - Introduction to Linguistics
- **Four/ Three** courses from
 - Any LING course(s)
 - Any foreign-language Modern Languages course(s) substantially involving linguistics content
 - For example: Kaleidoscope of Chinese Language
 - At most ONE Psychology course substantially involving linguistics content
 - PSYC 2760 (Human Language Processing); PSYC 3012 (Intro to Cognitive Psychology).
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LING 3100_Presentation
feedback for Kevin
Qi_10202021

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/r/zKzxrv5iFc](https://forms.office.com/r/zKzxrv5iFc)



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-25-2021



Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine (speech pathology)	Paper review #2 due
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Week 16 12/06/2021	Q&A session		

 JOIN LIVE

<https://bluejeans.com/4466967620>

For more information, contact
hwu480@gatech.edu

- Is there are specific topics/questions you'd like the speaker to address?

VIRTUAL WEBINAR

LINGUISTICS IN TECH

WITH

Dr. Hadas Kotek

*Siri Natural Language
Annotation Lead at Apple
and Research Affiliate
at MIT Linguistics*



Georgia Tech · Ivan Allen College of Liberal Arts
School of Modern Languages

WEDNESDAY
NOVEMBER 10
4 PM - 5 PM



Gentle reminder

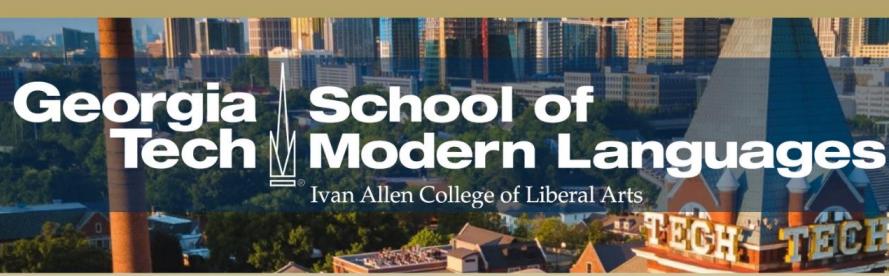
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Do you want to learn a foreign language as part of your GT undergraduate education?

Chinese French German Japanese Korean Russian Spanish

Join our virtual info session to learn more about:

- minoring in a foreign language
- (double) Majoring in Applied Languages and Intercultural Studies (ALIS)
- increasing fluency, intercultural competence, and global career marketability!

When: October 28, 11am-12pm

Where: BlueJeans meeting

RSVP at this link:

<https://forms.office.com/r/gZCHRPlleKz>

a virtual info session

Thursday, Oct. 28th
11:00am for students interested in learning about our minors and the ALIS double major

register at this link: <https://forms.office.com/r/gZCHRPlleKz>

more exciting talks

- **Linguistic Fieldwork in Papua New Guinea**
 - Kate Lynn Lindsey, Assistant Professor of Linguistics, Boston University
 - *Wednesday, November 3, 5-6pm; <https://bluejeans.com/4473252229>*

more exciting talks

- "When Physics Meets Literature: Fractality in Western Novels"
 - by Professor Stanisław Drożdż and Professor Paweł Oświecimka, from the Institute of Nuclear Physics, Polish Academy of Science
 - When: 1-2pm EST on November 12, Friday, 2021
 - Where: Bluejeans Meeting
 - RSVP at this link: <https://forms.office.com/r/uj2DeWN4ep>

VOWELS - CONSONANTS



VOWELS

A E I O U

* The letter Y is special:
Sometimes Y is a consonant
Sometimes Y is a vowel

CONSONANTS

B C D F G H J

K L M N P Q R
S T V W X Y Z

THE ALPHABET

26 LETTERS

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z



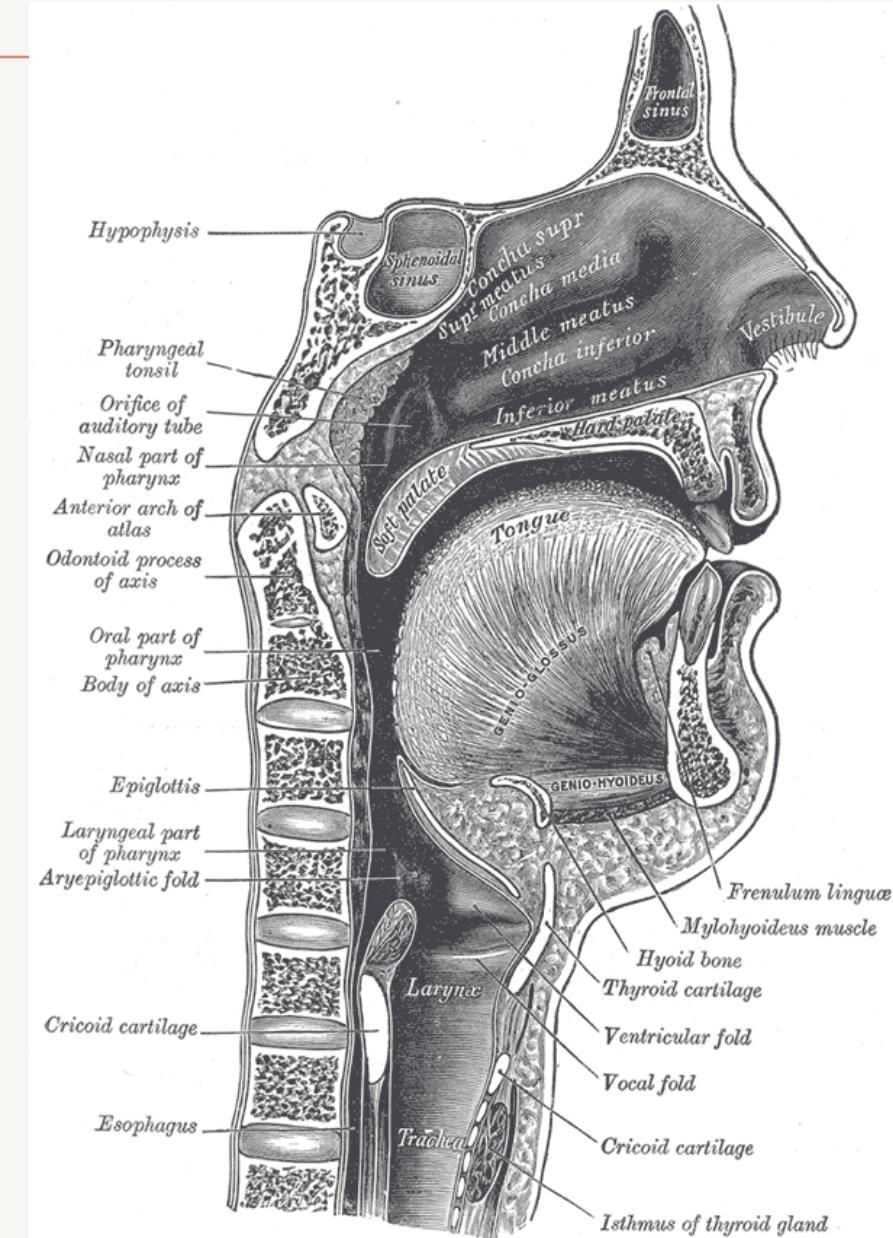
E A T



U N I C O R N

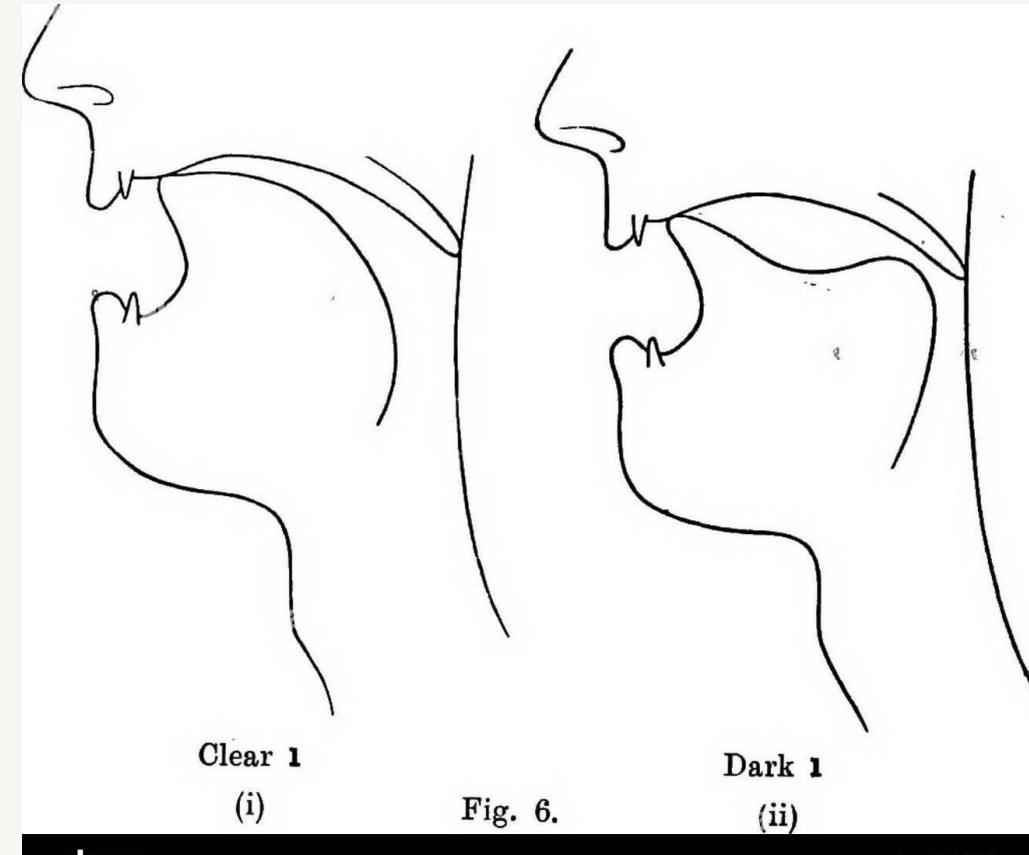
© Woodward English

- A **consonant** is a speech sound that is articulated with complete or partial closure of the vocal tract
- A **vowel** is a syllabic speech sound pronounced without any stricture in the vocal tract



How would you pronounce /i/?

- the way the tongue interacts with this upper roof is crucial
- The size of this contact area depends on the individual shape of the palate
 - it will be larger for speakers with a flat arch to their palate than for speakers with a narrow, high, dome-shaped palate

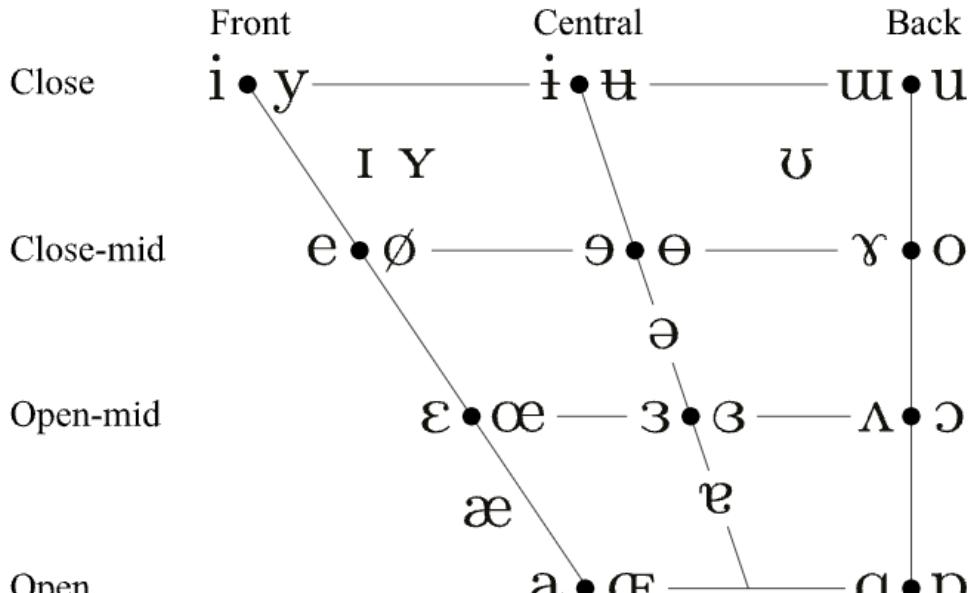


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www.alamy.com

Brunner, J., Fuchs, S. & Perrier, P. J. Acoust. Soc. Am. 125, 3936–3949 (2009).

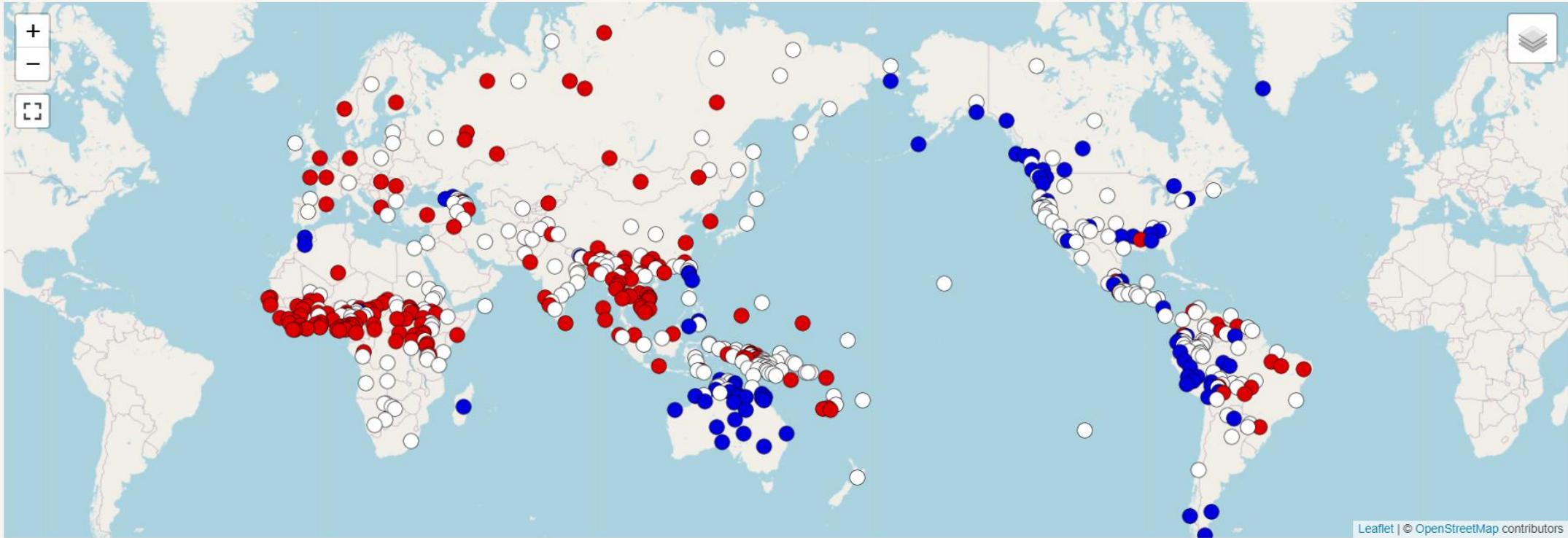
VOWELS



- How many vowels in your language(s)?
Does every language have vowels and have the same number of vowel sounds?

Legend ▾ Icon size ▾ Show/hide Labels

GeoJSON ▾



Values

●	Small (2-4)	93
○	Average (5-6)	287
●	Large (7-14)	184

<https://wals.info/feature/2A#2/23.9/152.8>

- **Top 10 languages for number of vowels**

- 1. Danish : 32
- 2. Norwegian : 19
- 3. French, German, Swedish : 17
- 4. Dutch, Finnish, Icelandic : 16
- 5. Hungarian, Portuguese : 14

https://www.eupedia.com/linguistics/number_of_phonemes_in_european_languages.shtml

Which cognitive, sociocultural
and biological components were involved
in the DIVERSITY of vowel inventories?

nature > nature human behaviour > articles > article

Article | Published: 19 August 2019

Weak biases emerging from vocal tract anatomy shape the repeated transmission of vowels

Dan Dediu  [Rick Janssen](#) & [Scott R. Moisik](#)

Nature Human Behaviour 3, 1107–1115 (2019) | [Cite this article](#)

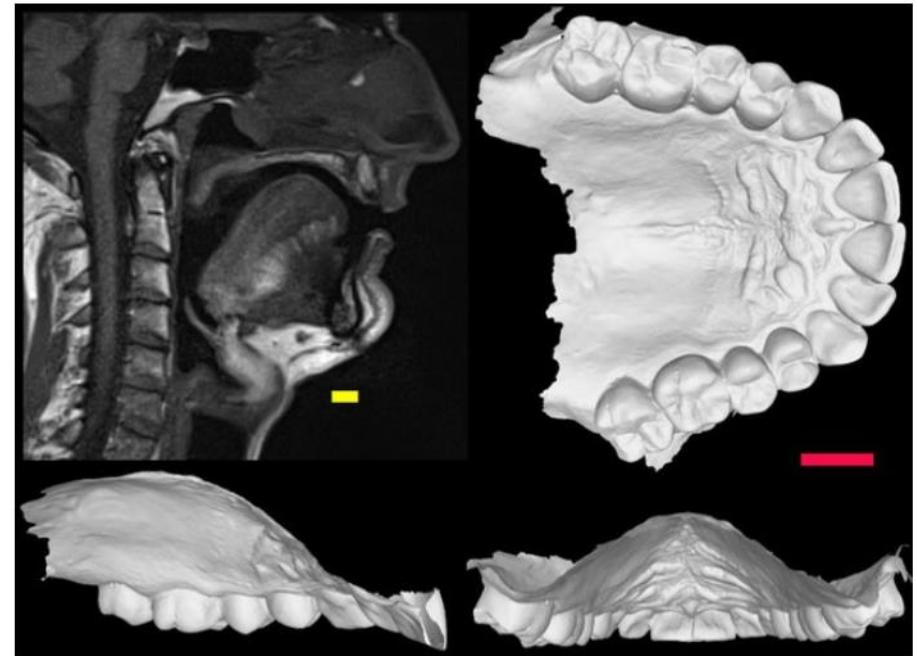
721 Accesses | 8 Citations | 75 Altmetric | [Metrics](#)

Abstract

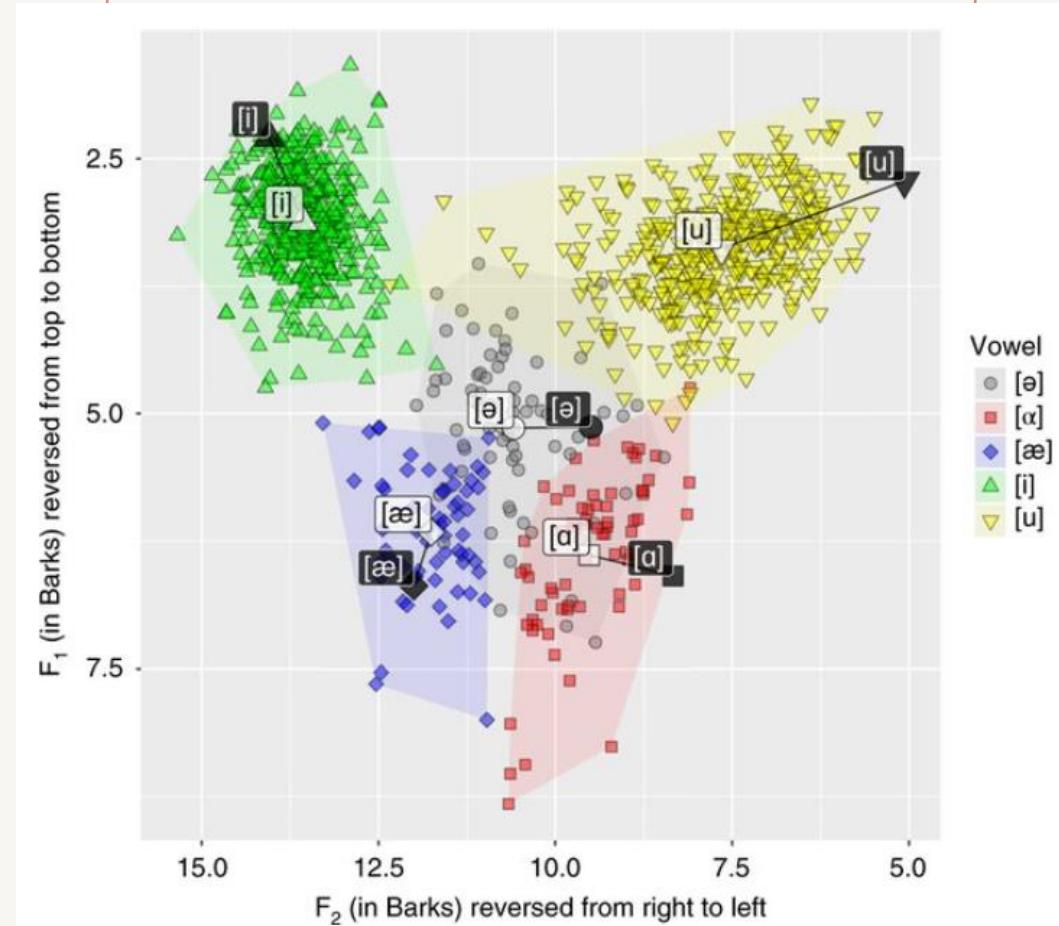
Linguistic diversity is affected by multiple factors, but it is usually assumed that variation in the anatomy of our speech organs plays no explanatory role. Here we use realistic computer models of the human speech organs to test whether inter-individual and inter-group variation in the shape of the hard palate (the bony roof of the mouth) affects acoustics of speech sounds. Based on 107 midsagittal MRI scans of the hard palate of human participants, we modelled with high accuracy the articulation of a set of five cross-linguistically representative vowels by agents learning to produce speech sounds. We found that different hard palate shapes result in subtle differences in the acoustics and articulatory

Asking whether idiosyncratic properties of adults' vocal tracts might contribute to linguistic diversity.

