Accent Management: From Theory to Practice

Part 1 | Accent Management Theory

Dr. Jenna Luque, CCC-SLP | G. Paul Moore Symposium 2021

UNIVERSITY of **SOUTH FLORIDA**
SARASOTA-MANATEE CAMPUS

Jenna Luque, PhD, CCC-SLP

- Proud UF Alum
  - BA – CSD and Linguistics
  - MA – CSD
- Northwestern University
  - MA – Linguistics
- University of South Florida
  - PhD – CSD

- Instructor at USF Sarasota-Manatee Campus
- 10+ years accent management experience
  - Presentations at ASHA and FLASHA
  - Primary research interest
  - Native Advantage, LLC

What is an accent?

- "Accents are variations in the execution of speech characterized by differences in phonological and/or prosodic features that are perceived as different from any native, standard, regional, or dialectal form of speech (Valles, 2015)"

- "Accents are marked by variations in speech-sound production, prosody, rate, and fluency (Celce-Murcia, Brinton, & Goodwin, 1996)."

- There are different types of accents.

- Accent ≠ Intelligibility ≠ Comprehensibility (Derwing and Munro)

- Not a disorder!

Accent Modification. Retrieved from https://www.asha.org/practice-portal/professional-issues/accent-modification/.

What is accent management? What isn't accent management?

- Past terms: accent therapy, accent reduction, accent elimination
- Aka accent modification, pronunciation training

- It is a way to improve intelligibility
- It is working on more than just the sounds of the language

- It is not removing somebody's accent
- It is not shaming somebody for having an accent

Why do people seek out accent services?

- Difficulty being understood

- Impacting their performance at work

- Affecting their participation in society

- Frequently needing to repeat themselves

- Negative responses/attitudes towards people with accents

Having an accent can be difficult

- Wei et al. (2012) showed that perceived language discrimination, based on accent, correlated with depression and anxiety
- Sembiante et al. (2020) discusses the experiences of 5 foreign-born assistant professors in US universities
  - Awareness of how race/ethnicity and accent index foreignness
  - Reactions to others' perceptions of foreign accents
  - Negative judgements of ability or status based on foreign accent
  - Positive judgements of ability or status and privilege based on foreign accent
  - Awareness of and strategic use of flexible language practices
- Worth (2019) discusses how in England they are discussing making federal rules about regional accents

Accent management is not without controversy.

- Terminology
  - Not therapy
  - Are they errors?
- Who should provide/receive these services?
- Should these services be ordered upon somebody?
- Should these services even exist?

What does accent management address?

- Phonemes and Allophones
    - The way they are formed
    - The phonotactics of the language

- Suprasegmental Information
    - Pitch and Intonation
    - Stress
    - Linking
    - And more

- Idioms, Vocabulary, American Culture

What causes an accent?

- The mismatch between a speaker's native language(s) and the language they are learning
    - This can occur at any level of language

- Let's unpack this a bit
    - Categorical Perception
    - Speech Perception Models
    - Types of Mismatch

