11-823: Conlanging

“Sound” of a language
Warning!

- These are linguistic examples
- These are not intended to be insulting
- They show peoples (wrong) perception of language

- But they are often funny ....
British English is aloof
French is romantic
German is hard
Italian is [some hand waving gesture]
Recognizing a Language

- Even when “nonsense”
- We can often identify a language
Why do they have a “sound”

- Phonetic choice
- Prosodic Choice
- Cultural prejudices
- But are these views universal
Artificial Languages

“Require” a particular sound

- Esperanto
  - Sounds “European” Romance

- Elvish
  - Sounds fluid, archaic, fantasy-like

- Klingon/Orc
  - Sounds harsh, violent
Word style vs Acoustic

- **Klingon is direct**
  - No “hello” or greeting
  - “What?” nuqbeH
  - No goodbye
  - “Success” Qapla’

- **But sound reflects story-telling narrative**
**Parseltongue**

*Harry Potter:*  
- Language of serpents

*Snake-like*  
- Lots of aspiration and fricatives  
- Restricted due to snake vocal articulators
Festival Speech Synthesizer

- **Open source speech synthesizer**
  - Edinburgh, CMU and NITECH

- **Multi-platform toolkit**
  - Building voices (in any language)
  - Speech synthesis experiments
  - Used in other LT systems (SDS, S2S)
Mapping English ...

- Mapping English to something else
- Mixed up the vowels
- Mix up the consonants
- Make all consonants unvoiced
- Make all consonants /m/
Parseltongue

- Base voice
- Whisper voice
- Make all consonants fricatives
- Unvoice the vowels
- Slow down the consonants
“Sound” of your language

- What do you want it to sound like
  - Fluid lyrical (more sonorants)
  - Harsher (more stops)
  - Archaic (more Norse/Welsh – if European)
  - Alien (implosives?)

- Have something distinctive

- Can you pronounce it?
Phoneme Distribution

- **Vowels**
  - Core vowels
  - Diphthongs plus
  - Build the distribution incrementally

- **Consonants**
  - Allophones vs phones
  - Voiced/unvoiced

- **Be conservative**
  - It gets too weird too quickly
Follow Zipf's law
- Some phones very common
- Some phones very rare
- Borrowed words with different distributions
- Mapping for missing phones
  - /th/ → /s/ or /d/
  - /s/ → /t/ or /sh/

Make a syllable structure

Will you have stress/accent/tone
Greenberg's Language Universals

- Mostly above phonetics
- Most common consonants
  - p t k m n
  - Obstruents tend to be unvoiced
  - Sonorants tend to be voiced
- Most common vowels (base 5)
  - aa eh iy ow uw
Orthography

- Make it easy to read
- Make letter/phonetic relationship easy
- All languages have inappropriate orthography!
- Have a romanization
  - At least for glosses
Festival System

- Festival tool set
  - To build a talking clock

- Do 11-492 (part one – install)
  - Or team up with someone who hasn't
  - Install (compile) software
  - Linux/OSX or Cygwin (Win7/8)

- Send mail to awb to confirm its working by Tuesday's lecture.