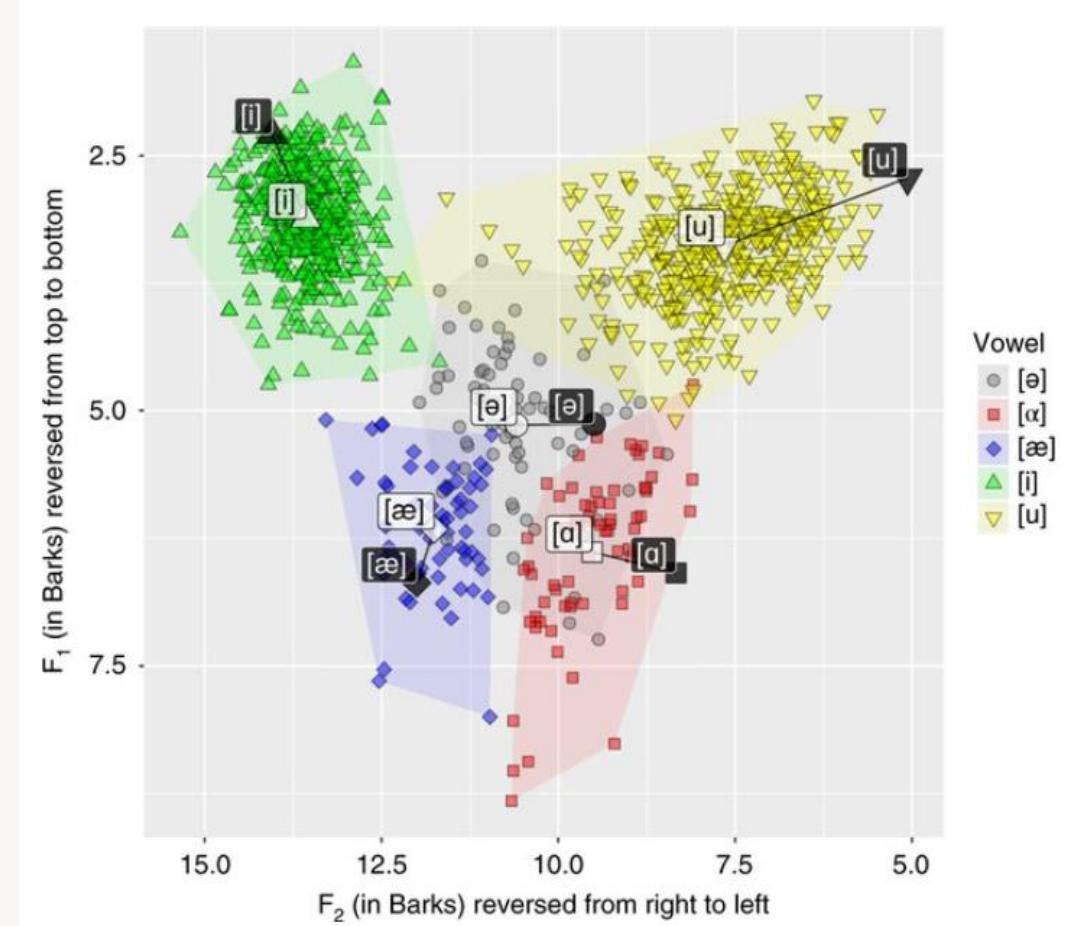
- Use realistic computer models of the human speech organs to test whether inter-individual and inter-group variation in the shape of the hard palate (the bony roof of the mouth) affects acoustics of speech sounds.
- four broad ethnolinguistic groups (Europeans and North Americans of European descent, North Indians, South Indians, and Chinese)



- Based on 107 midsagittal MRI scans of the hard palate of human participants, they modelled with high accuracy the articulation of a set of five cross-linguistically representative vowels by agents learning to produce speech sounds.
- Crucially, they found **small but consistent and phonetically relevant** differences between the groups.



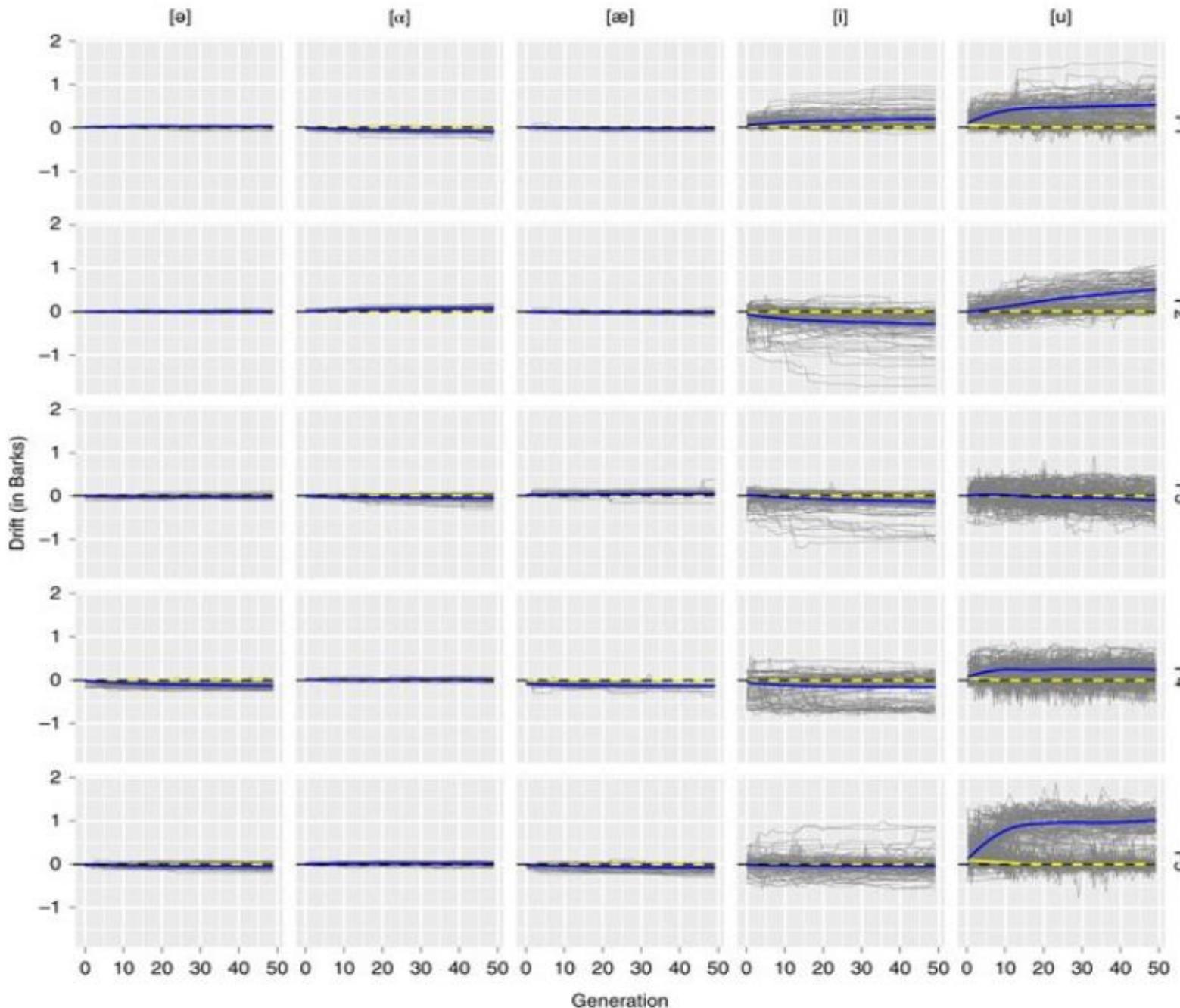
- Additionally, they selected a number of frequently occurring vowels from a comprehensive crosslinguistic database and found tremendous variation in their acoustic detail.



Impact of the potential impact of the idiosyncratic vocal tract properties on language evolution

- In this model only the shape of the palate was varied, while all other anatomical properties were kept constant.
- By means of an iterative learning algorithm, they simulated how the articulators adapt to the vocal tract properties with the goal of producing certain acoustic vowel characteristics.
- The output of each simulation was used for the next, simulating the transmission from one generation to the next.
- The authors were able to show that even though articulators compensate for the individual palate shape to some degree, weak differences are amplified over several generations of learners.

Drift in the current generation from:  The previous generation  The 'seed'



Sound systems evolution

- inter-individual variation in body properties—**here the palate shape**—can have an impact on sound change and thus, ultimately, language evolution.
- changes in human bite configuration are due to changes in agriculture and nutrition and favored the appearance of labiodental sounds in the world's languages

Small one piece in a big puzzle

- Individual vocal tract properties are a small one, in the big puzzle that concerns **the driving forces for linguistic sound system diversity**.
- The picture is further complicated by the considerable variation in vocal tract anatomy that exists within language communities (not least men vs women and adults vs children)

Children! WoW!

- But developing children, with their diverse vocal tract properties, can acquire the precise pronunciation of any of the languages around the globe.
- **That means speakers can adapt the articulatory motion of their speech organs within their individual vocal tract properties** in order to produce the sound characteristics of any speech community.

The role of biological factors in linguistic research

- Most linguists conceive of the sounds of the world's languages as timeless and independent of both physiological idiosyncrasies and of any broad physiological generalizations found around the world.
- **Individual variation is seen as noise in the data. Should it be??**

The role of biological factors in linguistic research

- certain biological factors have predictable effects on the acoustic properties of speech, such as body size.
 - Taller speakers generally have a longer vocal tract than smaller speakers, and
 - individual variation in body size and vocal tract length dimensions can lead to different acoustic output

Language and Medicine

- Provider-patient communication
- Speech-language pathology



- Provider-patient communication
- What does your doctor call you?
- What do you call them?
- What do you call the nurse(s)?
- How do you feel about the (asymmetric) use of titles?
- How would you like your doctor to communicate with you? (being authoritative? Or being patient-centered?)

Provider-patient communication

- In the 1950s to 1970s, most doctors considered it inhumane and detrimental to patients to disclose bad news because of the bleak treatment prospect for cancers.
- The medical model has more recently evolved from **paternalism** to **individualism**.
- Information exchange is the **dominant communication model**, and the health consumer movement has led to the current model of **shared decision making** and **patient-centered communication**

Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

10-27-2021



Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine <u>(speech pathology)</u>	Paper review #2 due
Week 11 11/01/2021-11/05/2021	Student presentations [medicine]	Language & technology	Discussion due [medicine]
Week 12 11/08/2021-11/12/2021	Student presentations [technology]	Language & names	Discussion due [technology] Outline of final project due
Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

 JOIN LIVE

<https://bluejeans.com/4466967620>

For more information, contact
hwu480@gatech.edu

- Is there are specific topics/questions you'd like the speaker to address?

VIRTUAL WEBINAR

LINGUISTICS IN TECH

WEDNESDAY
NOVEMBER 10
4 PM - 5 PM

WITH
Dr. Hadas Kotek

*Siri Natural Language
Annotation Lead at Apple
and Research Affiliate
at MIT Linguistics*



Georgia Tech · Ivan Allen College of Liberal Arts
School of Modern Languages



Gentle reminder

- **Paper review #2: due 10/31 11:59pm**
 - Please do not write paper review on the paper which you selected for oral presentation
 - Please do not write paper review on the paper which you selected for paper review #1
- **Outline of your final project:** due 11/14, 11:59pm

Plan for next week

- Monday 11/01: presentations on Language and Medicine

Translation is not enough: Interpreting in a medical setting (Haffner 1992)

David Simiele

Aphasia and aphasia recovery (Wilson and Fridriksson 2019)

Kyle Stachowicz

Notes on the sociology of medical discourse: The language of case presentation (Anspach 1988)

Macy Wright

- Wednesday 11/03: Language and Technology

Benefits of patient-centered communication

- creating a good interpersonal relationship
 - facilitating exchange of information
 - including patients in decision making.
-
- **What are the barriers to good communication in the doctor-patient relationship?**

1 D: Hm hm (.3) now what do you mean by a sour stomach?
2 P: (1.1) What's a sour stomach? A heartburn
3 like a heartburn or someth[ing].
4 D: [Does it burn over here?
5 P: Yeah
6 It li- I think- I think it like- If you take a needle
7 and stick [ya right [....there's a pain right here [

The practitioner-patient relationship

8 D: [Hm hm [Hm hm
9 P: and and then it goes from here on this side to this side. [Hm hm
10 D: Hm hm does it [go into the back?
11 P: [It's a:ll up here. No. It's all right
12 [Up here in the front.
13 D: [Yeah And when do you get that?
14 P: (1.3) Wel:l when I eat something wrong
15 D: How- how soon after you eat it?
16 P: Wel:l probably an hour maybe [less.
17 D: [About an hour?
18 P: Maybe less I've cheated and I've been
19 drinking which I shouldn't have done.
20 D: Does drinking make it worse?
21 P: Ho ho uh ooh Yes (1.0) especially the carbonation and
the alcohol.
22 D: Hm hm how much do you drink?
23 P: (1.5) I don't know enough to make me
sleep at night and that's quite a bit.
24 D: One or two drinks a day?
25 P: O:h no no no humph it's more like ten [at night
27 D: [How many drinks
- a night.
28 P: At night.
29 D: Whaddya ta- What type of drinks? I [((unclear))
30 P: [Oh vodka yeah
31 vodka and ginger ale.
32 D: How long have you been drinking that heavily?
33 P: (1.4) Since I've been married.
34 D: How long is that?
35 P: ((giggle)) Four years. ((giggle))

- Provider-patient discourse – examples from Harvey and Koteyko (*Exploring Health Communication*) 2013
- Who successfully “raises topics” in this conversation?
- What topics do not get elaborated?

older
the greeting phase of the

1 DR You been taking your medicines as you ought to?
2 MF Sometimes I do. But sometimes when I don't have no
pressure I don't take it.
3 DR Gee whiz, Mrs. Flowers, I told you if you don't take it
regularly you could get real sick like your Mom...
You been eating salt again?
4 MF It's hard to cook for the family without salt.
I don't have time to cook just for me
[...]
5 DR a low-salt diet is essential for your problem.
6 MF I know, I know. I mean I do all these things, but I just
plain forget sometimes. I got so much else goin' on and it
all seems to affect the pressure. I got two pregnant
daughters at home and my mother is doin' much worse. I
think she may be senile. And then I worries about J.D.,
and here comes Teddy with the same problems startin' up
[...]
7 DR You said you had headaches?
8 MR Sometimes I think my life is one big headache. These here
ain't too bad. I've had 'em for a long time, years. But in
recent weeks they been badder than before. You see, a
year ago last Sunday, Eddie Johnson, my friend, you
know. Uh huh, well, he died. And –
9 DR Are the headaches in the same place as before?

- Provider-patient discourse – examples from Harvey and Koteyko (*Exploring Health Communication*) 2013
- Mrs. Flowers is taking care of an ill, aging mother and two pregnant teenage children
- Why is Mrs. Flowers “non-compliant” with the doctor’s recommendations?

10 MF Yeah, same place, same feelin, on'y more often.
But, you see, Eddie Johnson had always told me not to
bother about –
11 DR Have you had any difficulty with your vision?
12 MF No.
13 DR Any nausea?
14 MF No. Well when I drank the pickle juice there was some.
15 DR Pickle juice? You've been drinking pickle juice? That's got
a great deal of salt. It's a real danger for you, for your
hypertension.
16 MF But I have felt pressure this week and my mother told me
maybe I need it because I got high blood and –
17 DR Oh, no. Not pickle juice. Mrs. Flowers, you can't drink
that for any reason. It just isn't good. Don't you
understand?

Barriers to good communication

- patients' anxiety and fear,
- doctors' burden of work,
- fear of litigation,
- fear of physical or verbal abuse,
- unrealistic patient expectations
- medical language barriers
- medical translation
- as of 2006, 18% of US residents don't speak English at home; 8.4% have limited English proficiency
- United States Department of Health and Human Services, 1980: "No person may be subjected to discrimination on the basis of national origin in health and human services programs [Medicare, Medicaid...] because they have a primary language other than English"

How to address these barriers?

- ***The patient will never care how much you know, until they know how much you care.***

Terry Canale in his American Academy of Orthopaedic
Surgeons Vice Presidential Address

Medical interpreters

who provides interpreting?

- Trained medical interpreter?
- Doctor or other hospital staff?
- Family member of the patient?....(family member under 18?)...
- Person over a phone?....

- Medical interpreters are highly educated in both languages, medical terminology, confidentiality, translation ethics....
 - but not easy to find for all languages, especially on short notice (in ER situation) except perhaps over the phone
 - Patients often do not get an interpreter even when they need one...
 - Not all states reimburse for interpreters with Medicaid....

Interim summary

- Provider-patient communication (language as medium for discourse)
- Medical language barriers, medical translation (mapping between two languages)
- Speech language pathology (language as the thing being healed)
- Medical records as data for natural language processing (language as medium for large-scale information)

Speech language pathology

- treating problems related to language
- Speech-language pathologists (SLPs) work to prevent, assess, diagnose, and treat speech, language, social communication, cognitive-communication, and swallowing disorders in children and adults.
- <https://www.asha.org/>

Different disorders

- **Speech disorders:**

- a person has difficulty producing speech sounds correctly or fluently (e.g., stuttering is a form of disfluency) or has problems with the voice or resonance.
 - Substitutions (tool/cool, wash/watch)
 - Omissions (sip/slip, boo/book)
 - Additions or distortions (lisps, wabbit/rabbit)
 - Voice may sound hoarse, raspy, too soft, high pitched, or choppy.
- This disorder may interfere with intelligibility.
- Significant speech sound disorders impact one's self-esteem, peer relationships, and ability to read, spell, and write accurately.

Different disorders

- **Language disorders:**

- a person has trouble understanding others (receptive language), or sharing thoughts, ideas, and feelings (expressive language).
- spoken or written
- The disorder may involve, in any combination,
 - the form of language (phonology, morphology, syntax);
 - the content of language (semantics); and/or
 - the function of language in communication (pragmatics)

Different disorders

- **Social communication disorders**

- has trouble with the social use of verbal and nonverbal communication
 - communicating for social purposes (e.g., greeting, commenting, asking questions)
 - talking in different ways to suit the listener and setting
 - following rules for conversation and story-telling.
- All individuals with autism spectrum disorder have social communication problems.
- also found individuals with other conditions, such as traumatic brain injury.

• Specific language impairment

- also called developmental language disorder, language delay, or developmental dysphasia.
- The cause of SLI is unknown, but recent discoveries suggest that it has a strong genetic link.
- The disorder can, however, affect both multilingual children and children who speak only one language.
- SLI is not the same thing as a learning disability. Instead, SLI is a risk factor for learning disabilities
- SLI is a developmental disorder, which does not mean that, as children develop, they grow out of the problem

Specific language impairment

- Symptoms common in older children and adults with SLI include:
 - Limited use of complex sentences.
 - Difficulty finding the right words.
 - Difficulty understanding figurative language.
 - Reading problems.
 - Disorganized storytelling and writing.
 - Frequent grammatical and spelling errors.

Sentence Repetition Tasks

- Such as testing for subject verb agreement, tense and the sentence bracket
"Der Prinz **hat** die Prinzessin **umarmt**". ('the prince hugged the princess')
- It is well established that SRTs have good sensitivity and specificity to distinguish typical children and children with SLI (Conti-Ramsden, Botting & Faragher, 2001) and that they do not only measure (phonological) working memory, but tap into morpho-syntactic knowledge if they are complex enough (Políšenská, Chiat & Roy, 2014; Vinther, 2002). Additionally, they allow to identify specific syntactic difficulties and error patterns (Szterman & Friedmann, 2015; among others)

Exhaustivity Task

- Cross-linguistic work in 15 languages showed that typical monolingual children master exhaustivity for single Wh-questions around the age of five, whereas paired Wh-questions are acquired somewhat later, but are mastered around the age of six, Schulz (2013).
- Schulz and Roeper (2011) established that the task is well suited to identify monolingual German children with SLI within an age range of five to seven.
- Tuller et al. (2015) reported that the task identified SLI in Arabic/French bilingual children
 - error patterns in monolingual and bilingual typical children are similar and are different from the error patterns found in children with SLI.