Categorical Perception
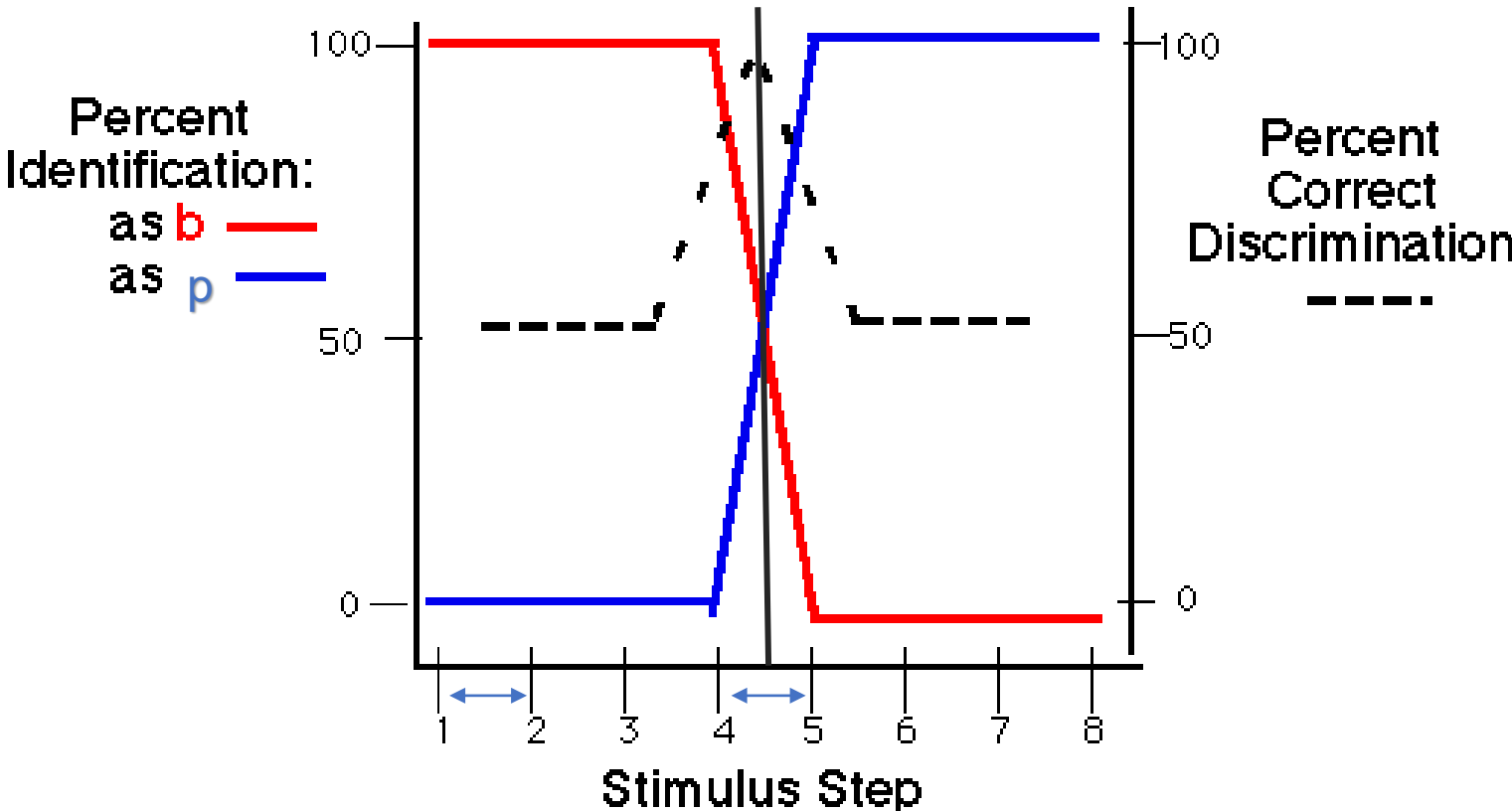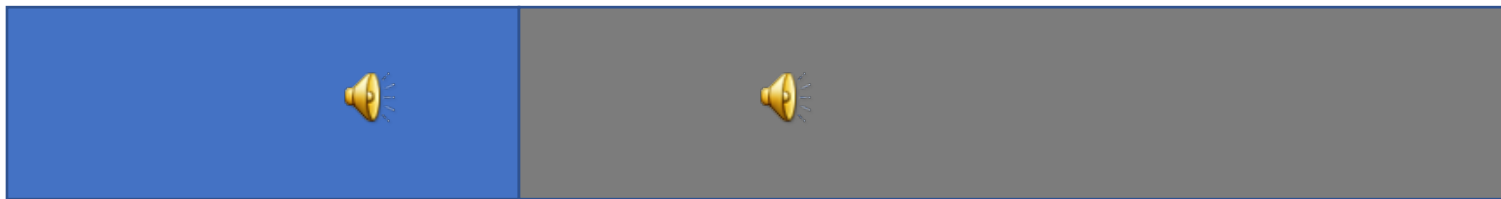
Categorical Perception in Real Life
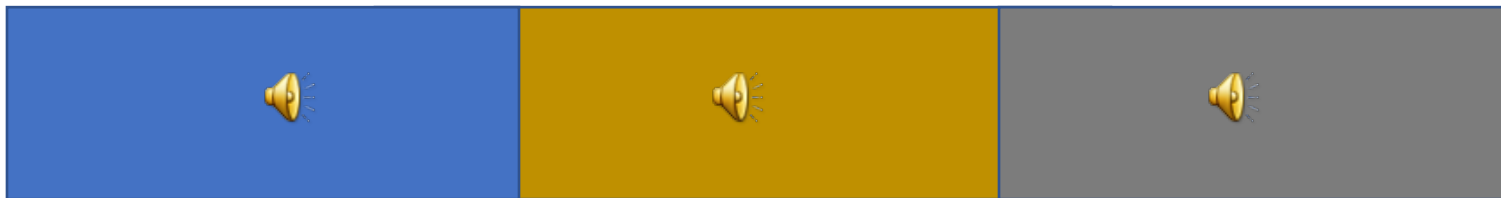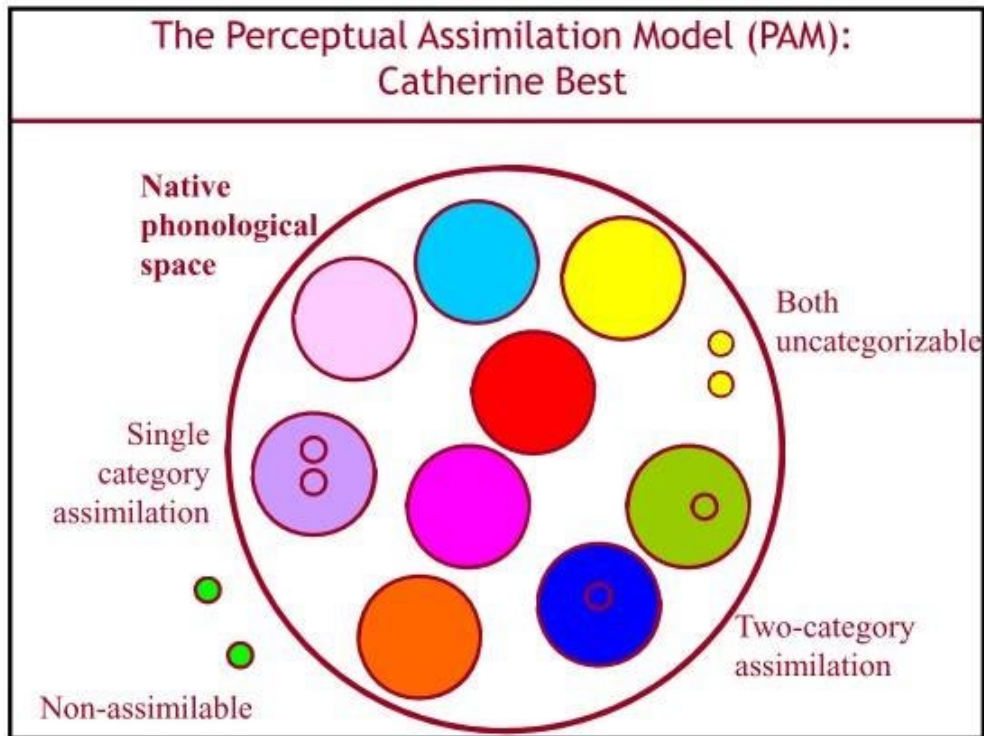
Negative VOT

