Today's topic:

- **Adult language learning — age effects vs. critical period**

Background preparation:

- *Kaplan (2016), Ch 6, "Adults can't learn a new language", section 6.3 (and review of sec 6.1)*

1. Review and discussion of what we've seen

- Is there evidence for an **age effect** in adult L2 learning?
  - Is the evidence different for different aspects of language learning?

1. Review and discussion of what we've seen

- Johnson & Newport (1989) | L1 Chinese, Korean | Grammaticality judgments, oral Eng morphosyntax
  - Evidence for a gradual decline in mastery to about age 16, then variation (incl. high mastery)

- DeKeyser (2000) | L1 Hungarian | As above
  - Evidence for high mastery before 16, lower mastery after 16, no age effect within each group
  - After 16, Eng mastery correlated with general language-learning aptitude — but not before 16 (though Kaplan notes small sample size)

1. Review and discussion of what we've seen

- Flege (1995) | L1 Italian | Foreign accent as perceived by Eng native speakers
  - Evidence for gradual decline by age with no cut-off point

- Hakuta et al. (2003) | L1 Chinese, Spanish | Self-report of proficiency from US Census data
  - For Spanish speakers: Gradual decline by age with no cut-off point
  - (What did they find for Chinese speakers?)

1. Review and discussion of what we've seen

- Is there evidence for an **age effect** in adult L2 learning?
  - Is the evidence different for different aspects of language learning?

2. The critical period and L1 acquisition

- What evidence has been put forward to support the critical perior hypothesis for **L1** acquisition?

  Is it convincing?

2. The critical period and L1 acquisition

- Children isolated from language input
  - When discovered young, they may acquire language normally
  - 'Genie' — discovered at 13; never acquired adult-like syntax

- Some issues with this evidence
  - Hard to separate the effects of linguistic isolation and social isolation
  - Did Genie have developmental delays in any case?

2. The critical period and L1 acquisition

- Deaf children — 90% have hearing parents
  - In many cases, the parents don't sign (or not well) — but the children still have *social, emotional* support
  - Such children typically learn to sign from peers
  - Earlier learning correlates with greater mastery of the sign language

2. The critical period and L1 acquisition

- Can an adult's language system continue to change over the course of a lifetime?

2. The critical period and L1 acquisition

- Can an adult's language system continue to change over the lifetime?
  - Queen Elizabeth's vowel system has changed over time, according to Harrington (2000)
    - Queen Elizabeth's 'Christmas Broadcasts' — compare 1957, 2015 (from the BBC)

2. The critical period and L1 acquisition

- Can an adult's language system continue to change over the lifetime?
  - Longitudinal study of Montreal French by Sankoff & Blondeau (2007)
    - *r* sound was in the process of change
    - most speakers stayed consistent (old vs. young)
    - some speakers did shift to the new pronunciation

2. The critical period and L1 acquisition

- What can we conclude about a critical period for **L1** acquisition?

  Does age matter in any way?

  Does age determine everything?

2. The critical period and L1 acquisition

- Critical period for **L1** acquisition?

  Does age matter in any way?

  Does age determine everything?

  - It does look like absence of language input in childhood makes it difficult or impossible to acquire language natively
  - Some people can change their pronunication (phonology) over the course of their life, perhaps in response to social factors
    (what about other parts of the mental grammar?)

3. The critical period and L2 acquisition

- Can we draw any overall conclusions?
  - Do age effects in adult L2 look like evidence for a 'strict' critical period? A 'weak' one?
  - Might there be a difference between **syntax** and **phonology**? (Have we seen other supporitng evidence for this idea?)

4. Age effects unrelated to true critical period?

- What factors does Kaplan discuss in sec 6.3 that might possibly make language learning different for children and adults, even if there is no critical period for L2 acquisition?

4. Age effects unrelated to true critical period?

- Some general factors about social contexts
  - Children are less afraid of making mistakes, so they experiment and learn
  - Society is sympathetic to L2 adults, but less so to L2 children
  - Adults might have more reasons to feel affiliation with their L1 and therefore retain L1 features in their L2

4. Age effects unrelated to true critical period?

L1 interference?

- Effects of interference from L1 may be stronger in adults
  - Learning L1 means closing off possibilities in your grammatical system
  - Maybe it's harder to reopen those possibilities once a learner has been trained (by L1 data) to ignore them

4. Age effects unrelated to true critical period?

L1 interference?

- Werker & Tees (1984) and subsequent research
  - Some contrasts between phonetically similar sounds are perceived by young infants (around 4 months) but not perceived by older infants (around 10 months)
  - Update from subsequent research: Other contrasts actually work the other way and need exposure to acquire
- Consider also choices among syntax 'parameters' such as null subjects, question formation, etc.

4. Age effects unrelated to true critical period?

Motivation?

- Children may be more 'motivated' than adults
  - Are children more likely than adults to have to function in monolingual contexts?
  - Are children more susceptible to peer pressure, leading them to eliminate L1 features from their L2?

4. Age effects unrelated to true critical period?

Motivation?

- Research has certainly found a role for motivation in (adult) L2 learning — but how can we assess or compare this in infants and toddlers?

4. Age effects unrelated to true critical period?

Motivation?

Kaplan Ch 6, p 127:

> By itself, the motivational hypothesis has the potential to blame second-language learners for their failures: if you haven't reached native-speaker fluency in your new language, that's because you just didn't try hard enough.
>
> But decades of research on second-language acquisition have made it clear that adult second-language learners face very real and difficult obstacles. Motivational differences ... cannot be the whole story.

4. Age effects unrelated to true critical period?

Ineffective learning methods?

- Tendencies…

Adults	**Children**
classroom settings	immersion; from peers
explicit teaching	implicit inference
simpler language from peers	peers unlikely to simplify
fewer situations to use L2	more situations to use L2
formal education was in L1	formal education is in L2

4. Age effects unrelated to true critical period?

Ineffective learning methods?

- Again, these factors surely matter
- They are probably not the whole story
- To what extent can experiments testing for a critical period control for these kinds of factors?

5. For discussion: Rosetta Stone

https://www.rosettastone.com/faq/

"Our language learning program teaches you based on a method of instruction called 'immersion'. It introduces language skills in a way that stimulates your brain's natural language learning ability.

"Rosetta Stone provides the opportunity to develop all of your language skills—listening, speaking, reading and writing, from the beginning. The program leads you through a carefully designed sequence that helps you build the language structure step-by-step.

"You begin to think in your new language from the very beginning-- the same way you learned your first language."

6. Conclusions

- Do adults have a more difficult time learning a new language?

- Is it impossible for adults to learn a new language well?

6. Conclusions

- Do adults have a more difficult time learning a new language?
  - In general, overall, yes

- Is it impossible for adults to learn a new language well?
  - No! But there are large individual differences

- What conclusions can we draw from these results?