Specific language impairment

- The type of evaluation depends on the child's age and the concerns that led to the evaluation. In general, an evaluation includes:
 - Direct observation of the child.
 - Interviews and questionnaires completed by parents and/or teachers.
 - Assessments of the child's learning ability.
 - Standardized tests of current language performance.
- **What about bilingual kids???**

Specific language impairment

- The standardized tests that speech-language pathologists use in schools to screen for language disorders are based on typical language development milestones in English.
- Non-native speakers are more likely to score in the at-risk range on these tests, but it can be hard to distinguish between children who are struggling to learn a new language and children with true language disorders.
- After studying a large group of Hispanic children who speak English as a second language, researchers developed **a dual language diagnostic test** to identify language disorders.
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5902172/>
 - <https://www.frontiersin.org/articles/10.3389/fcomm.2017.00016/full>
 - <https://www.lingref.com/cpp/gasla/13/paper3281.pdf>

Different disorders

- **Cognitive-communication disorders**

- problems organizing thoughts, paying attention, remembering, planning, and/or problem-solving
- usually happen as a result of a stroke, traumatic brain injury, or dementia, although they can be congenital.
- These symptoms may be the result of a traumatic brain injury (TBI) due to concussions and other head injuries

How our language can change after a stroke

- Foreign Accent Syndrome
- Foreign language instead of mother tongue
- Mondays English, Tuesdays German

- After a stroke, certain brain regions are dead, but depending on the age, the brain can use other areas to take over the tasks of the dead region.
- This works best when supported by therapy

bilingual aphasia



Different disorders

- **Feeding and Swallowing disorders**

- A feeding disorder includes difficulty getting food to the mouth, food selectivity, refusal, and/or difficulty with food textures or colors.
- A swallowing disorder is difficulty managing foods/liquids once they are in the mouth.
- Risks include malnutrition, dehydration, choking, and aspiration pneumonia.
- This disorder is educationally relevant because children must be kept safe when eating and drinking in school.

What's up with that title? CCC-SLP

- Certificate of Clinical Competence (CCC)
- Speech-Language Pathology (SLP)

Clinical NLP

- language as source of (unstructured) data
 - Doctors' notes – enormous amount of data,
 - but hard to access it or extract info
 - privacy....
 - how to "code" the data? might require trained medical professionals?
(expensive)

Clinical NLP

- “Drug-Disease Relation Dataset”
 - https://github.com/roamanalytics/roamresearch/tree/master/BlogPosts/Features_for_healthcare
- the “MIMIC” (Medical Information Mart for Intensive Care III) dataset
 - <https://mimic.physionet.org>

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Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-01-2021



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- Wednesday 11/03: Language and Technology

LING
3100_Presentation
feedback for David
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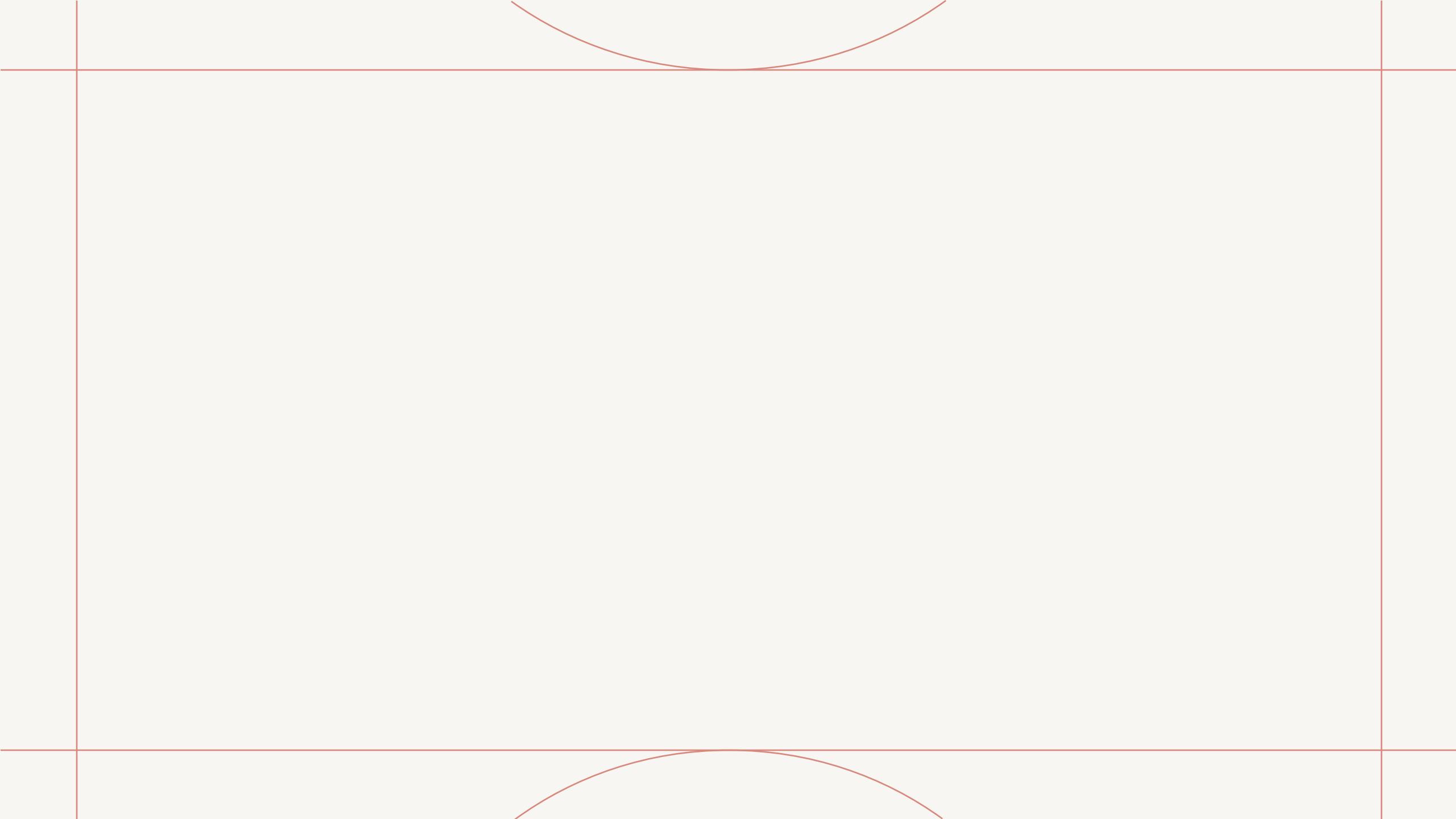
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3100_Presentation
feedback
for **Kyle Stachowicz**
11012021

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feedback for Macy
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Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-01-2021





Focus Program

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Focus 2022 Invitation to Apply

Georgia Tech cordially invites you to attend the
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Focus provides an opportunity for scholars to:

- Learn about Georgia Tech's graduate degree programs.
- Gain insight into available financial resources.
- Visit academic units and research laboratories.
- Obtain assistance with the graduate school application process

Accommodations, meals, and assistance with travel will be provided.

Applications will be accepted from September 15 through November 7, 2021.

www.focus.gatech.edu

Follow application instructions to apply:

- **To apply go to:** [2022 FOCUS Application](#)
- Create an account as a first time user
- Email with pin info should be received within a few mins. Follow directions.

- B.S. in Applied Languages and Intercultural Studies (ALIS) as a double major
 - <https://modlangs.gatech.edu/node/369>
- Minor in East Asian Studies
 - <https://modlangs.gatech.edu/degrees/minors-and-certificates/minor-east-asian-studies>

Minor in Linguistics

Certificate in Linguistics

<https://modlangs.gatech.edu/degrees/minors-and-certificates/minor-linguistics>

- LING 2100 - Introduction to Linguistics
- **Four/ Three** courses from
 - **Any LING course(s)**
 - **Any foreign-language Modern Languages course(s) substantially involving linguistics content**
 - For example: Kaleidoscope of Chinese Language
 - **At most ONE Psychology course substantially involving linguistics content**
 - PSYC 2760 (Human Language Processing); PSYC 3012 (Intro to Cognitive Psychology).
 - **At most ONE Computer Science course substantially involving linguistics content**
 - For example: Natural Language Processing.

LING 2022 Spring Courses

1) Linguistics courses

Intro to Linguistics – LING 2100

Dr. Lelia Glass - M/W 9:30-10:45

Introductory course surveying phonetics/phonology, morphology/syntax, semantics/pragmatics, linguistic diversity, and language variation.

***Satisfies the Humanities attribute.*

Special Topics (Meaning in Language) – LING 3813

Dr. Lelia Glass - M/W 3:30-4:45

Introduces the study of meaning in language: lexical semantics (word meaning), compositional semantics (sentence meaning), and pragmatics (meaning in context) using diverse perspectives and methodologies.

LING 2022 Spring Courses

2) Modern Languages courses

Spanish Applied Linguistics - SPAN 4170/ 6170

Dr. Cecilia Montes Alcala - Thursdays 2-3:15

(plus an additional 1.5 hours of asynchronous instruction)

Advanced linguistic analysis of the Spanish language (structure, history, variation, and use), particularly as it contrasts with English. Conducted in Spanish.

German Applied Linguistics – GER 4813/8803

Dr. Hyoun-A Joo – T/Th 3:30-4:45

Develops analytical skills through a deeper understanding of the structure of the German language. Topics include phonetics, syntax, pragmatics, history, and variation.

Me, Hongchen Wu – Spring 2022 Course

- Chinese 4004: Advanced Chinese II
- Chinese 1002 UA: Elementary Chinese I

(Office: Habersham 109)



- Language and Culture in China/ Asia
- Structure of Uncommonly Taught Languages
- Language Typology/ Languages of the World
- Asian Languages in the U.S.
- Prosody: The Music of Language and Speech
- History of Chinese language

Gentle reminder

- **Discussion:** Language and Medicine (due 11/07, 11:59pm)
- **Outline of your final project:** due 11/14, 11:59pm

Exciting talk

- **Linguistic Fieldwork in Papua New Guinea**
 - Kate Lynn Lindsey, Assistant Professor of Linguistics, Boston University
 - *Wednesday, November 3, 5-6pm; <https://bluejeans.com/4473252229>*

Plan for next week

- **Monday 11/08:** presentations on Language and Technology

Evaluating Gender Bias in Machine Translation
(Stanovsky et al. 2019)

Pulak

The linguistic accuracy of chatbots: Usability from an
ESL perspective (Coniam 2014)

Jayden

Bathleham

- **Wednesday 11/10: Language and Names; "Linguistics in Tech" Talk!!!!**



What do
compauters do
with language?

By linguistic domains- Syntax/ Morphology

- **Morphological Segmentation** - segment cars into car + s
- **Part-of-Speech Tagging** - tag all the nouns, verbs, adjectives, prepositions in a document
- Parsing - assign structures to sentences
- **Sentence Boundary** - figure out where sentences begin and end
 - punctuation can be misleading - "U.S.A."
- **Word Segmentation** - especially relevant in languages without spaces between words
 - where do words begin / end?

By linguistic domains- Semantics

- Meanings of Words - which words are synonyms, antonyms, related
- Machine Translation - map message from one language to another
- Named Entity Recognition - identify all the person / place / date names in a document
- Natural Language Understanding - understand text
- Natural Language Generation - create new sentences
- Question-Answering - "Siri, where is Hausa spoken?"
- Document classification - is this email spam/ham? is this article "fake news" or "real news"?

By linguistic domains- Semantics

- **Recognizing Textual Entailment and Contradiction** - do these two news stories report conflicting information?
 - “The company stated that its CEO resigned” - did CEO resign?
- **Relationship extraction among entities** - learn relations between “Obama”, “Hawaii”, “USA”
- **Sentiment analysis** - is this tweet about my company positive or negative?
- **Topic Segmentation** - what part of this book discusses the topic I’m interested in?
- **Word-Sense Disambiguation** - does “cool” mean “cold” or “awesome”?

By linguistic domains~ Pragmatics and Discourse

- **Summarization** - summarize this document
- **Anaphora Resolution** - what does “they” refer to? ”
 - The council-members refused the protestors a permit because they {feared / advocated} violence”
- **Discourse Analysis** (explanation, elaboration, contrast, parallelism)
 - Three reasons were given for the concert's cancellation: the lead singer was sick, ticket sales were low, and the drummer had left the band.

By linguistic domains~ Pragmatics and Discourse

- **Dialog** – have a conversation (chatbot; Dialog Agent)
- **Language Generation** – create naturalistic-sounding text
- **Action**
 - “text my mom that I’m going to be late!”,
 - “set an alarm for 7 tomorrow”

By linguistic format – speech, text

- **Speech Segmentation** - recognize words in continuous sound stream
- **Speech-to-Text** - go from sound stream to written sentence
- **Text-to-Speech** - written sentence to sounds, with right prosody
- **OCR** (optical character recognition) - digitize old texts from photo
- **Spell-Check**
- **Grammar-Check**
- **Predictive Text** (predictive emails)

- ▶ Try to use Goggle Translate to translate some of the inspirational quotes in *Kung Fu Panda* into a non-English language that you're familiar with
- ▶ Then evaluate whether the auto-translation matches your understanding of the original quotes in English.



← Tweet



Humankind
煮豆燃豆萁
豆在釜中泣
本是同根生
相煎何太急

8:12 PM · Nov 1, 2021 · Twitter for iPhone

23K Retweets 7,395 Quote Tweets 174.5K Likes



Chinese - detected

English

煮豆燃豆萁
豆在釜中泣
本是同根生
相煎何太急

Zhǔdòu rán dòu qí
dòu zài fǔ zhōng qì
běn shì tónggēn shēng
xiāng jiān hé tài jí



Boiled Beans Burning
Bean Osmunda
Bean weeping in the
cauldron
Originally from the
same root
Why are you so
anxious?



[Open in Google Translate](#) • [Feedback](#)

*Beans asimmer on a beanstalk flame
From inside the pot expressed their ire
Alive we sprouted on a single root –
What's your rush to cook us on the fire?*

- Move text/speech from one language ("source language") to another language ("target language") while preserving intended message
 - Faithful translation
 - Artful translation
-
- **In addition to poems, any other things that you think may pose challenges to machine translations?**



爆米花	Pomoho	¥ 8
骨肉相连		¥ 8
美式松饼	Americee Style Muffi	¥ 12
蜂蜜松饼	Honey Muffi	¥ 12
台湾香肠	Taiwan Sausage	¥ 12
鱿米花	Squid Meters Flowers	¥ 12
肉松三文治	Sandwich With Dried Meat Floss	¥ 12
花枝丸	Squid Meat Ball	¥ 14
烤鱿鱼	Baken Sleeve-fish	¥ 20

Dough Fried with Select Materials

Main

Battered Brains

OR

Vegetarian Meat Floss

Dessert

Cigarette pie

Dinner

Peculiar Taste of Tea

WITH WHEAT'S SMELL

Old Yeast Five-But-Bag.....

Sad Cold Noodles

Mouth Bags

TODAY'S SPECIALS

MEDITERRANEAN RISOTTO
WITH SMALLPOX

\$18

SAUTÉED HAPPY FAMILY

\$18

BEEF LANGUAGE IN BUTTER

- Culinary translation, medical translation is hard and safe-critical!
- What should you translate, what should you just leave as-is as a borrowed word?
 - sushi, quesadilla, bibimbap

To build a machine translation

- **Step 1: Parallel corpus!**
 - Rosetta Stone <https://www.sacred-texts.com/egy/trs/trs07.htm>
 - Government documents with multi languages – European Union, Hong Kong, Canada, etc.
 - Literature publications Harry Potter, Madame Bovary, ...
 - Film/television subtitles
 - Subtitled TED talks
 - Academic paper abstracts
 - Universal Declaration of Human Rights and UN documents
 - <https://www.un.org/en/our-work/documents>
 - The Bible

• Step 2:
align words

C ₁	DAIYU ALONE ON BED TOP	THINK	BAOCHAI
E ₁	As she lay there alone Dalyu's thoughts turned to Baochal .		
C ₂	AGAIN LISTEN-TO WINDOW OUTSIDE BAMBOO TIP PLANTAIN LEAF OF ON-TOP RAIN SOUND SIGH DRIP		
E ₂	Then she listened to the insistent rustle of the rain on the bamboos and plantains outside her window .		
C ₃	CLEAR COLD PENETRATE CURTAIN		
E ₃	The coldness penetrated the curtains of her bed .		
C ₄	NOT FEELING FALL DOWN TEARS COME		
E ₄	Almost without noticing it she had begun to cry .		

Figure 24.1 A Chinese passage from Dream of the Red Chamber, with the Chinese words represented by English glosses IN SMALL CAPS. Alignment lines are drawn between 'Chinese' words and their English translations. Words in blue are Chinese words not translated into English, or English words not in the original Chinese. [Collapse](#)

Published in

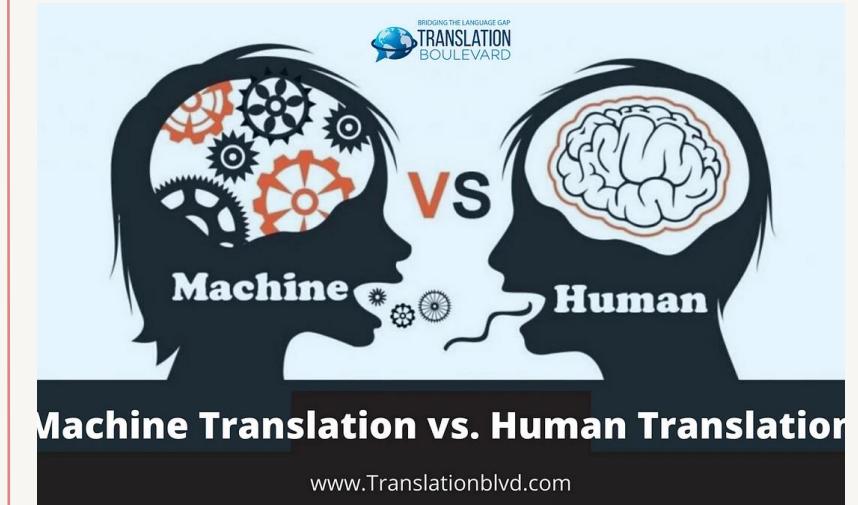
MACHINE TRANSLATION The process of translating comprises in its essence the whole secret of human understanding and social communication . Attributed to

H. Gadamer



- Automated way of learning alignments from data
 - Statistical Machine Translation (e.g., IBM Model 1 and successors) – Noisy Channel implementation
 - Neural Machine Translation
 - [How Google Translate Works - The Machine Learning Algorithm Explained! - YouTube](#)

- In what situations would you use Google Translate?
- In what situations do you think machine translations do a good job?
- In what situations would you want a human to translate or at least check/confirm the output of Google Translate?



What are the barriers for the advance of machine translations?

- Low-resource languages
- What happens when the training data and use-case data come from different domains? (trained on Parliament and the Bible, used to translate natural-disaster tweets?)
- Translation involving knowledge of the world

Applications of Linguistics

Hongchen Wu

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11-08-2021



Week 10 10/25/2021-10/29/2021	Language & medicine	Language & medicine (speech pathology)	Paper review #2 due
Week 11 11/01/2021-11/05/2021	Student presentations [medicine]	Language & technology	Discussion due [medicine]
Week 12 11/08/2021-11/12/2021	Student presentations [technology]	Language & names	Discussion due [technology] Outline of final project due
Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

Gentle reminder

- **Discussion:** Language and Technology (due 11/14, 11:59pm)
- **Outline of your final project:** due 11/14, 11:59pm

Plan for this week

- **Monday 11/08:** presentations on Language and Technology

Evaluating Gender Bias in Machine Translation
(Stanovsky et al. 2019)

Pulak

The linguistic accuracy of chatbots: Usability from an
ESL perspective (Coniam 2014)

Jayden

How Might Voice Assistants Raise Our Children? (Cezary
et al. 2019)

Bathleham

- **Wednesday 11/10: Language and Names; "Linguistics in Tech" Talk!!!!**



LING
3100_Presentation
feedback for Pulak
Agarwal_11082021

[https://forms.office.com
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LING
3100_Presentation
feedback for Jayden
Witucki_11082021

[https://forms.office.com
/r/t1inskxDH](https://forms.office.com/r/t1inskxDH)



Consequences of machine translation for human jobs?

Isn't Google Translate just as good as a human translator?

Just as Alexa can answer simple questions but can't think for you, machine translation can get the gist of a text but can't convey complex thoughts.

GET THE GIST

Free machine translation services such as Google Translate can be excellent tools for getting the gist of a foreign-language message.