0

Positive VOT

Perceptual Assimilation Model (PAM)
Cathy Best

• When perceiving the difference between two sounds in a new language, the ease of discrimination depends on how these sounds map onto the speaker's native language

The Perceptual Assimilation Model (PAM): Catherine Best

Native phonological space

Both uncategorizable

Single category assimilation

Two-category assimilation

Non-assimilable

Speech Learning Model (SLM)
Jim Flege

- When a sound in the second language is similar to a sound in the native language, category formation is blocked
  - New sound will resemble native sound
  - Native sound will begin to resemble new sound
- If a new category is formed in the second language, it and/or nearest existing sound may dissimilate
- Children are more likely to create new categories than adults

So, how do these contribute to an accent?

- Categorical perception explains why English learners cannot just hear English phonemes as they start to learn the language

- Models like SLM and PAM help explain the specific difficulties the learners might have based on the mismatch between their native language (L1) and second language (L2)

Let's talk about mismatch.

- So far, we have really focused on phonemes, but differences can occur in other areas.

- Phonotactic Systems

- Stress

- Intonation

- Vocabulary

- And more

Transfer from L1 to L2

- Italian speaker learning the vowel /ɪ/ in English
- Mandarin speaker learning a CVC syllable in English
- English speaker learning Spanish vocabulary
- Spanish speaker learning /s/-clusters in English
- Czech speaker learning stress can be non-initial in English
- French speaker learning English intonation

These transfers may cause an accent or a meaning change.
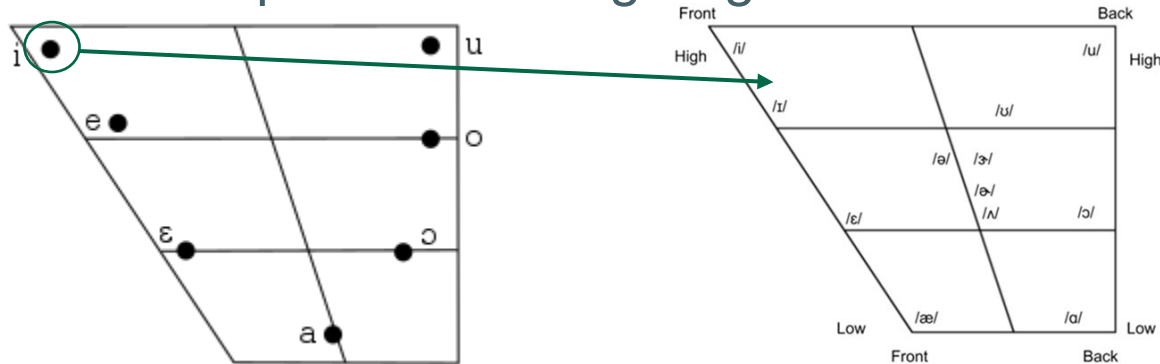
Model Take Home

- Models give us a way to predict the difficulties an English learner might have
    - Based on the sound system in their first language
    - Both the sounds they may find difficult and the way in which they make errors

- They are also great ways to explain their difficulties to clients

Influences on Accent

- Age of Acquisition (AOA)
- Length of Residence (LOR)
- L1/L2 use
  - Input
  - Output
- Motivation

- Flege's work

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Part 2 | Accent Management Assessment

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Assessment Goals

- Sounds of interest at various levels and positions
  - Don't forget about vowels!!!

- Intonation, Stress, Reduction, Timing

Looking for language transfer.

- Language: grammar, vocabulary, idioms?