Best used for personal purposes, such as:



ordering at a restaurant abroad



a message from a foreign Airbnb host

GET THE MESSAGE

Human translators are essential when the message needs to be accurate, nuanced, and natural.

Best used for critical situations, such as:



medical records



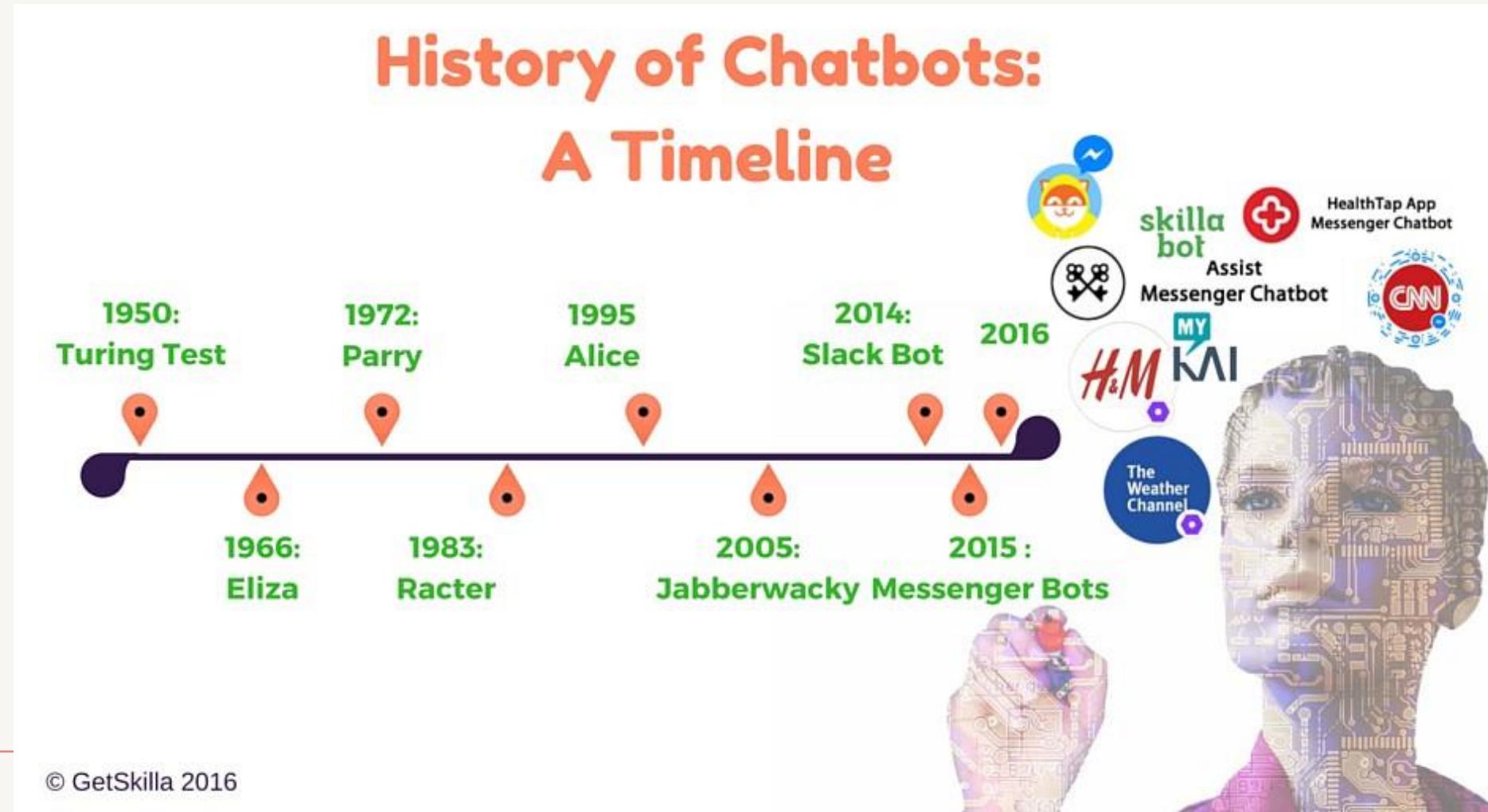
contracts



USE WITH CAUTION

Many mistranslations have arisen from machine translations. For example, when KFC began doing business in China, their slogan “Finger Lickin’ Good” was translated as “Eat Your Fingers!” Needless to say, this was one of the reasons for the company’s initial poor performance in China.

Chatbots: dialog Systems



The very first therapy Chatbot: ELIZA

developed by Joseph Weizenbaum

(MIT) 1964-1966

pretends to be psychotherapist

fooled a surprising number of test subjects

The tendency of humans to assume computer behavior is analogous to human behavior.

Reading human intentionality into mechanistic symbol manipulations

```
Welcome to
      EEEEEE  LL      IIII  ZZZZZZ  AAAAAA
      EE      LL      II     ZZ  AA  AA
      EEEEEE  LL      II     ZZZ  AAAAAAAA
      EE      LL      II     ZZ  AA  AA
      EEEEEE  LLLLLL  IIII  ZZZZZZ  AA  AA

Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?
YOU: Men are all alike.
ELIZA: What is the connection, do you suppose ?
YOU: They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
YOU: Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here ?
YOU: He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU: It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy ?
YOU: █
```

Try it yourself

- <https://web.njit.edu/~ronkowitz/eliza.html>

ELIZA: a very basic Rogerian psychotherapist chatbot

Talk to Eliza by typing your questions and answers in the input box.

```
> Hello, I am Eliza. I'll be your therapist today.  
* HI there, tell me what i should eat for lunch  
> Why do you ask?  
* i don't know what to eat  
> Why don't you know what to eat?  
* if I know why, i won't ask you  
> Oh... Let's move on to something else for a bit. ?  
* oh, you don't know what to eat  
> We were discussing you, not me.
```

TYPE HERE

Possible Commercial Uses of Chatbots

- 24h phone and online support Optimum help chat
- telemarketing Samantha West for health insurance
- Erica for BOA digital assistant
- video games Fa,cade, event[0]
- Mental health Therapy chatbot: Webot
(<https://youtu.be/KGh8dNkpZWk>)

Limited uses of Chatbots

- text only, no speech
- restricted topic of conversation
 - medical advice, weather forecast, ...
 - formulaic or specialized discourse ordering train tickets, room reservation, ...
- grammar with few distinct word forms
 - restricted word order: English VS German VS Hungarian

Why dialog is arguably the hardest problem in NLP?

- Requires:
 - perfect command of language grammar
 - analysis of meaning
 - rich world knowledge
 - ability to keep track of discourse save new information
 - recall established facts
 - correct turn taking
 - understanding non-literal speech indirect speech acts, humor, . . .
 - sophisticated reasoning developing and following arguments

Strategies for Detecting Chatbots being non-intelligent

- Be annoying Ask the same thing over and over again.
 - Do you get contradicting replies?
- Be a giant douche Say something that is completely beyond the pale.
 - Do you get a scolding or shocked reply?
- Be a polyglot Randomly switch languages.
 - Do you get replies in a matching language, without any mention of the language change?
- Be recent Incorporate recent events that a human would be aware of.
 - Do you get a meaningful reply?
- Be insane Ignore all rules of language (word order, grammar, etc.).
 - Do you get a surprisingly normal reply?

Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-10-2021



Gentle reminder

- **Discussion:** Language and Technology (due 11/14, 11:59pm)
- **Outline of your final project:** due 11/14, 11:59pm

Plan for today

- **Wednesday 11/10**

How Might Voice Assistants Raise Our Children? (Czary et al. 2019)

Bathleha
m

- **"Linguistics in Tech" Talk!!!!**



Plan for next week

- Monday 11/15: Lecture sessions on Language and names, Language and food
- Wednesday 11/10: Presentations on Language and names, Language and food

Linguistic markers of status in food culture: Bourdieu's distinction in a menu corpus
(Jurafsky et al 2017)

Jessie Sui

Kome
Onoyona

Tsion
Fitsum

Pokémonikers: A study of sound symbolism and Pokémon names (Shih et al 2018)

Analyzing the Language of Food on Social Media (Fried er al. 2014)

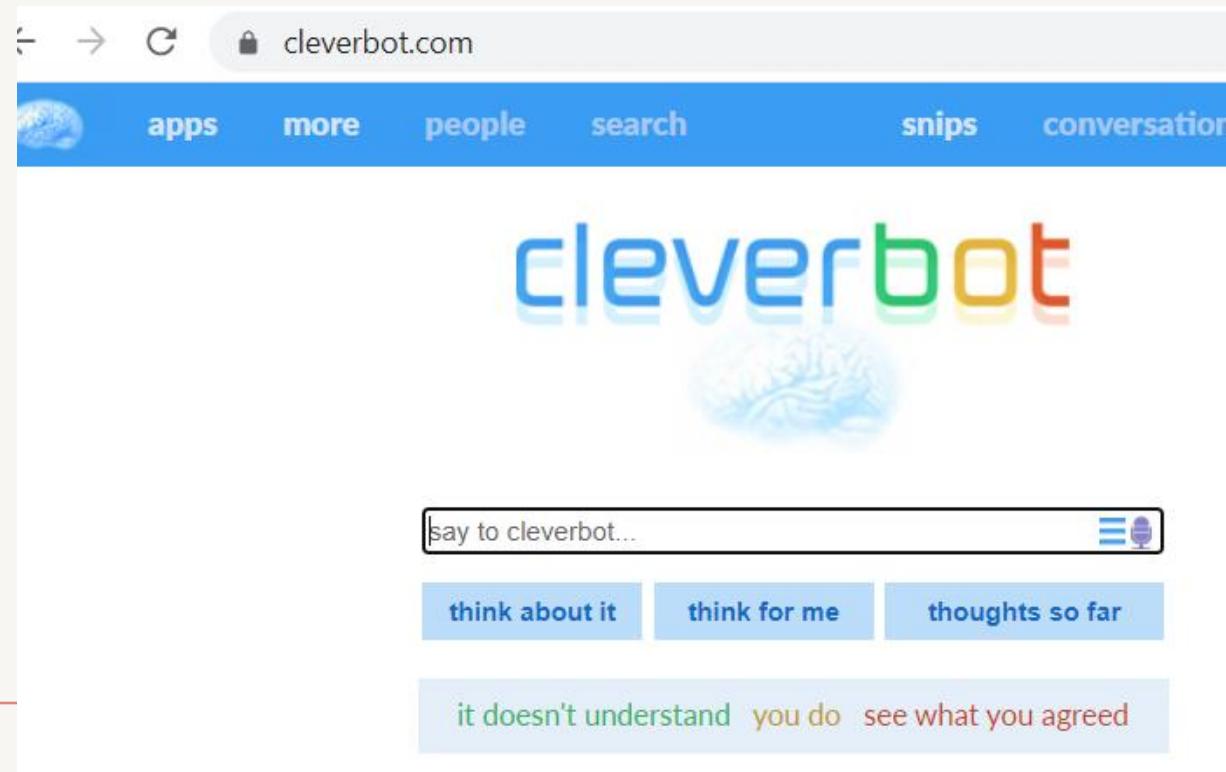
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Cleverbot

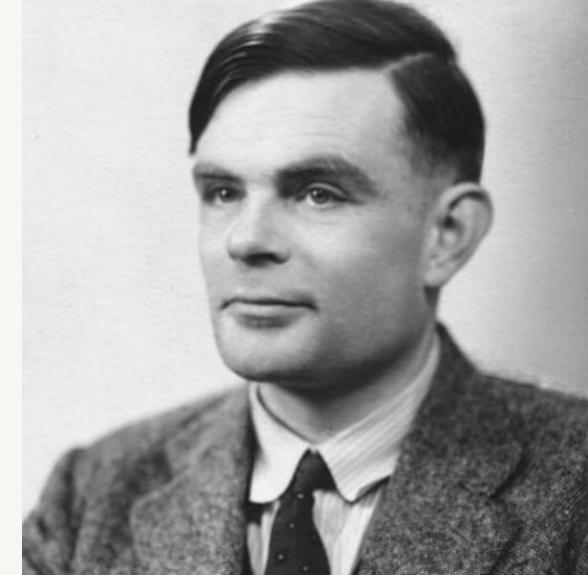
- <http://www.cleverbot.com/> [example]



- Cleverbot's responses are **not pre-programmed**.
- It **constantly learns from Human input, growing in data size at a rate of 4 to 7 million interactions per second**.
- online Cleverbot is usually talking to around 80,000 people at once.
- Cleverbot was judged to be 59.3% human in a formal Turing test at the 2011 Technich festival in India.
- In 2017, a Twitch stream of two Google Home devices modified to talk to each other using Cleverbot.io garnered over 700,000 visitors and over 30,000 peak concurrent viewer. (<https://www.youtube.com/watch?v=Tv2CiA1taF0>)

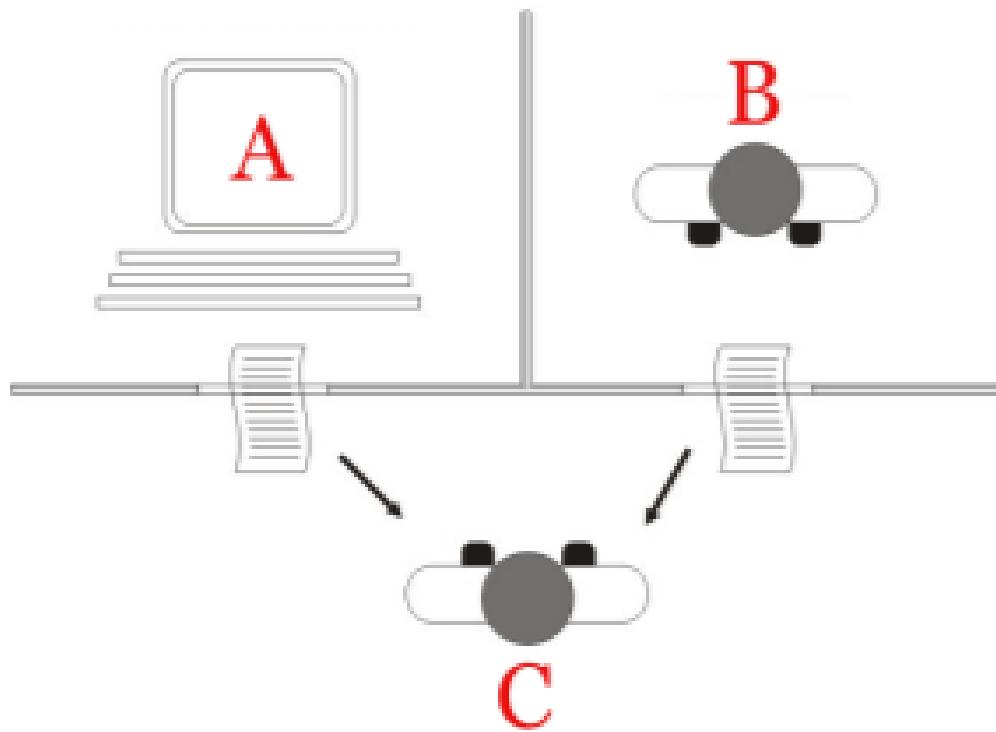
The Turing Test

- Alan Turing (1912-1954)
- British mathematician/computer scientist
- cracked the Enigma in World War II
- father of computation (Turing machine)
- defined artificial intelligence (Turing test)
- extreme long-distance runner (40+ miles)
- Turing was interested in the possibility of artificial intelligence.
 - **What does it mean for a machine to be intelligent?**
 - **Turing's proposal A machine is intelligent if humans cannot distinguish it from a human**



Turing Test

- ▶ human C joins remote/online chat
- ▶ must decide whether they are talking to human B or machine A
- ▶ machine A passes test if human C believes it is human



Criticism of the Turing Test

- **Too weak?**

- appearing intelligent != being intelligent
- AI can cheat to pass Turing Test

- **Too strong?**

- intelligence != human intelligence
- AIs have very different memory and computation abilities.
- We should not expect them to think like humans.
- Also, humans can fail/differ in various aspects of intelligence. Autism, Williams syndrome, .

Strong AI versus Weak AI

- **Strong AI (definition by John Searle):**

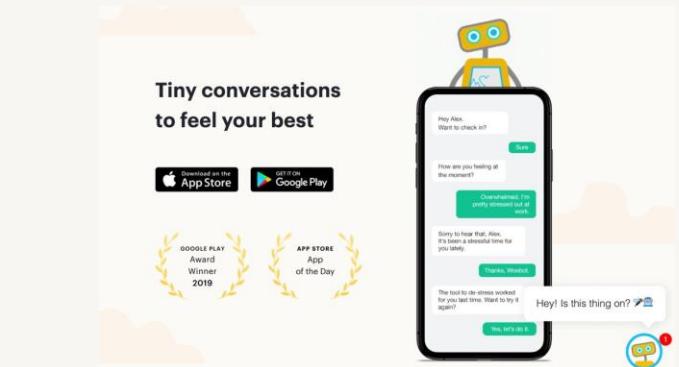
- “The appropriately programmed computer with the right inputs and outputs would thereby have a mind in exactly the same sense human beings have minds.”

- **Weak AI (definition by Stuart Russell and Peter Norvig)**

- “The assertion that machines could possibly act intelligently (or, perhaps better, act as if they were intelligent).”

Questions to think about:

- Why are chatbots of practical interest for businesses?
- Why is dialog a hard problem?
- Give a succinct explanation as to why the following argument is flawed:
 - “Computers can write poems like humans, so they have truly mastered language.”
- Name an AI figure you saw in the movies and do you think we will eventually have that kind of AI products in our daily life?



Tiny conversations
to feel your best

Download on the
App Store GET IT ON
Google Play



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-10-2021





A billboard advertisement for the delivery service Flink in Berlin uses what's called the "gender star" in the word *Freund*in*, a gender-neutral word for romantic partner.

<https://www.npr.org/2021/10/30/1049603171/germany-gender-neutral-language-german>

Summary of paper review # 2

- https://gtvault-my.sharepoint.com/:x/r/personal/hwu480_gatech_edu/_layouts/15/Doc.aspx?sourcedoc=%7B5237082D-547E-47B6-AEF9-DA937568E364%7D&file=LING%203100_Fall%202021_Oral%20presentation_Sign-up%20sheet.xlsx&wdOrigin=OFFICECOM-WEB.MAIN.REC&ct=1637006689545&action=default&mobileredirect=true&cid=b3b2a6f2-c8a6-409e-a60d-b862c2f7c2aa

Plan for this week and next week

- **Monday 11/15:** Lecture sessions on Language and names (maybe Language and food)
- **Wednesday 11/10:** Presentations on Language and names, Language and food

Linguistic markers of status in food culture: Bourdieu's distinction in a menu corpus
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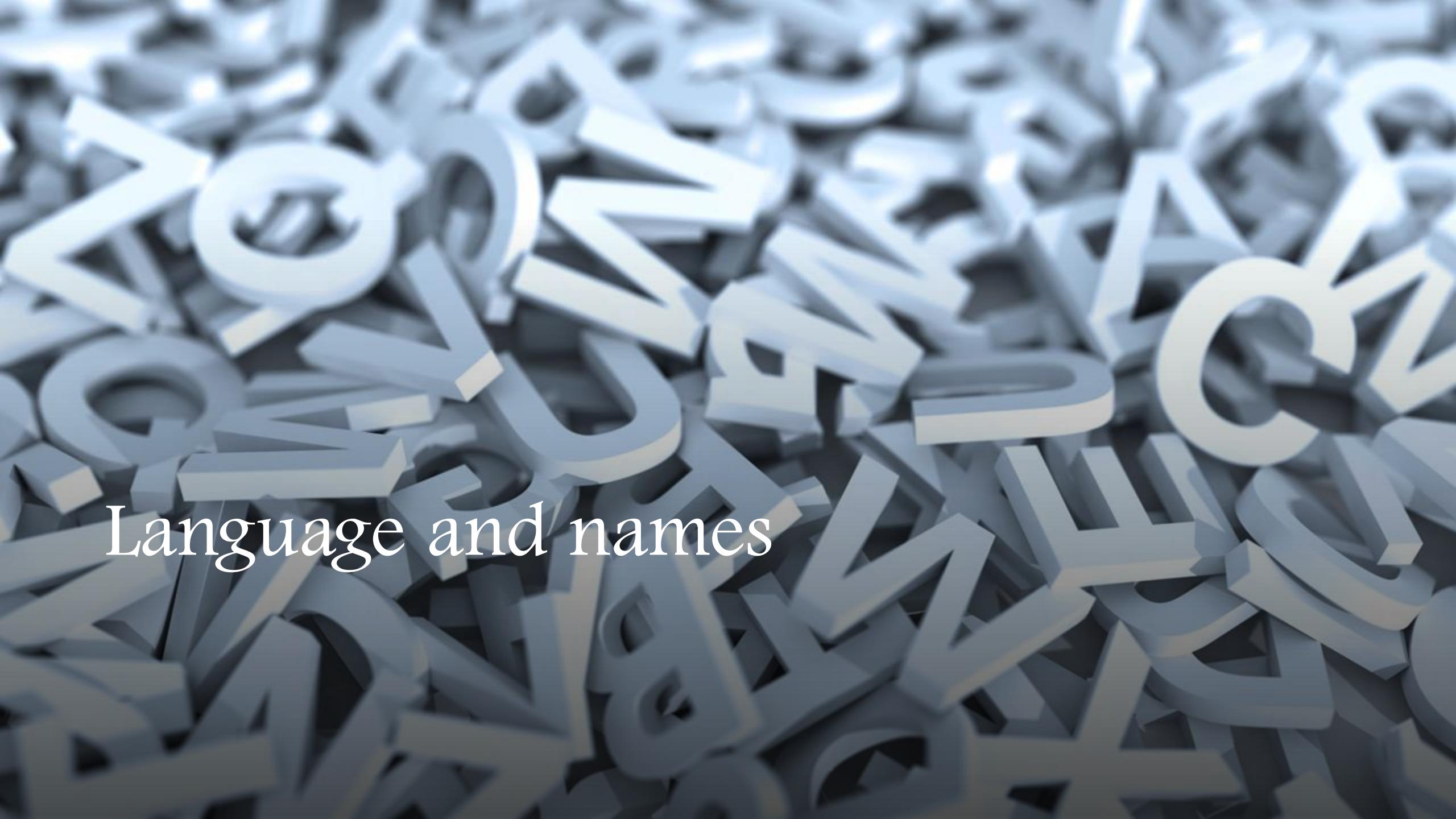
Plan for this week and next week