- Perception

- Check for stimulability

- Overall communication

- What do they think they need help with?

Pre-Assessment Prep

- Comparison of L1 to English
  - Get an idea of where to expect difficulty
    - Sounds, Intonation, Grammar
  - Wikipedia, Google, textbooks, a friend

- What information does this give you?
- How accurate is this information?

Why is perception so important?

- There is extensive research on non-native speech perception
  - The link between perception and production is not always clear

- Some evidence suggests, that training perception itself leads to improved production (Thomson, 2011)
- Other work shows that production precedes perception (Flege, Bohn, and Jang, 1997)

Client History

- Understanding their experience with English is incredibly important
  - When and where did they learn/study it?
  - Who taught them?
  - How are they currently using it?
- Do be cognizant that it is possible for your client to also have a communication disorder
- Always ask if there is anything else they want to tell you

Standardized Tests

Compton Phonological Assessment of Foreign Accent (Compton, 1983)

- After going through the Compton training, you can use these materials
- Compton Screening Assessment of Foreign Accent
  - 15 words with aa English sounds
  - 3 sentence paragraph
  - Speech sample → General observations
- Full Assessment
  - Background Questionnaire
  - 66 words with all English sounds, initially and finally, twice
    - Produced in isolation and in a spontaneous sentence
  - Spontaneous speech sample → phonetic and grammatical errors
  - 15 sentence paragraph
    - Read aloud and then in imitation

Proficiency in Oral English Communication (POEC) (Sikorski, 1991)

- POEC – Screener
- POEC

- Auditory Discrimination
- Intonation
- Articulation

Problems with these Tests

- Scoring tends to be based on number of errors
- Effect of reading
- Lack of morphophonological assessment
- May require training
- Yet, they cost money

- So, what do you do?

My Testing Protocol

I made my own…

- 78 words
  - All sounds in all positions
  - BvD words
  - Clusters
- Sentences with all sounds
- "Please call Stella" paragraph
- Past tense and plural allomorphs
- Common phrases
- Multisyllabic words
- Conversation/Background Information

Word Level

1. agile
2. aha
3. anger
4. assign
5. attempt
6. bade
7. bard
8. bared
9. bathe
10. bead
11. beard
12. beauty
13. bed
14. bid
15. bide
16. bird
17. blanket
18. bode
19. body
20. booed
21. book
22. bored
23. bowed
24. boy
25. breath
26. bud
27. bulb
28. caffeine
29. carb
30. card
31. chick
32. cliff
33. cry
34. douse
35. dread
36. flavor
37. front
38. frosty
39. future
40. garage
41. gland
42. granny
43. happy
44. jag
45. laser
46. lump
47. match
48. mayor
49. method
50. mother
51. nation
52. pink
53. plane
54. pledge
55. prize
56. pulp
57. rabbit
58. scarf
59. seam
60. skull
61. slab
62. spell
63. stammer
64. step
65. stretch
66. sugar
67. swerve
68. taken
69. tarp
70. they
71. thing
72. throwing
73. tread
74. treasure
75. video
76. wash
77. yellow
78. zest

Sentence Level

1. Pete's job was to keep the baby happy.

2. Today Dick told Patty about it.

3. The girls were baking the biggest cake for Mr. Tag.

4. Their brother wouldn't bathe because he thought a bath would make his toothache worse.

5. In a half day, he repaired five television sets, two telephones, and a very old stove.

6. Suzie sewed zippers on two new dresses at Bessie's house.

7. She usually rushes off to push the garage door closed.

8. George is at church watching a magic show.

9. We rode with Lucy around the tall tower in her new yellow car.

10. Why haven't you looked anywhere behind the house or beyond the hill yet?

11. Nancy found some fine hangers among the many things at the sale.

12. Let me keep a little of this wedding cake to eat later.

13. Father asked how much money Tom had saved to buy a bird cage.

14. Ruth caught a cold because she wouldn't wear her new warm wool coat.

15. I found a huge toy music box outside Roy's house.

Paragraph

Please call Stella. Ask her to bring these things with her from the store: six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

Grammatical Allomorphs

1. Please make the following words plural.
   a. Cat
   b. Pen
   c. Mess
   d. Match
   e. Pump
   f. Chair

2. Please make the following words past tense.
   a. Jog
   b. Watch
   c. Jump
   d. Measure
   e. Mend
   f. Walk

Common Phrases

1. What's up?
2. I want to buy milk, eggs, bread, and butter.
3. Do you want some?
4. Why?
5. Can I help you?
6. How's it going?
7. Nice to meet you.
8. Where do you want to meet?
9. What time?
10. My name is _____.
11. I live in _____.