- Monday 11/22: Lecture sessions on Language and food
- Wednesday 11/24: Student Recess (No Classes - Campus Open)
 - *The discussion on the Language and name, Language and food will be due by end of week 15 then.*

Week 13 11/15/2021-11/19/2021	Language & food	Student presentations [food, names]	Discussion due [food, names]
Week 14 11/22/2021-11/26/2021	 Final project presentations	<i>Student Recess</i>	
Week 15 11/29/2021-12/03/2021	Final project presentations	Final project presentations	
Week 16 12/06/2021	Q&A session		

Plan for the weeks after next week

- **"5 Minute Blitz Talk Competition"**
 - During week 15 (maybe week 16), you will present your work-in-progress with your final project in class (10% of your final grade)
 - The format is presenting in **5 MINUTES with only 1 PowerPoint slide.**
 - The goal is for students to engage all their **communication skills** to make your presentation vivid and engaging while emphasizing its key point without too much technical terminology or field-specific jargon.
 - Prizes will be awarded for 1st, 2nd and 3rd place VOTED by the audience based on the evaluation of the presentation's comprehension, content, communication and engagement
 - Presentation days will be randomly selected. **You need to submit your one-slide PPT to "Oral presentation of your final project" on Canvas, by 11/29, 10am.**

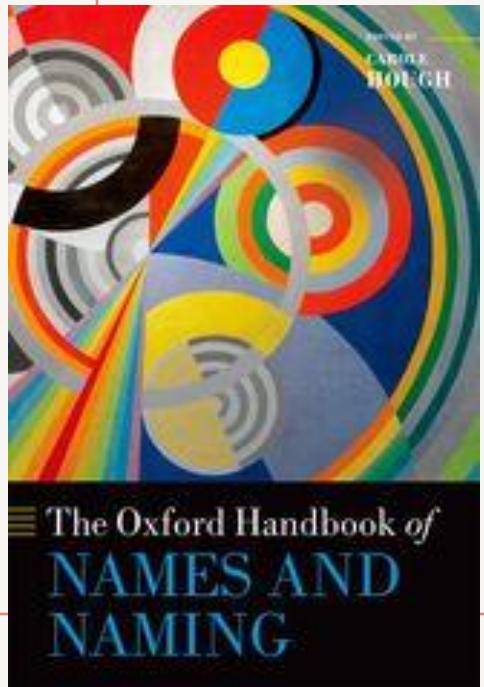


Language and names

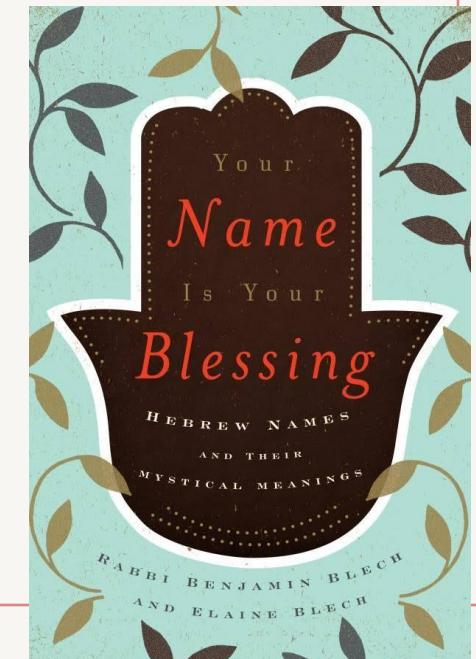
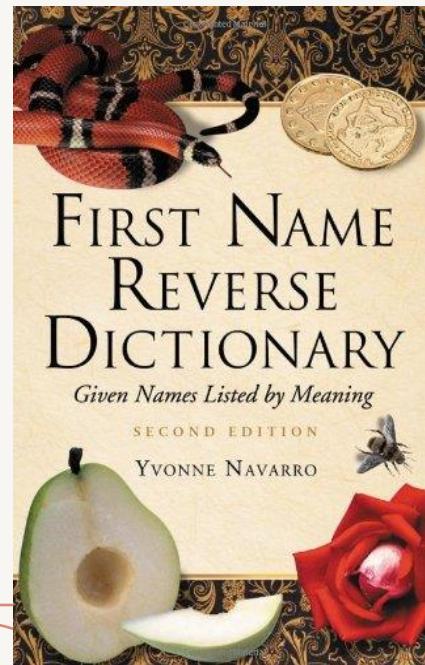
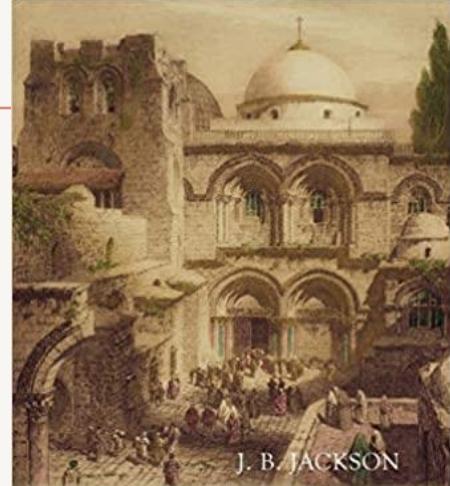
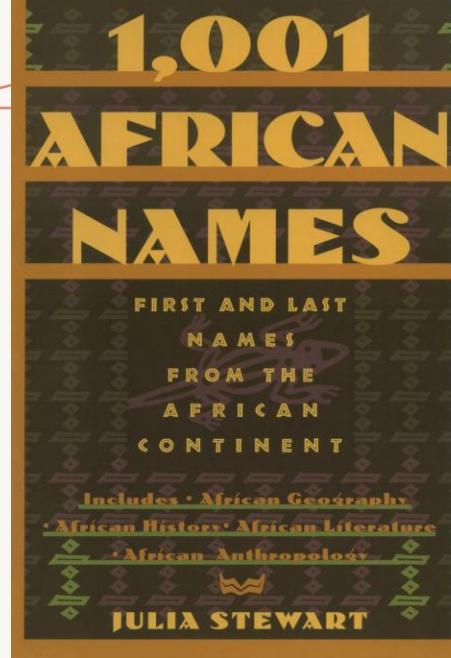
John M. Anderson

The Grammar of Names

ΣΤΑ ΚΑΜΑΡΙΑ
ΣΤΩΙΚΟΙ ΟΝΟΜΑΤΑ
ΟΝΟΜΑΖΕΤΑΙ ΒΑΣΙΛΗΣ
ΒΑΣΙΛΗΣ ΛΕΝ ΕΙΔΑ ΤΟ ΒΑΣΙΛΗ

**The
Anthropology
of Names
and Naming**

EDITED BY

Gabriele vom Bruck
Barbara Bodenhorn

Onomatology/ Onomastics

- The study of the etymology, history, and use of proper names
- Onomastics covers the naming of all things,
 - including place names (toponyms) and
 - personal names (anthroponyms).
- Onomastics also have branches include:
 - Literary onomastics is the study if the names in works of literature and other fiction.
 - Socio-Onomastics is the study of names within a society or culture.

Questions to think about

Why do we need a name?

Why is choosing a name for a newborn often considered as an activity of utmost significance?

What are the literal and non-literal meaning(s) of your name?

Who made the decision to choose the name for you?

How do parents choose personal names for their children?

Importance of naming

- Names help a person establish an identity, and the process of "**naming is a crucial aspect of converting 'anybodies' into 'somebodies'.**"
- Names also help tie a new child into a family identity because "the act of naming has the potential to implicate infants in relations..."
- Individual lives thus become entangled–through the name–in the life histories of others." (Bodenhorn)

Personal names

- Gender
- Race/ethnicity
- Religion
- National origin
- Family history
- Sound symbolism
- Information economy (distinctiveness?)

Lieberson and Bell 1992

Children's First Names: An Empirical Study of Social Taste

TABLE 1

LEADING NAMES, BY RACE, OF CHILDREN BORN IN NEW YORK STATE, 1973-85

GIRLS				Boys			
White	%	Black	%	White	%	Black	%
Jennifer	4.2	Nicole	1.6	Michael	5.7	Michael	2.2
Christine	3.1	Tiffany	1.4	Christopher	3.4	Jason	1.6
Jessica	2.3	Ebony	.9	John	2.7	Anthony	1.6
Melissa	2.0	Jennifer	.9	David	2.6	Christopher	1.5
Michelle	1.9	Latoya	.9	Matthew	2.6	James	1.5
Nicole	1.8	Monique	.8	Joseph	2.6	Robert	1.4
Sarah	1.7	Kimberly	.7	Brian	2.6	David	1.3
Lisa	1.3	Natasha	.7	Jason	2.6	Sean	1.3
Elizabeth	1.3	Christine	.7	Daniel	2.4	Kevin	1.0
Amy	1.3	Michelle	.7	Robert	2.3	William	1.0
Heather	1.2	Crystal	.7	James	2.1	John	1.0
Stephanie	1.2	Melissa	.7	Steven	2.0	Joseph	.9
Kimberly	1.1	Danielle	.6	Thomas	1.6	Steven	.8
Amanda	1.1	Erica	.6	Eric	1.6	Andre	.8
Kelly	1.1	Stephanie	.6	William	1.6	Eric	.8
Danielle	1.1	Jessica	.5	Anthony	1.4	Charles	.8
Catherine	1.0	Tamika	.5	Sean	1.4	Brian	.7
Rebecca	.9	Lisa	.4	Mark	1.4	Richard	.7
Laura	.9	Elizabeth	.4	Jeffrey	1.3	Duane	.7
Rachel	.9	Tanya	.4	Richard	1.3	Kenneth	.6
Total births:							
71,422		17,071		75,163		17,762	

NOTE.—Total births refers to a 6.25% sample of births with an actual first name reported on the birth certificate.

Lieberson and Bell 1992

- **a gender difference in the disposition to use novel names:**
 - Among white boys, 45 of the leading 50 names are in the Stewart directory, with the comparable figure for white girls being only 35
- **Some striking differences in the actual sounds of the names for girls and for boys**
 - Among the 100 names most often given to white girls, 34 end in a "schwa-like" sound, as in Jessica or Sarah; by contrast a schwa ending is rare for boys, being found in only one of the 100 leading white boys' names (Joshua)
 - 87% of the leading names given to white males end in a consonant sound, more than double the rate occurring among females
 - Names ending with an "n" sound are an exception, however, being equally common for girls (as in Christine, Catherine, and Megan) and boys (in both cases about one-fourth of all names)

NAMES GIVEN TO WHITE GIRLS, BY EDUCATION OF MOTHER,
NEW YORK STATE, 1973-85

NAME	ND	% RECEIVING NAME BY NO. OF YEARS OF SCHOOL COMPLETED BY MOTHER				
		9-11	12	13-15	16	17+
Emily39	.27	.22	.76	1.17	1.43
Allison33	.11	.56	1.05	1.55	1.65
Lauren32	.13	.64	.99	1.49	2.07
Megan32	.12	.66	1.57	1.94	1.33
Catherine21	.56	.76	1.25	1.93	1.67
Elizabeth20	.79	.96	1.47	2.19	2.67
Sarah20	.82	1.52	2.23	2.91	3.32
Laura18	.47	.76	1.24	1.52	1.47
Erin17	.27	.76	1.22	1.38	.86
Rachel15	.55	.77	.98	1.55	1.49
Rebecca13	.67	.80	1.11	1.54	1.51
Amy01	1.13	1.29	1.46	1.45	1.57
Christine	-.02	2.29	3.48	3.44	3.28	2.73
Amanda	-.02	1.08	1.10	1.09	1.25	1.27
Stephanie	-.02	.99	1.25	1.27	1.28	1.07
Kelly	-.03	.67	1.33	1.42	.84	.72
Erica	-.04	.77	.76	.72	.81	.86
Heather	-.04	.97	1.40	1.49	1.23	.80
Danielle	-.04	.74	1.29	1.17	.77	.99
Kimberly	-.06	1.08	1.19	1.33	1.12	.68
Jessica	-.07	2.73	2.26	2.44	2.16	2.31
Jennifer	-.07	3.86	4.78	4.21	3.80	3.42
Jamie	-.07	.76	.89	.83	.74	.60
Stacy	-.08	.64	.92	.73	.61	.60
Lisa	-.09	1.10	1.58	1.13	.91	1.15
Nicole	-.10	1.56	2.17	2.06	1.17	1.07
Melissa	-.11	2.18	2.15	2.04	1.55	1.29
Michelle	-.11	1.67	2.28	2.06	1.06	1.09
Angela	-.27	.79	.69	.49	.19	.10
Maria	-.27	1.01	.65	.36	.36	.28
Tammy	-.45	.84	.37	.18	.06	.06
Crystal	-.47	1.36	.51	.32	.07	.00
Valid N	10,330	31,557	12,695	6,900	5,027

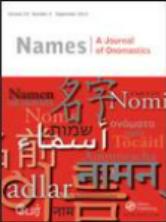
NAMES GIVEN TO WHITE BOYS, BY EDUCATION OF MOTHER,
NEW YORK STATE, 1973-85

NAME	ND	% RECEIVING NAME BY NO. OF YEARS OF SCHOOL COMPLETED BY MOTHER				
		9-11	12	13-15	16	17+
Andrew23	.53	1.05	1.69	2.13	2.73
Adam19	.52	.96	1.52	1.74	1.98
Matthew17	1.40	2.26	3.77	4.20	3.99
Jonathan16	.75	.90	1.45	1.95	1.70
Ryan14	.34	.95	1.54	1.29	1.07
Scott08	.70	1.06	1.28	1.58	1.24
Mark08	.81	1.38	1.59	1.46	2.06
Joshua07	.97	.98	1.32	1.28	1.91
Brian07	1.44	2.69	3.25	3.53	2.51
Daniel07	1.63	2.36	2.73	2.96	3.26
Jeffrey06	.88	1.28	1.67	1.40	1.76
David04	2.45	2.40	2.89	3.17	3.85
Eric04	1.32	1.58	1.87	2.06	1.89
Steven	-.02	1.66	2.15	2.03	2.20	2.00
Christopher	-.02	2.80	3.72	3.99	3.50	2.88
Michael	-.03	4.75	6.22	6.14	5.70	5.46
Sean	-.03	1.22	1.42	1.64	1.25	1.20
Thomas	-.04	1.34	1.88	1.63	1.56	1.57
John	-.05	2.34	2.93	2.56	2.97	2.17
James	-.07	2.13	2.23	2.18	1.97	1.72
William	-.09	1.65	1.70	1.46	1.36	1.46
Jason	-.12	3.02	2.85	2.39	2.07	2.11
Robert	-.12	2.71	2.58	2.27	1.83	1.67
Richard	-.13	1.42	1.45	1.16	.88	.94
Joseph	-.15	2.67	3.15	2.21	1.63	1.55
Anthony	-.25	1.95	1.78	1.04	.61	.51
Luis	-.54	1.11	.30	.13	.11	.04
Jose	-.58	1.71	.46	.16	.07	.04
Valid N	10,880	33,168	13,468	7,197	5,344

Lieberson and Bell 1992

- The divergent tastes underlying naming patterns for boys and girls reflect **a tendency to assign a lesser role to women**, such that their names are relatively more decorative and thereby open to fashion.
- Names and mother's education
 - More-educated mothers prefer more-historical names, Biblical names (*Rachel, Rebecca, Adam, Daniel*)
 - Some names start off as most-common among most-educated mothers, then become more common among lesser-educated mothers – but rarely the reverse

Changes in frequency of names over time



Names >
A Journal of Onomastics
Volume 50, 2002 - Issue 4

[Journal homepage](#)

Enter keywords, authors, DOI, ORCID

121 Views

7 CrossRef citations to date

0 Altmetric

Original Articles

Long Term Trends in the Frequencies of Given Names

Douglas A. Galbi

Pages 275-288 | Published online: 19 Jul 2013

[Download citation](#) <https://doi.org/10.1179/nam.2002.50.4.275>

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<https://www.tandfonline.com/doi/abs/10.1179/nam.2002.50.4.275>

Table 1
Popularity of UK Personal Given Names: 1800 to 1994

Birth Year	Females			Males		
	Top Name Name	Top 3 Pop.	Top 10 Pop.	Top Name Name	Top 3 Pop.	Top 10 Pop.
1800	Mary	23.9%	53.2%	82.0%	John	21.5%
1810	Mary	22.2%	50.7%	79.4%	John	19.0%
1820	Mary	20.4%	47.7%	76.5%	John	17.8%
1830	Mary	19.6%	45.4%	75.8%	John	16.4%
1840	Mary	18.7%	43.2%	75.0%	William	15.4%
1850	Mary	18.0%	41.0%	72.1%	William	15.2%
1860	Mary	16.3%	37.0%	68.3%	William	14.5%
1870	Mary	13.3%	31.5%	61.1%	William	13.1%
1880	Mary	10.6%	25.4%	53.8%	William	11.7%
1900	Elizabet	7.2%	16.2%	38.5%	William	9.0%
1925	Mary	6.7%	16.8%	38.7%	John	7.3%
1944	Margaret	4.5%	12.6%	31.7%	John	8.3%
1954	Susan	6.1%	13.2%	32.5%	David	6.3%
1964	Susan	3.6%	10.3%	28.6%	Paul	5.6%
1974	Sarah	4.9%	12.3%	28.0%	Mark	4.6%
1984	Sarah	4.1%	11.0%	27.3%	James	4.3%
1994	Emily	3.4%	8.6%	23.8%	James	4.2%

Note: Based on Galbi (2001), Table 3, p 15 and underlying data. See Appendix D of that paper for sources and details of analysis..

Table 2
Popularity of Personal Given Names in England before 1825

Year, Location	Females					Males				
	Top Name	Pop.	Top 3 Pop.	Top 10 Pop.	Sample Size	Top Name	Pop.	Top 3 Pop.	Top 10 Pop.	Sample Size
1080, Winchester 1)						Robert	6.6%	18.0%	35%	228
1120, Winchester 1)						William	6.6%	15.8%	30%	912
1180, Winchester 1)						William	10.2%	29.2%	57%	383
1200, Essex 2)	Alice	11.3%	27.4%	56%	c. 1400	William	12.4%	30.5%	61%	c. 4000
1210, South 3)	Matilda	16.2%	39.9%	70%	173	William	14.4%	32.7%	65%	877
1270, Rutland 4)	Alice	19.4%	51.0%	84%	206	William	15.2%	35.6%	76%	1627
1300, Lincoln 5)	Alice	17.1%	42.4%	75%	1213	John	22.7%	52.2%	79%	9390
1260, London 6)						John	17.6%	39.7%	69%	814
1290, London 6)						John	23.3%	44.8%	73%	1852
1510, London 7)						John	24.4%	49.4%	74%	427
1610, London 7)						John	21.0%	43.8%	72%	463
1825, London 8)	Mary	19.2%	43.9%	73%	63809	William	16.3%	39.2%	80%	48275
1350, Manchester 9c)						John	22.7%	47.4%	92%	717
1610, Manchester 10)						John	18.6%	37.6%	77%	1298
1805, Manchester 11)	Mary	25.8%	48.2%	84%	1866	John	21.7%	48.7%	81%	1935
1350, Yorkshire 9d)	Alice	22.4%	50.4%	86%	1794	John	33.5%	66.8%	93%	1665
1620, Yorkshire 12)	Ann	24.0%	54.7%	88%	342	John	16.2%	47.1%	86%	427
1670, Yorkshire 12)	Ann	21.5%	59.2%	79%	228	William	18.7%	47.4%	78%	283
1720, Yorkshire 12)	Mary	25.7%	57.4%	87%	413	John	25.5%	57.8%	86%	377
1770, Yorkshire 12)	Mary	22.8%	45.9%	84%	381	John	25.6%	55.7%	86%	433
1825, Yorkshire 8)	Mary	20.1%	45.8%	81%	99299	John	18.8%	44.2%	79%	91111

Table 3
Personal Given Names in England:
1570 to 1700

Birth Years	Popularity of Top 3 Names	
	Females	Males
1570-1579	41.0%	48.5%
1580-1589	36.2%	47.3%
1590-1599	41.1%	50.6%
1600-1609	38.2%	48.8%
1610-1619	38.8%	49.9%
1620-1629	41.3%	49.3%
1630-1639	45.1%	48.5%
1640-1649	46.7%	49.3%
1650-1659	50.1%	49.0%
1660-1669	47.5%	48.0%
1670-1679	50.3%	50.3%
1680-1689	51.7%	49.2%
1690-1700	52.1%	51.2%

Source: Smith-Banister (1997) Table 7.8, p. 150.
Figures for “mean” across English regions are
given above. Sample sizes and weighting not
reported.