Multisyllabic Words

1. Correct
2. Subjective
3. Hotdog
4. Pleasant
5. Florida
6. Chocolate
7. Camera
8. Computer
9. Usually
10. Fabulous
11. Vitamin
12. Halloween
13. Thanksgiving
14. Biology
15. Unfortunate

Conversation/Background Information

- Goal: get them talking

- Ask questions about their language background
- Get to know them
- Get them to tell you stories

- Listen for the same things we have been looking for at the conversational level

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Part 3 | Accent Management Treatment

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Something to keep in mind…

- These are adults with total knowledge of another language/sound system

- They may not know phonetics, but they have knowledge base to work from
  - Once they know place, manner, and voicing – they will make some sense of their native language

- They can also reason well and have control over their articulators

Setting Goals

- Collaborative process

- Things to consider
  - Biggest impact
  - Ease of accomplishment
  - Ease of teaching

- Consider level to target

- Balance segmental and suprasegmental targets

Treatment Approaches

Pre-Treatment Training

- Accent clients come from varied backgrounds in terms of their English language education

- Ensuring common knowledge/vocabulary allows the everything else to continue smoothly

- There is not a lot of research on this, but I am working in it

Segmental Instruction – Motor-based

- Imitation
- Articulatory Cues
- Visual Models

- Isolation
- Syllable
- Reading
- Conversation

Segmental Training – Phonological-based

- Recent work has suggested approaching accent work as we do phonological disorders in children could work
  - Some of the same "phonological processes" occur (Franklin and McDaniel, 2016; Tessel and Luque, 2020)

- Minimal Pair Approach
- Cycles Approach

Prosodic Instruction

- Stress
- Sentence vs. question intonation
- Linking
- Speech Rate

- Clear Speech
  - Differences in native vs. non-native clear speech (Smiljanic and Bradlow, 2005; Rogers, DaMasi, and Krause, 2010; Luque and Bradlow, 2011)
  - One study looked at this an instruction approach (Behrman, 2017)

Segmental vs. Prosodic

- Is more effective to choose one approach over the other?
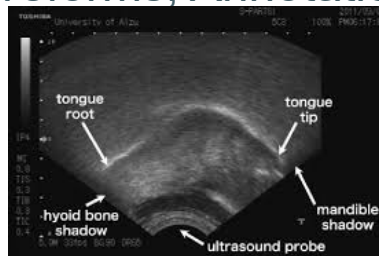
Biofeedback

- Biofeedback shows the client a representation of their speech
    - Used as a comparison
    - Manipulated to learn how to move articulators

- Acoustic Feedback
    - Praat (Boersma and Weenik, 2021)
    - Computerized Speech Lab (CSL) (KayPentax)
    - WASP (Waveforms, Annotations, Spectrograms, Pitch) (Huckvale, 2016)
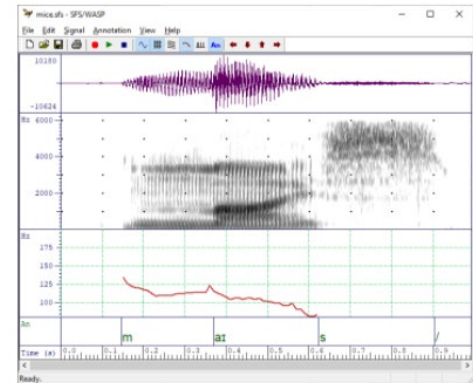
- Ultrasound

Wilson, I. (2014). Using ultrasound for teaching and researching articulation. *Acoustical Science and Technology*, *35*(6), 285-289.

Group Treatment

- Benefits
  - Partner work
  - Peer models

- Difficulties
  - Different language backgrounds
  - Juggling many people

- Compton does have a curriculum

My Treatment Approach

The Three Senses

From
www.audrey1.com

Audrey Hepburn - L'Ange des Enfants

The Three Senses

- From PAM, we know that some sounds are difficult to discriminate
  - This is why saying /ɪ/, not /i/, will not usually work
  - This is also why self-monitoring will be difficult

- So add in sight and touch
  - Certain sounds work better with each

Tips for Using Sight

- ALWAYS have a mirror present
    - Lip shape, tongue protrusion, movement
    - For telepractice, they can usually see themselves in the chat program
    - Some clients will fight you on this

- What else can you see?
    - Pitch track
    - Voicing bar

Tips for Using Touch

- Some people can't feel what their mouth is doing
  - So start with their native language

- Enhance the feeling
  - Lollipop, ice cube, pencil

- Have them move their articulators with their hands, or something else

Remember….

- Accent modification is a type of articulation therapy, so if you have a trick in that arena – try to apply it here

- Same principals of scaffolding and finding a facilitative context

Vowels

- Four things to focus on
  - Lip shape
    - Smile
    - Round
    - Open
  - Tongue Height
  - Tongue Backness
  - Movement (Diphthongs)

  Don't forget things like tongue rounding also

Specific Vowels

- beat, bit, bet
    - How much space should be between the teeth?

- boot, book
    - Tight vs. Duck Face
    - Use a jawbreaker
    - Transition from /ʃ/

- cot, caught
    - Does this matter?