- **What kind of information can we get through looking at the frequency of names over time?**
 - Changes in the popularity of **the most frequent name, most frequent three names, and most frequent ten names** are part of a larger order of change that can be easily recognized graphically

Chart 1
**Popularity Distribution of
UK Female Names**

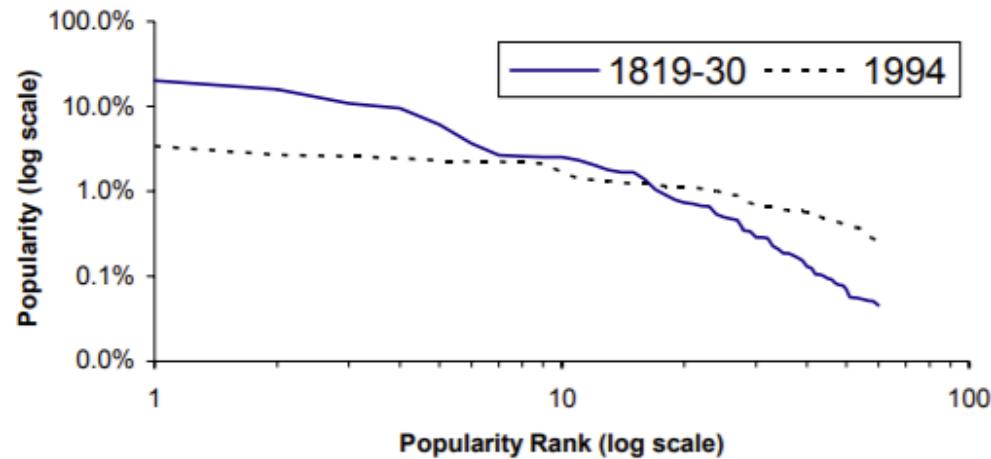
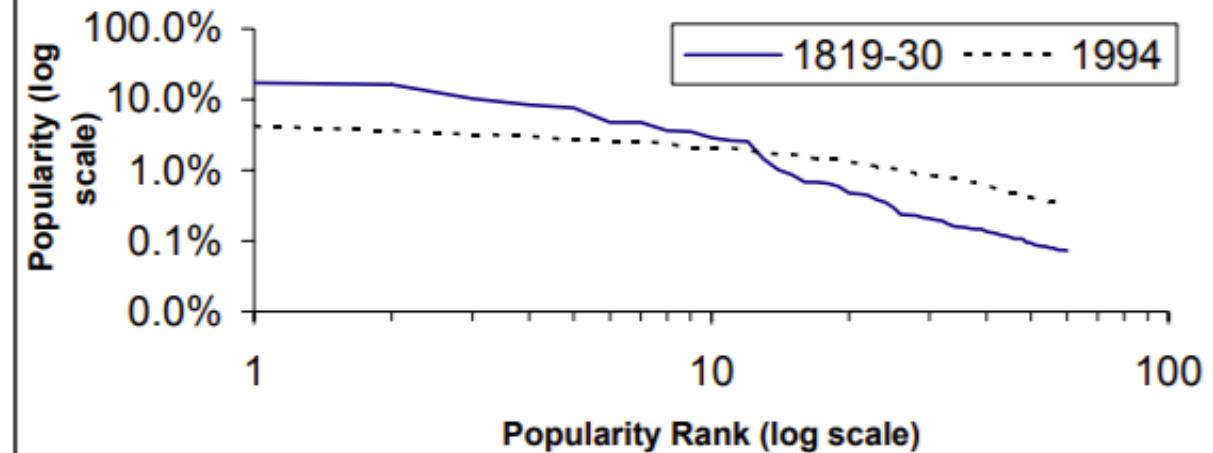


Chart 2
**Popularity Distribution of
UK Male Names**



- **Why are the most-frequent names becoming less frequent?**
 - Growing cultural preference for individualism?
 - Changing information economy, changing social networks? (Search engine optimization?)
 - Increasingly-available knowledge about aggregate naming patterns can itself affect naming patterns

Guess what's the top 10 baby names in the states?

Change in Name Popularity

Background information

Change in Popularity

Statistics on popularity change

Names that increased in popularity from 2019 to 2020

The table shows names where the change in rank is greater than 4.

Male births				Female births			
Name	Change	Rank in ...		Name	Change	Rank in ...	
		2020	2019			2020	2019
Zyair	590	968	1558	Avayah	1547	930	2477
Jaxtyn	575	585	1160	Denisse	942	854	1796
Jakobe	544	838	1382	Jianna	824	850	1674
Kylo	483	449	932	Capri	608	685	1293
Aziel	456	495	951	Rosalia	542	744	1286
Ander	455	628	1083	Denise	522	872	1394
				Zhuri	398	991	1389

Background information

Change in Popularity

Statistics on popularity change

Names that decreased in popularity from 2019 to 2020

The table shows names where the change in rank is greater than 4.

Name	Change	Male births		Female births			
		2020	2019	Name	Change	2020	2019
Vivaan	378	1254	876	Yaritza	387	1200	813
Alexzander	284	1172	888	Marissa	209	1084	875
Javion	259	1212	953	Annabella	197	852	655
Reyansh	258	1062	804	Ariadne	196	1195	999
Kenny	228	1094	866	Jayde	193	1025	832
Yisroel	190	1074	884	Miah	191	1067	876
Marquis	188	1145	957	Beatrix	190	1173	983
Toby	188	1142	954	Tinley	188	1152	964
Kolten	171	1102	931	Amiya	187	1035	848

• <https://www.ssa.gov/oact/babynames/>

Guess what's the top 10 baby names in the states?

Top 10 Baby Names of 2020

Rank	Male name	Female name
1	Liam	Olivia
2	Noah	Emma
3	Oliver	Ava
4	Elijah	Charlotte
5	William	Sophia
6	James	Amelia
7	Benjamin	Isabella
8	Lucas	Mia
9	Henry	Evelyn
10	Alexander	Harper

Popular Baby Names



Popular Names by State

November 11, 2021

The following table shows the 100 most frequent given names for male and female births in 2020 in Georgia. The number to the right of each name is the number of occurrences in the data. The source is a 100% sample based on Social Security card application data. See the [limitations](#) of this data source.

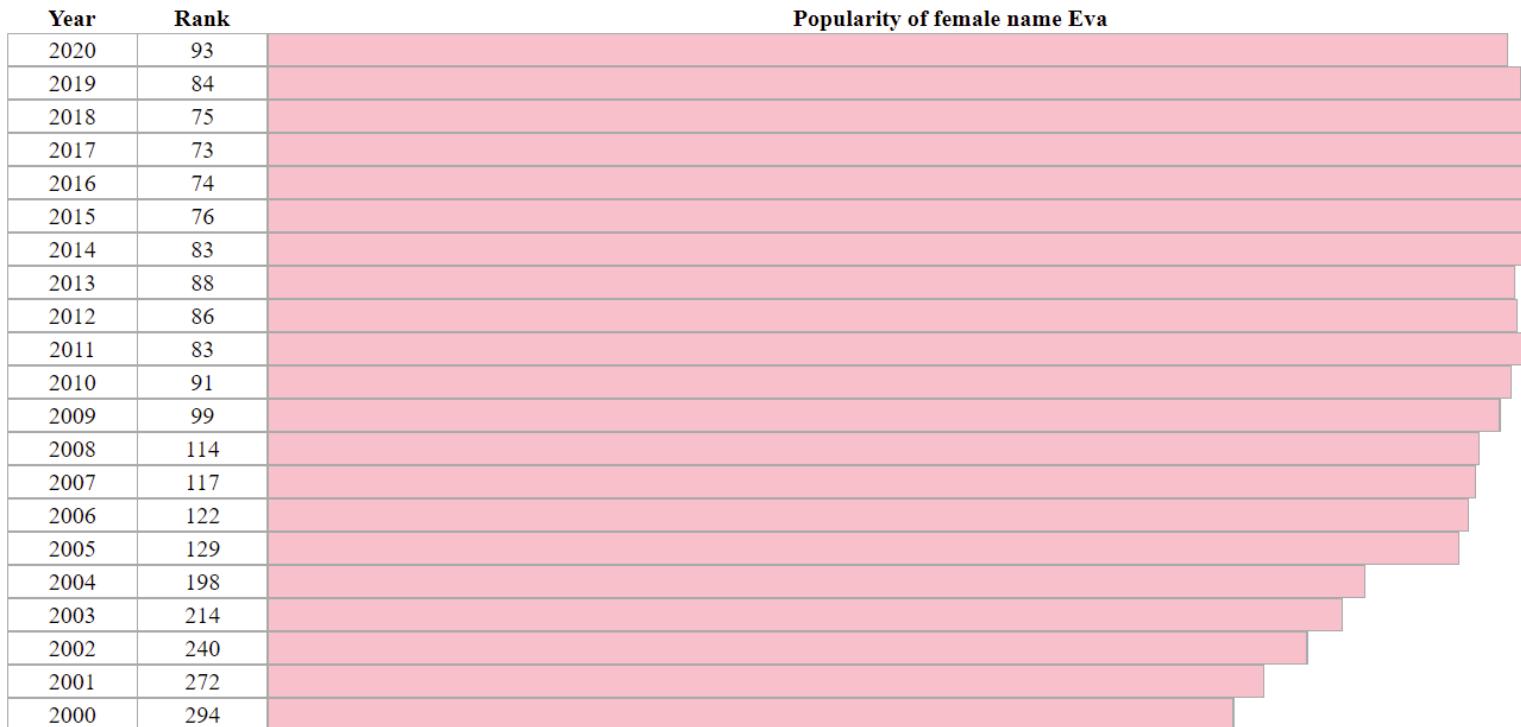
Popularity for top 100 names in Georgia for births in 2020

Rank	Male name	Number of males	Female name	Number of females
1	Liam	590	Ava	567
2	Noah	576	Olivia	545
3	William	550	Amelia	395
4	Elijah	523	Emma	387
5	James	434	Charlotte	371
6	John	373	Sophia	313
7	Asher	333	Isabella	301
8	Oliver	330	Harper	292
9	Aiden	325	Evelyn	275
10	Mason	321	Elizabeth	274
11	Henry	306	Nova	242
12	Levi	302	Madison	240
13	Alexander	297	Mia	238
14	Michael	297	Abigail	232
15	Ethan	296	Ella	219
16	Carter	294	Luna	218

- <https://www.ssa.gov/oact/babynames/>

Popularity of name Eva

For each year, we show the rank for Eva and a bar representing the popularity of that name. The longer the bar, the more popular the name. The more popular the name in a given year, the numerically lower the rank, with rank 1 being the most popular.



Years where ranks are the same does not imply that the number of births are the same. Name data are from Social Security card applications for births that occurred in the United States.

More information for female name Eva

- For 2020, the number of births with name Eva is 2826, which represents 0.161 percent of total female births in 2020.
- The year when the name Eva was most popular is 2017. In that year, the number of births is 3634, which represents 0.193 percent of total female births in 2017.

<https://www.ssa.gov/cgi-bin/babynames.cgi>

In-class activity

- What is the top 5 baby names in your state/ country/ US?
- What is the popularity of your given name in your state/ country/ US?
- If you were to choose a name for a baby, how would you do so? What factors would influence your decision? What name will you give to that baby?
- **<https://www.ssa.gov/oact/babynames/>**
- **<https://www.ssa.gov/cgi-bin/babyname.cgi>**
- **<https://www.behindthename.com/>**
- **<https://www.fantasynamegenerators.com/>**

Combination of given name and last name

- Study of first-name/last-name combinations on Facebook – compared to randomized combinations thereof
- Preference for strong/weak/strong/weak stress pattern – "Christina Taylor" over "Christine Taylor"
- Preference against repeated phoneme at name boundary- "Robert Taylor"
- Preference for alliterative names - "Meghan Myers"

Towards Optimal Rhythm

Shih, Stephanie Sin-yun. Stanford University. ProQuest
Dissertations Publishing, 2014. 28121279.

How do names work?

- English names often have first name first and given name the second; sometimes, there is a middle name.
- How names work (order of family name and personal name; is there a middle name?, gender suffix?, how is the name chosen?) in some non-Anglophone culture?
- Are names distinctively gendered in a non-Anglophone culture that you know?

Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-17-2021



Gentle reminder

Discussion:
Language and name, Language and food

Due 21 Nov., 11:59 PM

Due 29 Nov., 10:00 AM

One-slide PPT :
submit to "Oral presentation of your final project"
on Canvas

Plan for today

- Language and names
- Language and food
- Student Presentation

Name changes

- Name changes to combat anti-Semitism or other discrimination
- A lot of family myths of names being changed by “Ellis Island” – but that’s usually not what happened
- People voluntarily changed their names to improve chances at admission into schools and professions in an anti-Semitic climate

[seattleglobalist.com/2018/11/20/changing-names-is-just-one-part-of-immigrant-life-in-u-s/76787](https://seattleglobalist.com/2018/11/20/changing-names-is-just-one-part-of-immigrant-life-in-u-s/)



The Seattle Globalist

About News

This site is an archive. The Seattle Globalist ceased operations on September 30, 2020.

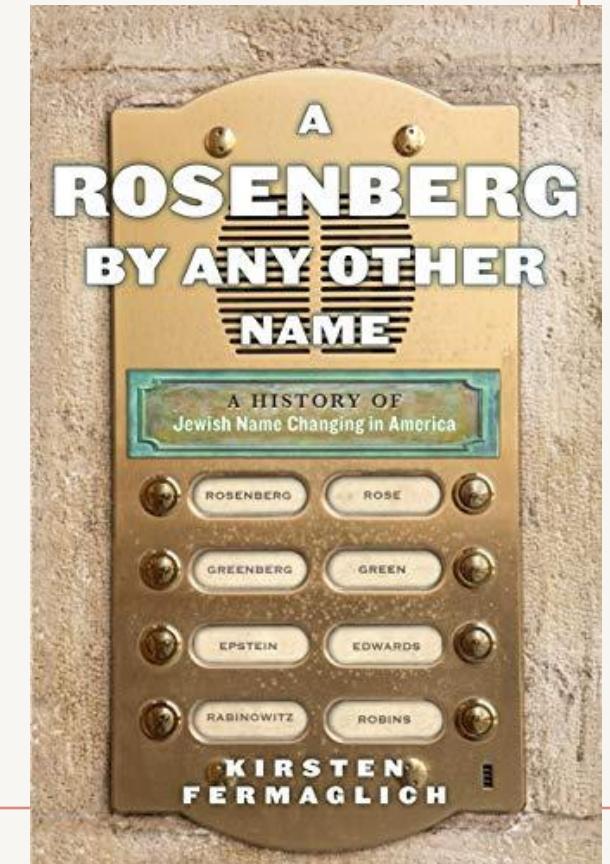
Changing names is just one cost of immigrant life in the U.S.

Posted on Nov 20, 2018 by Zijun Cathy You

Mission

The Seattle Globalist ceased to operate on September 30, 2020. This site is an archive.

Our mission is to elevate diverse



Two names

- Do you know anyone who use two names (e.g., heritage name and English name)?
- To your impression, which immigrant groups “assimilate” or stay distinct in their naming patterns and why?

Names and gender

- Will names become less distinctively gendered in light of new ideas about gender? (Among which groups?)

Name in the literature/ sci-fiction/ movies

- Which names become popular thanks to literature? (Among whom?)
- If you were to choose a name for a character in a fiction, which name will you give?

scifiideas.com/sci-fi-character-name-generator/

SCI FI IDEAS.com



SCI-FI CHARACTER NAME GEN

The Sci-Fi character name Generator will help you name the human characters in your science fiction stories or games. Maybe ideal for random bridge officers on your spaceship? Or space marines? Or NPCs that you can meet in a bar an alien planet?

Names generated here come from a big list of Human first names & last names (from across the world & cultures), plus also some generated from scifi books, films, comics etc, also some generated using random syllables for that extra random weirdness. Need the name of a robot character? Try our [Robot Name generator](#).

If you need a name for an alien character, try our [Alien Name Generator](#).

CHARACTER NAME GENERATOR

Kriki Barker

Cmdr Braeden Elliot Gardner Sr.

Yex Nichols

Lt Banan Mosley

Hadji Deleon Jr.

SCPO Bzee Odom BSc

Derron Dulan III

Junior Hamad Craban

High Admiral Bryce Alston

Vice Admiral Masson Bryan

Vzia Clarke Sr.

Laws about name changing

- AUGUST 17, 1938
- The Executive Order on the Law on the Alteration of Family and Personal Names requires German Jews bearing first names of "non-Jewish" origin to adopt an additional name: "Israel" for men and "Sara" for women.



Naming laws and naming chaning laws

georgia.gov/apply-name-change

Legally change your name by submitting a petition to a Superior Court.

To legally change your name, you must submit a petition to your local Superior Court. When you request to change your name, you are required to publicize your petition and wait at least 30 days before a hearing. After the court approves your name change request, you should update your name on government identification and other documents.

If you filed for a name change when you applied for your marriage license in order to take the name of your spouse, your marriage certificate from your county's probate court is your legal name change document. You do not need to apply again for a name change through the county's Superior Court.

<https://namechange.uslegal.com/name-changes-laws-by-state/>

Take a guess

1. Which states have length restrictions on the naming?
2. Which states have restrictions on the choice of last names?
3. Which states require a petition process for changing names?

<http://www.gwlr.org/wp-content/uploads/2012/06/80-1-Larson.pdf>

In-class task

Search naming laws and naming chaning laws of a country or a state to see if the following given names are allowed to be legal names in the past or in the present; and then share your findings with the class :

1. Captain
2. Queen Victoria
3. Lol
4. Cammmilla
5. 惡魔, which literally means "devil"
6. ***
7. Google

Take a guess

- In Sweden, if a baby was named "John", and later wants to change the first name to "Jack", guess what would be the baby's new first name on legal documents?
 - A. Jack
 - B. John
 - C. Jack John
 - D. John Jack

Take a guess

- In Japan, does every Japanese citizen have one given name and one surname?

A. Yes

B. No

Take a guess

- In German, can a baby have a first name that does not indicate gender?
 - A. Yes
 - B. No

Take a guess

- In Denmark, can a baby have a first name same as last name?
 - A. Yes
 - B. No

Take a guess

- In Iceland, can a baby have more than three personal names?
 - A. Yes
 - B. No

Questions: Language, law and names

1. Why do many countries have law restrictions on naming, such as a list of approved personal names, and spelling that fits the national language?
2. Why do many countries require an application process for naming change?
3. Do you think the law-makers should update the naming laws that emphasize a gender binary?