Consonants

- Three things to focus on
  - Voicing
  - Place
  - Manner

Specific Consonants

- /r/
  - Close your mouth
  - Different types of r's

- /ŋ/
  - Do they know it exists?
  - Transition from k or g

- /l/
  - Point out the visual of contact with the alveolar ridge

Tools I Have Used

- Praat
  - Free software that allows you to see that acoustic properties of speech
  - I have given a whole talk on just this before, so today is just a brief mention

- Speech Buddies/Language Buddies

Praat

- Created by linguists in The Netherlands
- Very powerful, but you can just use parts of it
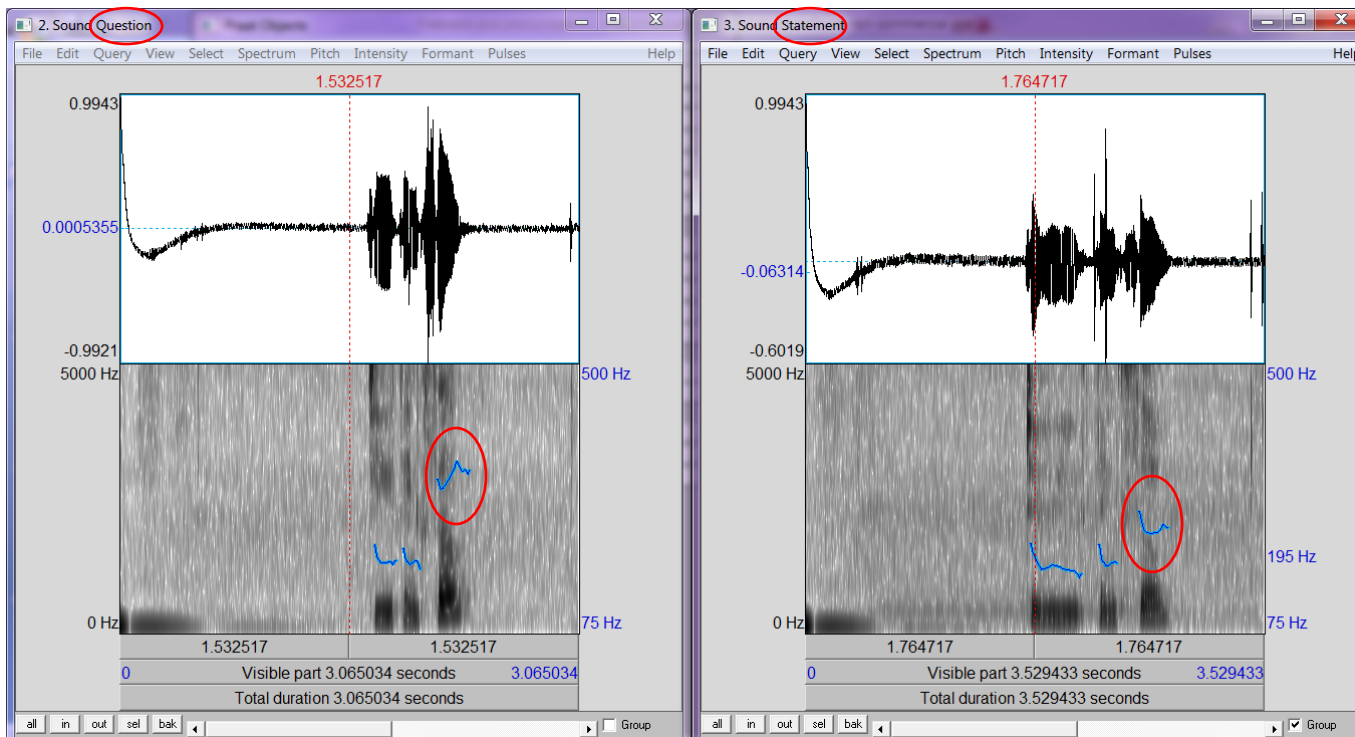
- Download for free at www.praat.org
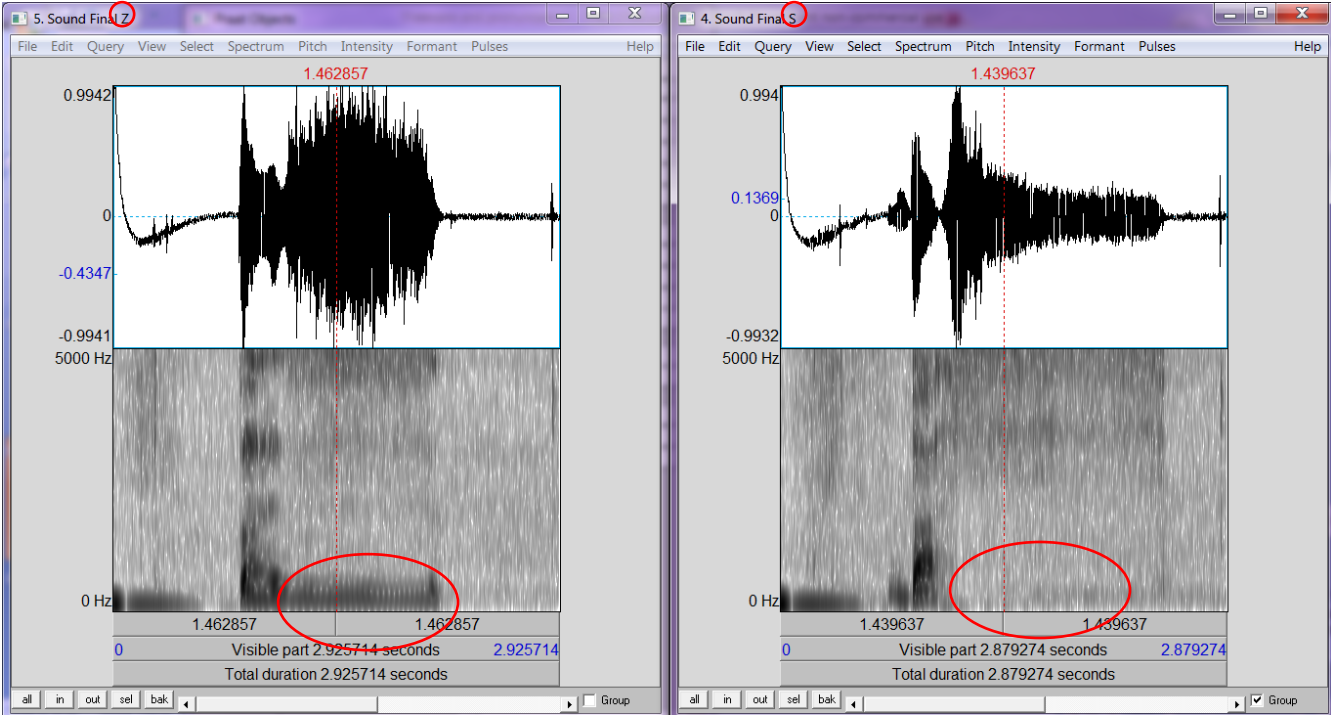
How to Read a Spectrogram

Volume = Darkness

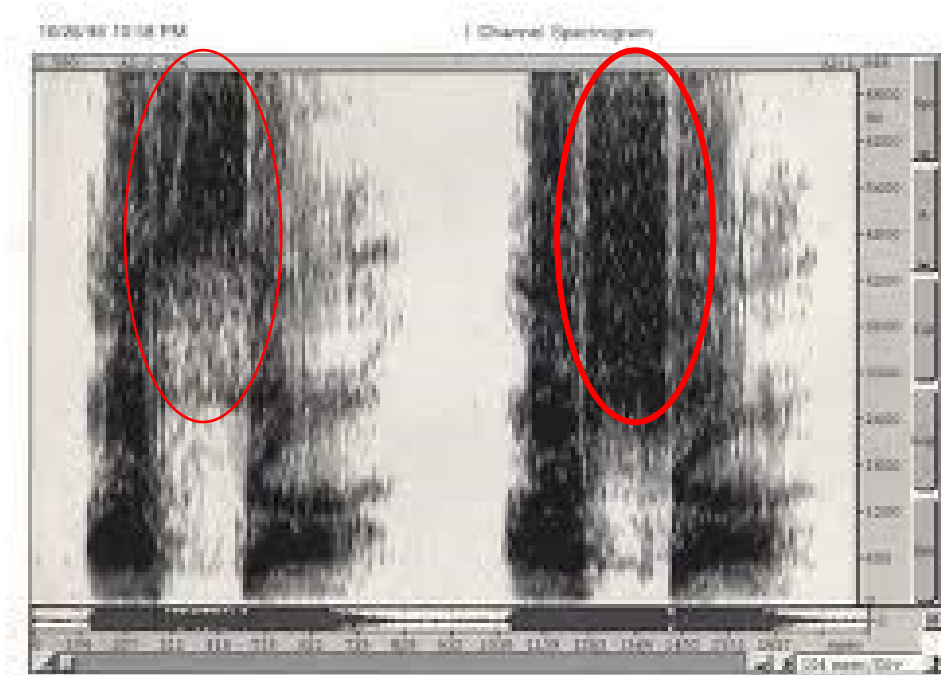**Y-Axis: Frequency**
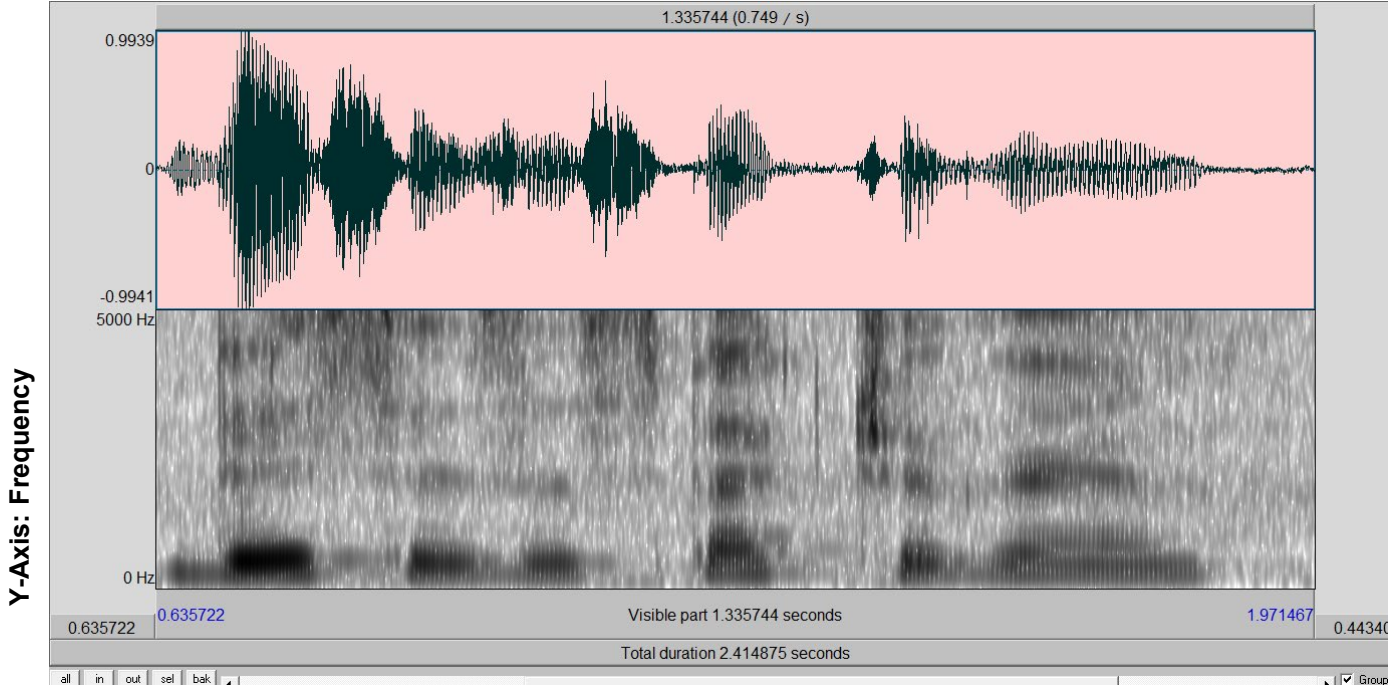
X-Axis: Time
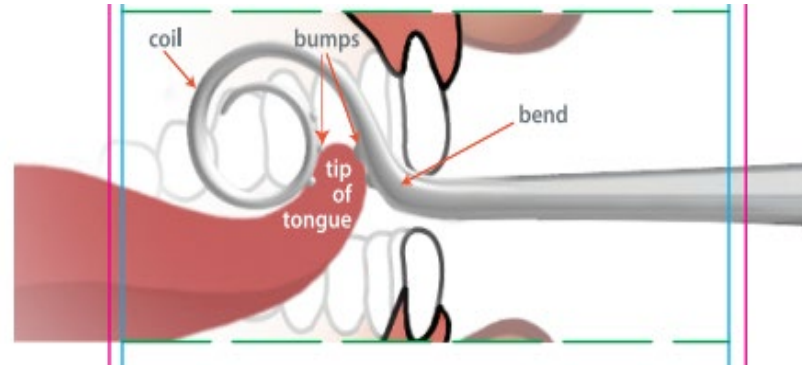
Pitch