<https://www.mentalfloss.com/article/25034/8-countries-fascinating-baby-naming-laws>

LING
3100_Presentation
feedback for Jessie
Sui_11172021

[https://forms.office.com
/r/X01Vynm1tT](https://forms.office.com/r/X01Vynm1tT)



Applications of Linguistics

Hongchen Wu

Hongchen.wu@gatech.edu

11-22-2021



Gentle reminder

- **Due 29 Nov., 10:00 AM**
 - **One-slide PPT :**
submit to "Oral presentation of your final project" on Canvas

Course plan for this week

- **Monday 11/22:**

- Lecture sessions on Language and Food,
- as well as two student presentations on language& name and language & food

- **Wednesday 11/24:**

- Student Recess (*No Classes - Campus Open*)

Course plan for next week

- **Monday 11/29 and Wednesday 12/01:**
 - 5 Minute Blitz Talk Competition
 - The order of presentation will be randomly selected at the beginning of each session.
 - presenting your in-progress final project in 5 MINUTES with only 1 PPT slide
 - Please also be prepared for questions from the audience
 - Prizes will be awarded for 1st, 2nd and 3rd place VOTED by the audience based on the evaluation of the presentation's comprehension, content, communication and engagement

Course plan for the weeks after next week

- **Monday 12/06:**

- Continue the 5 Minute Blitz Talk Competition if we are not able to have everyone's presentation done during the 11/29 and 12/01 sessions.
- Prize-giving ceremony for the 5 Minute Blitz Talk Competition
- End-of-semester review and survey
- Farewell

- **Wednesday: 12/15**

- Submit the write-up of your final project to Canvas before 5:30 pm on 12/15

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3100_Presentation
feedback for Kome
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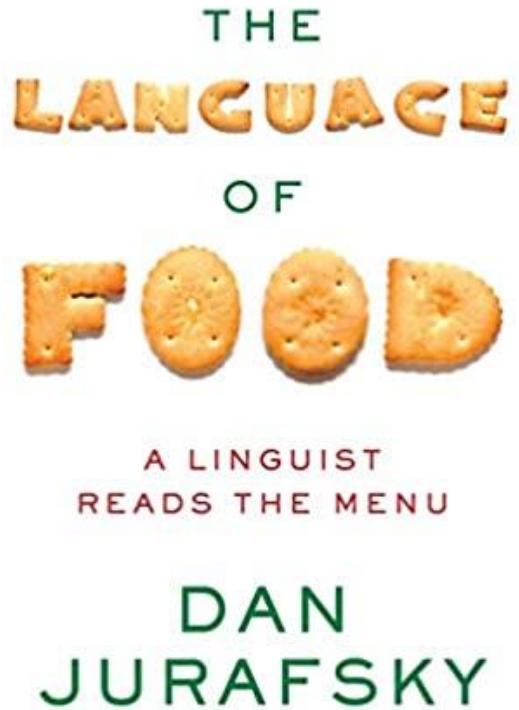
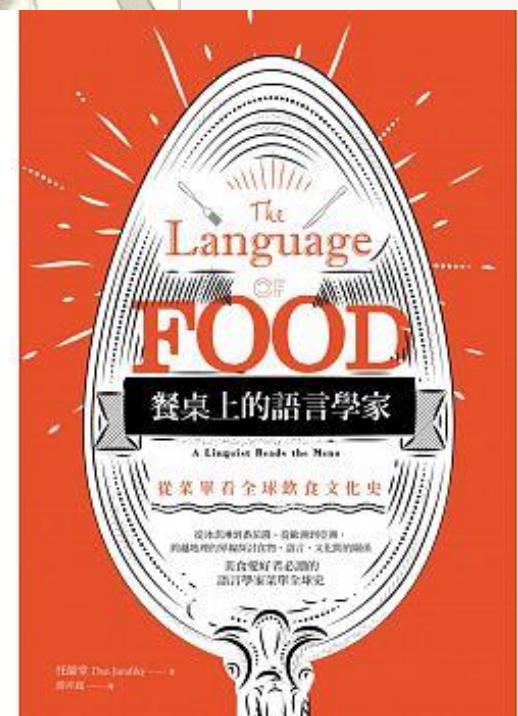
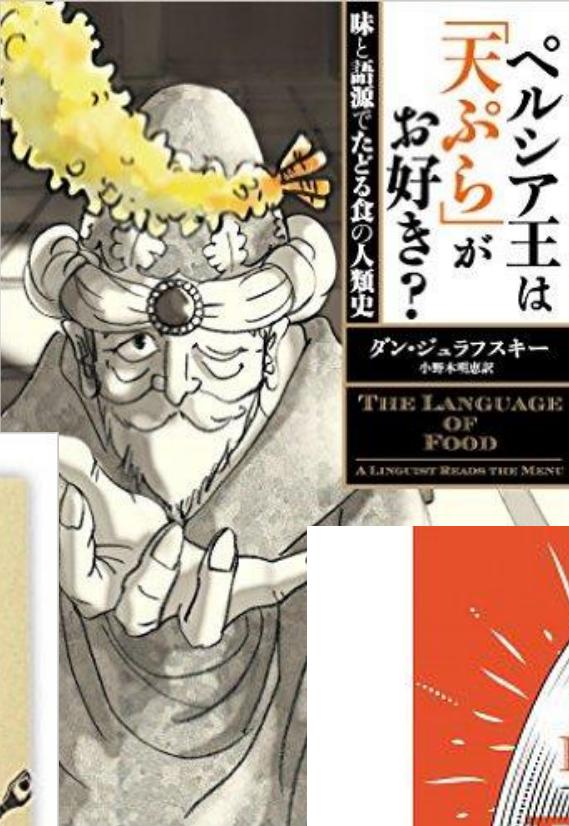
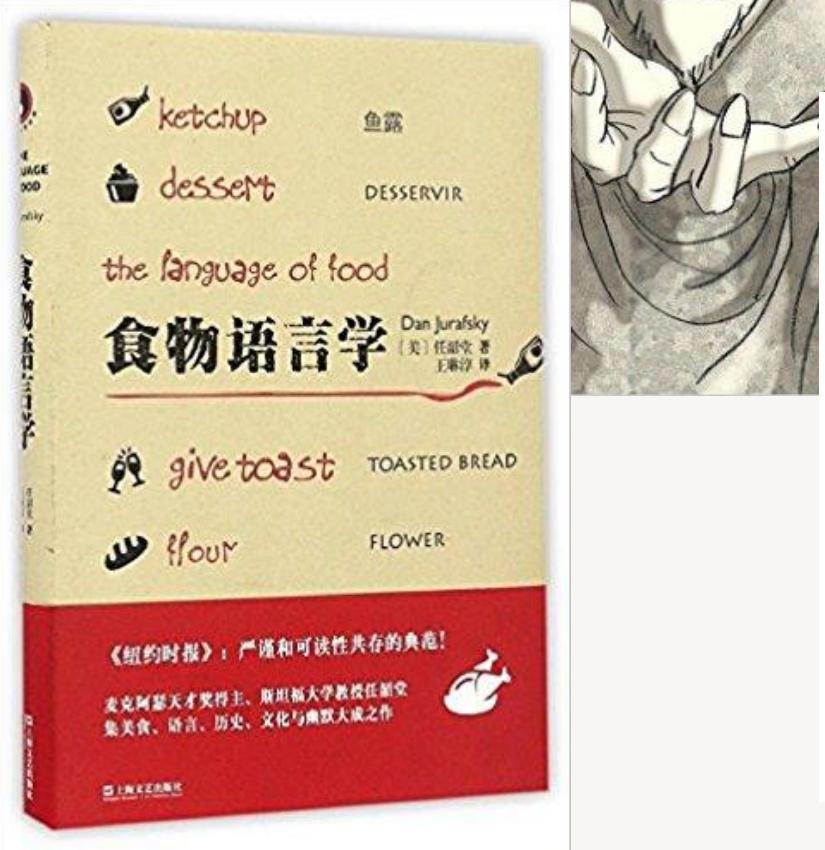
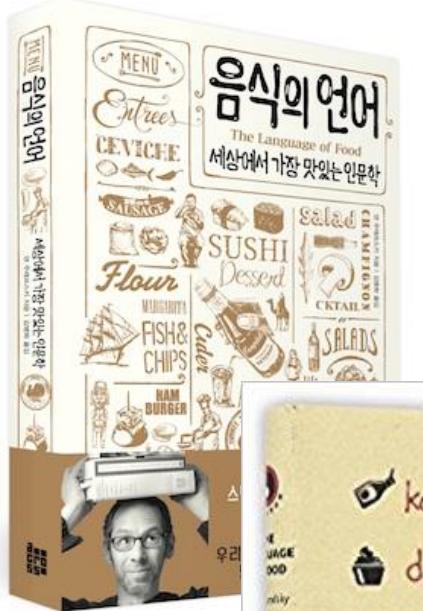
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A collage of various grains and legumes in burlap sacks. The visible sacks contain white rice, yellow cornmeal, black beans, soybeans, red quinoa, and white quinoa. The sacks are tied with twine and are arranged on a dark wooden surface.

Language and food



"[A] brilliant achievement."
—PETER SOKOLOWSKI, NEW YORK TIMES BOOK REVIEW

Names for food

- Why is **ketchup** called as **tomato ketchup**?
- Why is not **ketchup** called as **tomato sauce**?



Language of food as a window into globalization and the spread of ideas (Jurafsky)

- Ketchup originally derived from a pickled fish sauce made on the Chinese east coast; called *ke-tsiap* in Hokkien (a Southern Min language spoken in Southeastern China and Southeast Asia)
- It is also called *kechap* and *ketjap*
- 17th-century English sailors discovered the delights of this Chinese seasoning and brought it west where cooks tried to replicate the dark sauce.
- The British used ingredients such as anchovies or oysters, mushrooms, and walnuts to recreate those flavors.

Language of food as a window into globalization and the spread of ideas (Jurafsky)

- The English settlers brought this mushroom ketchup to America, where it continued to gradually go through various changes.
- One significant alteration was **the addition of tomatoes**, which first appeared in a recipe by Sandy Addison in 1801 in *The Sugar House Book*.
- Because tomatoes are part of the Solanaceae family, which consists of certain poisonous plants, many people steered clear of eating fresh tomatoes, but were willing to consume ketchup, since it was cooked and preserved with other ingredients.
- Thus, the popularity of bottled ketchup begins.

Language of food as a window into globalization and the spread of ideas (Jurafsky)

- Natural kinds (animals, plants) are often named for their place of origin
 - Natural kind names are often borrowed across languages
-
- **Why Americans call turkey "Turkey"?**
 - **What is a "turkey" in your language?**



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GLOBAL

Why Americans Call Turkey ‘Turkey’

How a New World bird came to be named after countries halfway around the globe

By Zach Goldhammer



turkey the word is a geographic mess—a tribute to the vagaries of colonial trade and conquest.

Americas-as-India belief in the name of turkey

- In Armenian, it is called **hndkahav** or **hntkahav** (Հնդկահավ), literally meaning "Indian chicken".
- In Hebrew, the turkey is called **tarnegol hodu** (תרנגול הודו), literally meaning "rooster of India".
- In Italian it is known as **pollo d'India**, with clear reference to India, although the most common name is **tacchino**, that apparently refers to the sound that turkey makes.
- In French, it is known as **poulet d'Inde** literally meaning "rooster of India".
- In Polish and Ukrainian, it is **Indyk**, a reference to India. Similarly it is **indik** (אִינְדִּיק) in Yiddish, also referring to India.
- The Dutch word is "**kalkoen**", derived from the city Calicut in India, likewise Danish, Estonian and Norwegian **kalkun**, Swedish **kalkon**, and Finnish **kalkkuna**, as well as in Papiamento **kalakuna**.

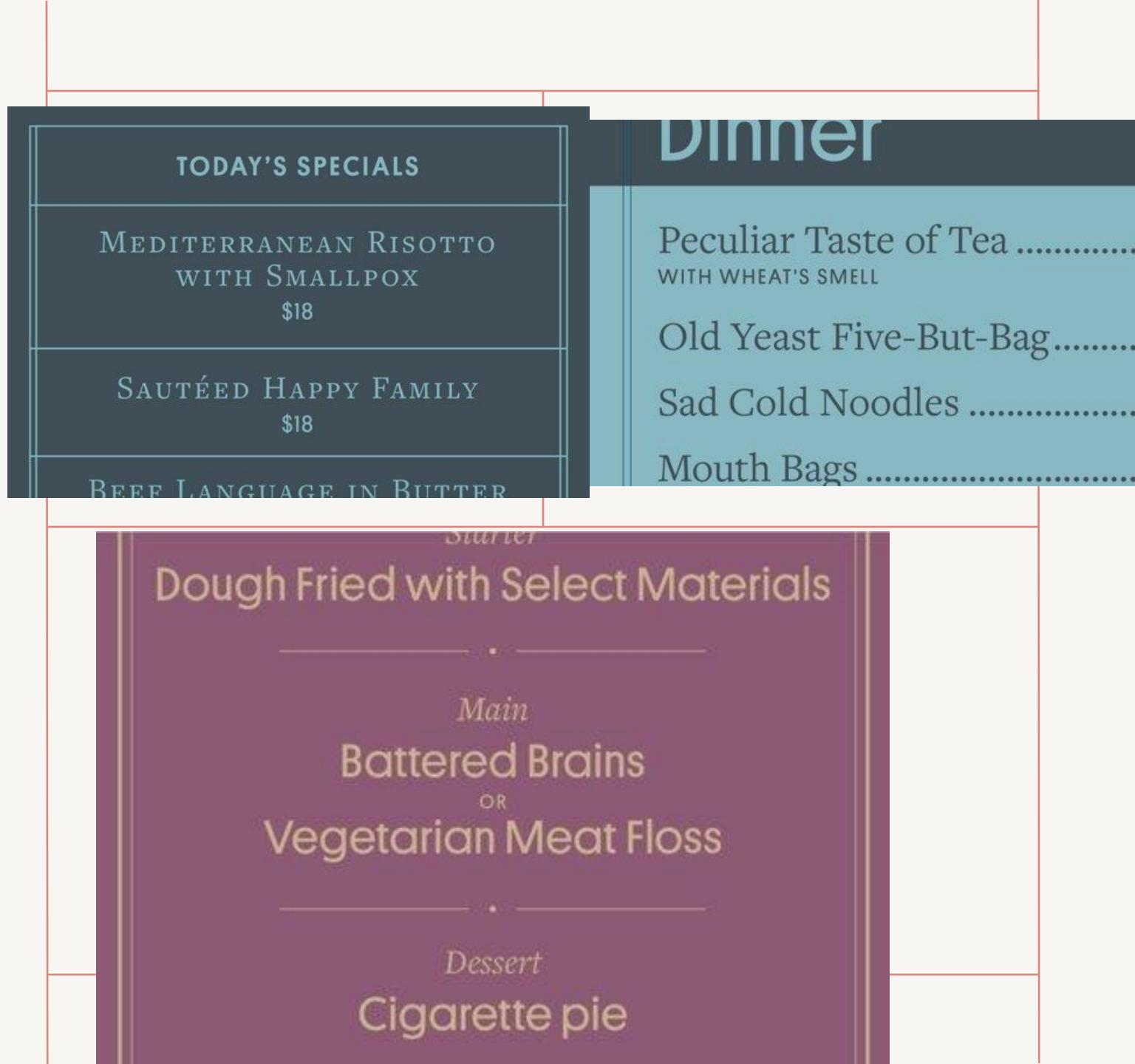
- In Hawaiian, it is called *pelehu*, from the Portuguese. The Hawaiian nobleman Boki acquired turkeys during the South American leg of his world tour and introduced both the bird and the Hawaiian transliteration of the Portuguese term *peru* to Hawai'i and later, in 1827, to Rotuma.
- In Japanese, the turkey is called *shichimenchō* (シチメンチョウ / 七面鳥), which literally means "seven-faced bird".
- In German, it is called *Truthahn*, derived from *trut* for the call used to lure the bird, and *Hahn*, rooster.
- In Mandarin, it is called 火鸡 (huoji), meaning 'fire chicken'

Language of food as a window into culture, social class, taste (Jurafsky 2015) — corpus study of Yelp data

- Cheap menus: more options, more text, more high-frequency words (“pizza”)
- Expensive menus: fewer options, less text, more low-frequency words (“abalone”)
- **Cheap or expensive? Why?**
 - “Fresh greens paired with a variety of tasty toppings”
 - “insalata rosa: radicchio, red beet, red onion with red wine mulled vinaigrette

Culinary translation fails

- Have you had experience that you often need google translate when ordering food at some fancy/foreign restaurant even though the given menu is in English?



Culinary translation fails

NT.130	香菇高麗菜 Shiitake with cabbage	NT.130
NT.130	醋溜高麗菜 Cabbage with sweet & sour sauce	NT.130
NT.140	清炒大豆苗 Pea sprout	NT.140
NT.140	炒水蓮 I can't find on google but it's delicious	NT.140
NT.100	花芝圈 Mermaid in Deep sea	NT.100
NT.100	麥克吉塊 McDonald's best friend	NT.100
NT.100	兒仔酥 Mr.Oyster	NT.100
NT.100	薯條 Ms. French fries	NT.100

- 302 云南芫爆松茸
Sautéed trichdoma matsutake with coriander and mushroom
蘑菇之王，素有“海有鲱鱼子，陆地上的松茸”，含入细嫩，香味浓溢
- 303 白油爆鸡枞
Stir-fried wikipedia
肉质细嫩，洁白如玉，或炒或蒸、串汤作菜，清香四溢
- 304 云南皱椒鸡枞
Stir-fried wikipedia with pimientos
- 305 香油鸡枞蒸水蛋
Steam eggs with wikipedia
- 2 随便
Whatever
综合果汁
- 3 天然蓝莓花果茶
Fresh Blueberry Tea
蓝莓果子茶

Menu corpus: New York Public Library Menu Collection Project!

- <http://menus.nypl.org/menus> or a menu from your favorite restaurant
 - **Find a menu and discuss with your classmates on what you learned about the design/ language usage presented in the menu**
 1. How many items are on the menu?
 2. How many sensory related words are used there? Are the words subjective or objective?
 3. Are there any low-frequency words? Are the words English or borrowed?
 4. Do you see any negation/ metaphor?
 5. Do you see any possibly uninformative descriptors (tomato ketchup, real cheese)?

Language of food as a window into culture, social class, taste (Freedman and Jurafsky 2011)

- Which potato chip brand is cheap (per ounce), which one is expensive (per ounce)?
 - “*nothing fake or phony. no fake colors, no fake flavors, no fluorescent orange fingertips, no wiping your greasy chip hand on your jeans. no, really*”
 - “*Made using a traditional Polynesian recipe. Unique flavor profiles, crunchy texture, and artistic, colorful illustrations all combine to create a unique and delicious snacking experience that captures the freshness and authenticity of the islands.*”





HAWAIIAN STYLE

Hawaiian Kettle Style Potato Chips® and Snack Rings are made using a traditional Polynesian recipe. Known not only for superior taste and quality, you may also recognize us by our packaging, with tropical artwork depicting the sights and scenes of Hawaii. Unique flavor profiles, crunchy texture, and artistic, colorful illustrations all combine to create a unique and delicious snacking experience that captures the freshness and authenticity of the islands.



Language of food as a window into culture, social class, taste (Freedman and Jurafsky 2011)

- Expensive potato chips
 - More obscure/low-frequency words (evoking educational capital)
 - More health claims (“no trans fat”) despite not sure whether it is actually healthier; more claims of “natural authenticity” (“sea salt, nothing artificial”)
- Cheap potato chips
 - More everyday/high-frequency words
 - More claims of “traditional authenticity” (“our family recipe, our founder”)

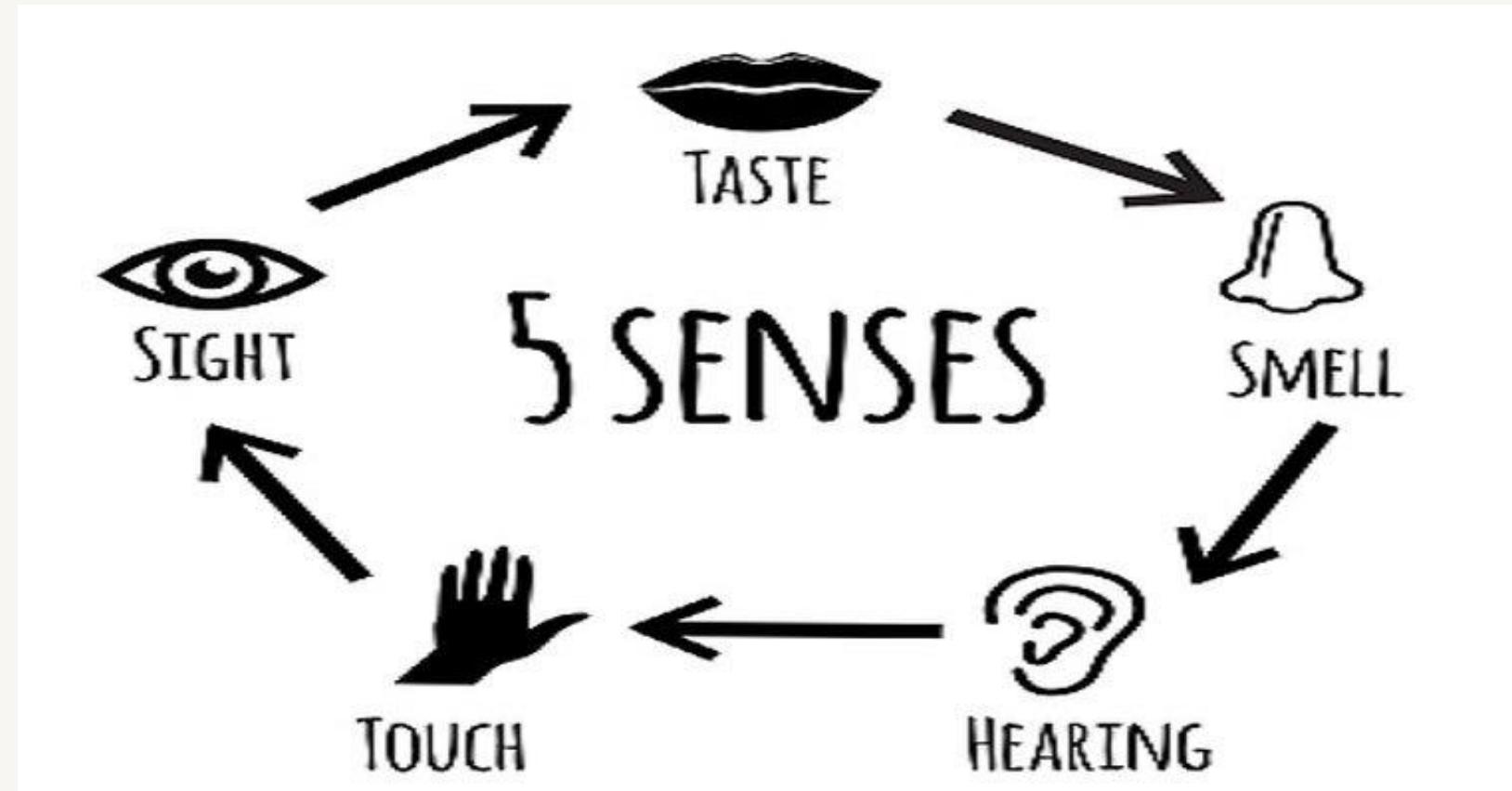
The use of negation in food language

- French sociologist Pierre Bourdieu
- *"In matters of taste, more than anywhere else, all determination is negation; and tastes are perhaps first and foremost distastes, disgust provoked by horror or visceral intolerance ('sick-making') of the tastes of others."*
- Particularly: **Taste is DISTASTE for other people's taste**
- Hence, more negation on "upper-class" potato chip label
 - **no** fake colors, **no** fake flavors, **no** fluorescent orange fingertips, **no** wiping your greasy chip hand on your jeans

How would you describe this color?