Final Voicing

s/ʃ

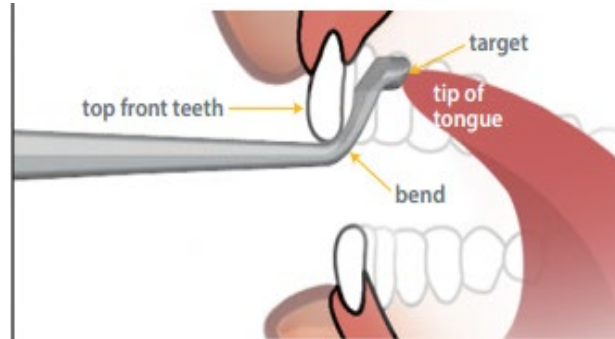/asa/   /aša/

- Notice location of energy

Speech Buddies

- The Speech Buddy, designed by Articulate Tech, is a tool that gives consistent tactile feedback for difficult speech sounds
  - The Speech Buddy is designed to guide tongue placement for language learners
  - The full set contains 5 target sounds (/r, l, s, ʃ, tʃ/)

Speech Buddy - R

Speech Buddy - L

Our Study

- Conducted at Northwestern University
    - Using 9 English learners
    - Focused on /r/ and /l/
    - Pre- and Post-Recordings, with at home practice protocol
    - Quantitative data supported use of Speech Buddy
    - Qualitative: 6/6 said they would recommend the tool to a friend

Luque, Leddon, and Moore (2013)

Quotes from Participants

- The program required a lot of commitment, but patience will pay off.

- The distinction between R and L is the most difficult thing in my English learning. Thanks to the Speech Buddy, I feel more confident with those pronunciations than before.

- At first you may feel tired of using the Speech Buddy, but you will be excited when you see the improvement of your pronunciation as time goes on.

- The tool can help me find the right position for the tongue.

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