How are sensory experience and personal taste represented in languages?



Is the pizza big?



- Sensory experience can be described with both objective and subjective/evaluative words
- “Codeability” – a measurement of agreement across speakers
- Simpson’s diversity index (idea from ecology) used to measure diversity, frequency, consistency across answers: highly codeable = high agreement

Majid et al 2018

- Of the 5 senses (vision, hearing, touch, taste, smell), which one do you think is described in the MOST “codeable” language?
- Which one is described in the LEAST “codeable” language?

Differential coding of perception in the world’s languages

Asifa Majid,  Seán G. Roberts, Ludy Cilissen, Karen Emmorey, Brenda Nicodemus, Lucinda ...

[+ See all authors and affiliations](#)

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Article

Figures & SI

Info & Metrics

 PDF

Abstract

Is there a universal hierarchy of the senses, such that some senses (e.g., vision) are more accessible to consciousness and linguistic description than others (e.g., smell)? The long-standing presumption in Western thought has been that vision and audition are more objective than the other senses, serving as the basis of knowledge and understanding, whereas touch, taste, and smell are crude and of little value. This predicts that humans ought to be better at communicating about sight and hearing than the other senses, and

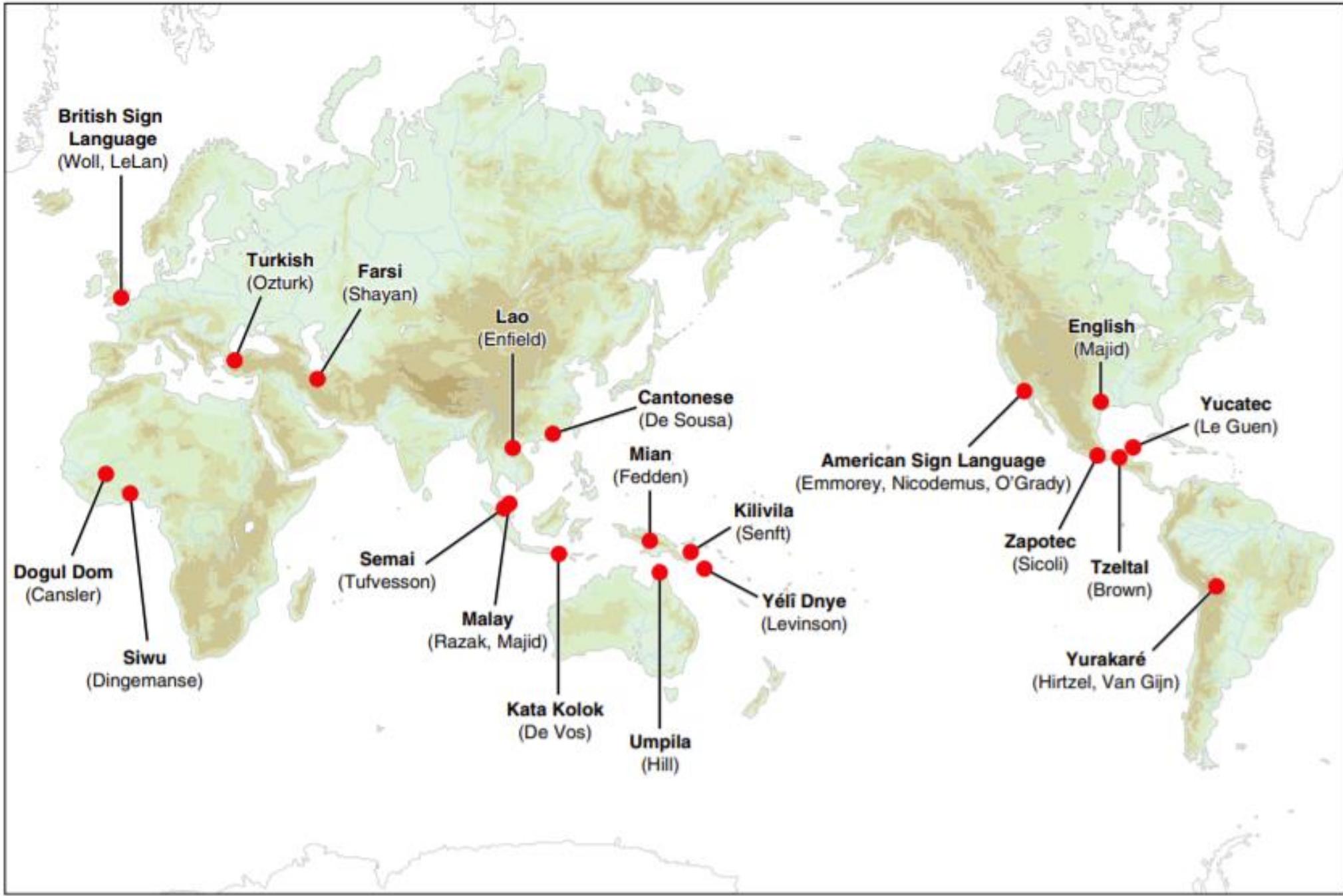
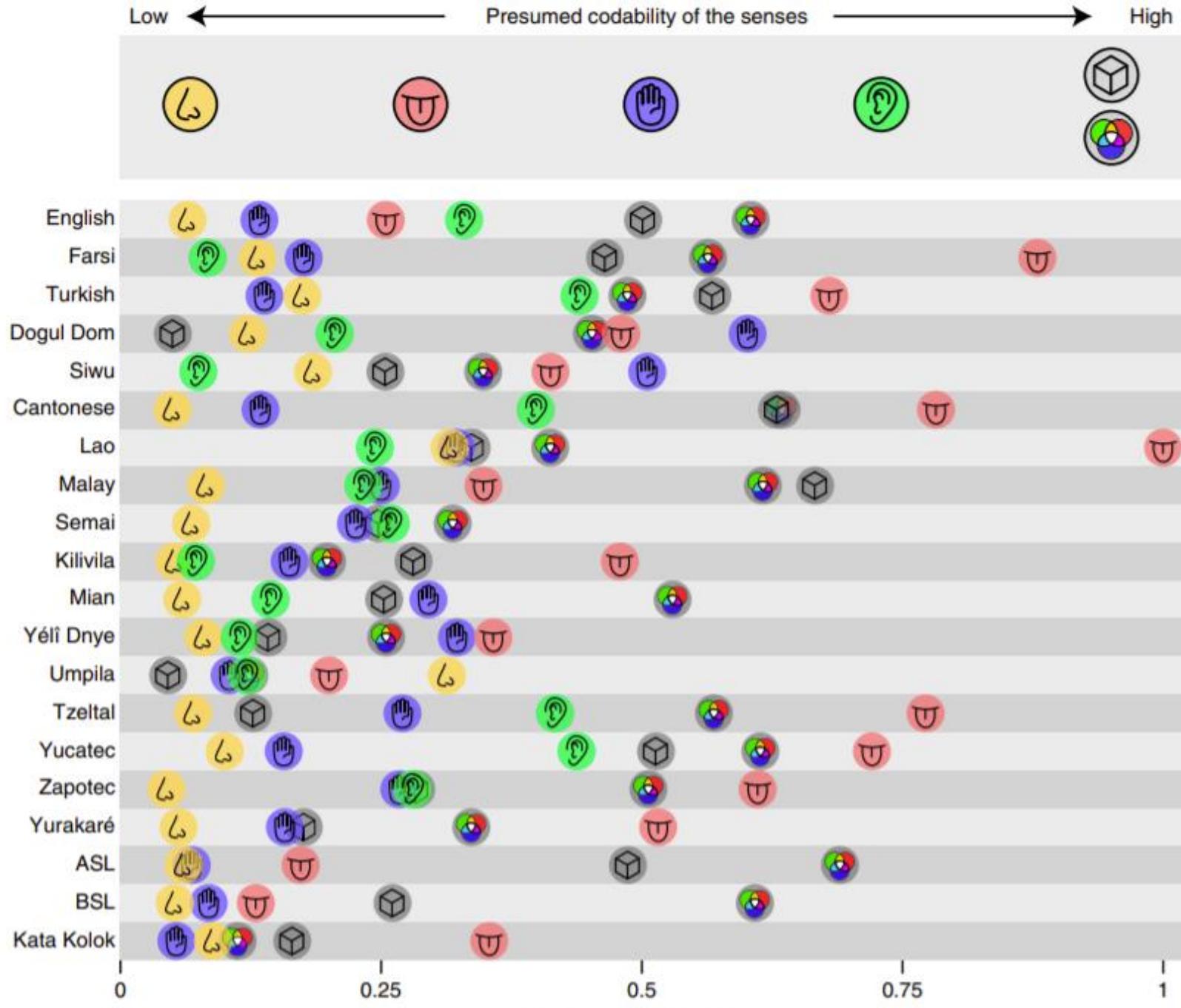


Fig. 1. Languages (and researchers) contributing to the study. Locations indicate field sites where data were collected.



Majid et al 2018

- Visual words – especially shape and color – are the most codeable (highest-agreement)
- Olfactory words (smell) are the least codeable
- touch, hearing, taste – in between
- In general, there are just MORE different words (in English, at least) used for visual perception than for olfactory perception

Is food “hard to describe”?

- Given that taste/smell are subjective, emotional, and not necessarily “codeable”, how do people describe food and food experiences?
- How do people get a sense of the food by reviewing other people's reviews?



simplyfalafel
your appreciation
serving you again

#happycustomers #
#vegan #healthylives
#atlfoodie #atlantaaea
#atlantarestaurants #
#atlantachef #atlchef
#atlfood #eateratlanta
#atlantalife #downtown
#discoveratlanta #iger
#whyiloveatl #discover
#iloveatl #atl #discover
#georgiastate

6d



33 likes

6 DAYS AGO

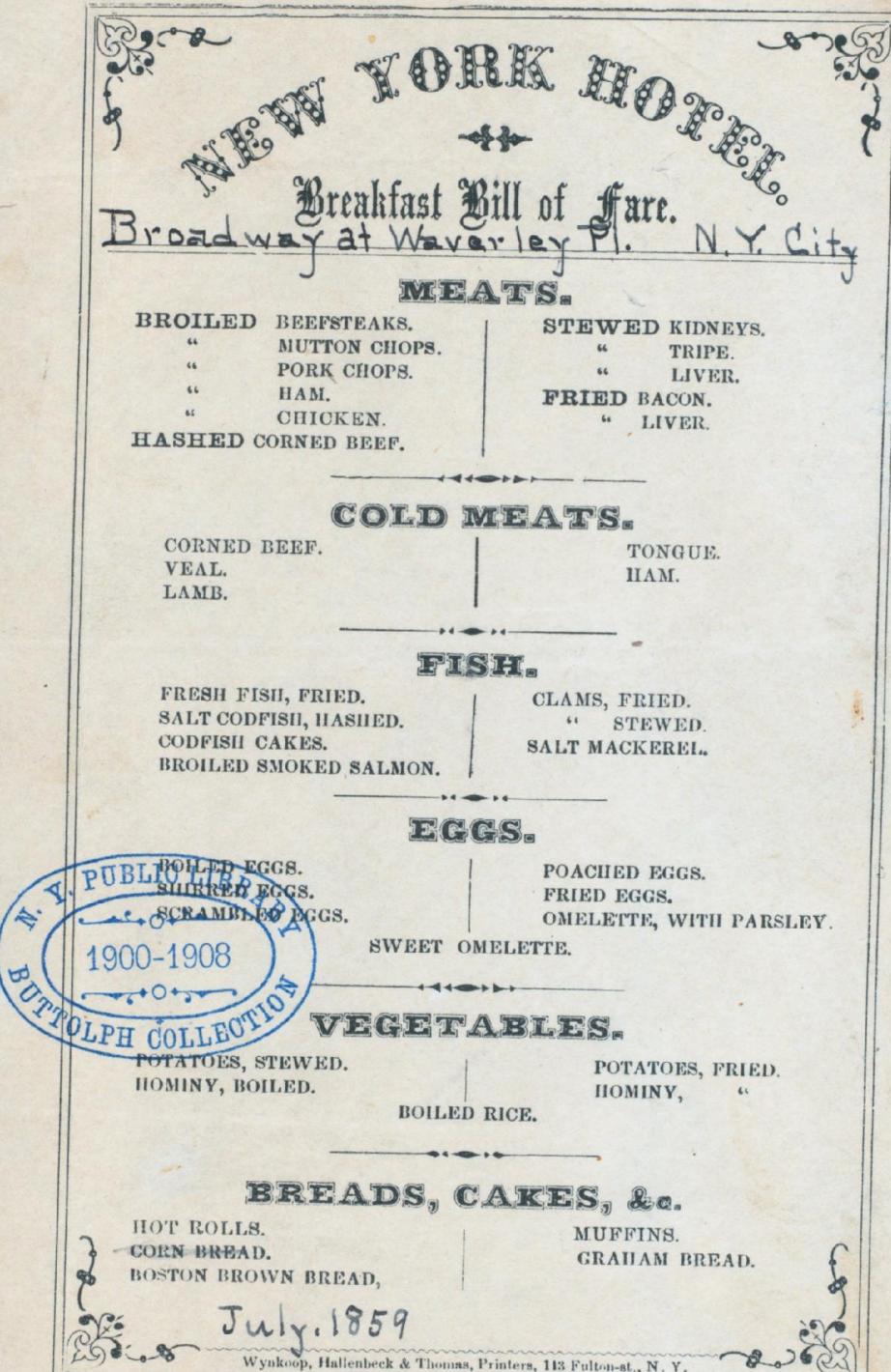
Ad

- Metaphors – comparing food to other domains
- Jurafsky et al 2014 study of Yelp reviews:
 - cheap food is described using metaphors for drugs ("fries like crack"), expensive food using metaphors for sex ("very naughty pork belly")
 - Negative reviews focus more on bad service (being ignored by waiters) than on bad food

What's on a menu?

*Menu language,
with its hyphens,
quotation marks, and
random outbursts of foreign words,
serves less to describe food than
to manage your expectations.*

Dickerman, Sara. 2003. [Eat Your Words: A Guide to Menu English](#). Slate. April 29, 2003



Applications of Linguistics

Hongchen Wu

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11-29-2021



Gentle reminder

- **Extra Credit (up to 5%) through research practicum** (due 12/06, 11:59pm)
- **Write-up of your final project** (due 12/15, 5:30 pm)

Course evaluation

- <https://gatech.smartevals.com>



- The time it takes to say "thank you" can be brief, but the impact it has is far greater than you may realize. Choose someone to thank today! <http://thankateacher.gatech.edu>

Course plan for this week

- Monday 11/29 and Wednesday 12/01: **5 Minute Blitz Talk Competition**
 - The order of presentation will be randomly selected at the beginning of each session.
 - presenting your in-progress final project in 5 MINUTES with only 1 PPT slide
 - Please also be prepared for questions from the audience
 - Prizes will be awarded for 1st, 2nd and 3rd place VOTED by the audience based on the evaluation of the presentation's comprehension, content, communication and engagement

Course plan for the weeks after this week

- **Monday 12/06:**

- Continue the 5 Minute Blitz Talk Competition if we are not able to have everyone's presentation done during the 11/29 and 12/01 sessions.
- Prize-giving ceremony for the 5 Minute Blitz Talk Competition
- End-of-semester review and survey
- Farewell

LING-3100-Oral
presentation of final
project: "5 Minute Blitz
Talk Competition"

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Applications of Linguistics

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12-06-2021



LING-3100-Oral
presentation of final
project: "5 Minute Blitz
Talk Competition"

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Prize-giving ceremony

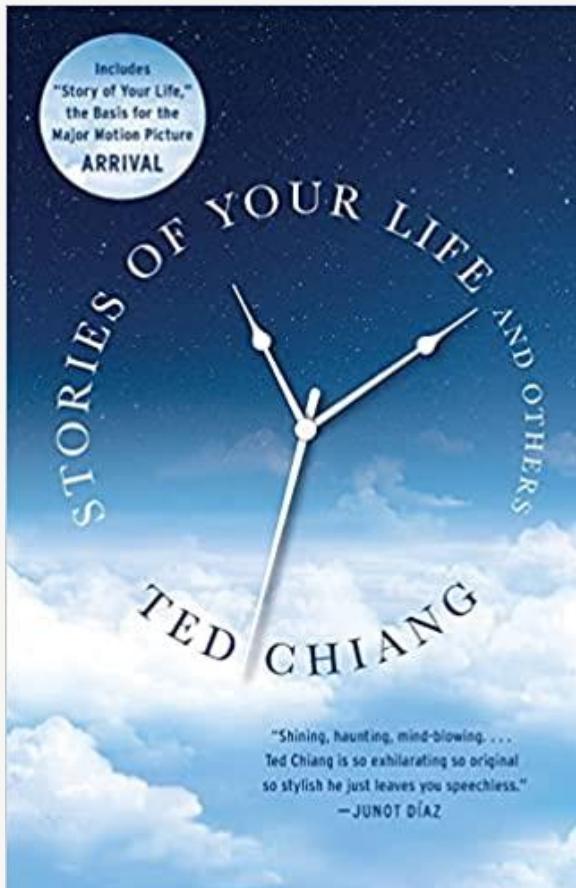
Prize for the first place

Atlanta Hawks vs. Minnesota Timberwolves

Wed., Jan. 19, 7:30pm

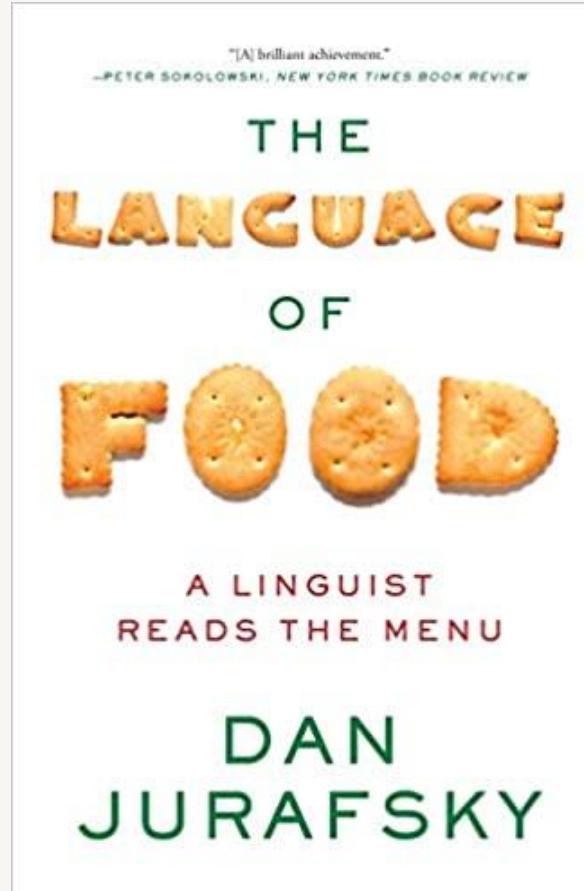
Two tickets plus
first place medal

Prize for the second place



Plus second place cake

Prize for the third place





Thank you!

~ Hongchen Wu

