

Introduction to the Study of Language

-Ling 1-
Fall 2020

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Announcements

- No live lecture on 11/11 (Holiday)
 - syllabus updated accordingly
 - attendance of live lectures = 7/10
- Please take the *Respondus* quiz asap
 - Midterm: 11/8-9
- Please start working on Analysis Paper #1 (due on 11/15)
- Two notes on office hours
 - appointments with TAs
 - waiting room in my office hours

Roadmap for today's class

- 60 minutes in total
- last 10/15 minutes: your time to ask me questions
 - orally by using the raise-hand button
 - or by sending me a **private** message in the Zoom chat
 - questions can be on any topic of any live lecture

❖ How do we know that language is a biologically-determined ability?

Language development and age/time

- Language involves a **critical period** of language acquisition:
 - a span of time after which complete acquisition is difficult or impossible
 - 'window of opportunity'
- critical period is widely documented, not only for our species

Types of critical period in other species: acquisition of songs by **birds**

- Young birds reared away from their species fail to acquire the **song**
- Even when returning to their original habitat
- If chaffinches isolated during 4th month, they do not acquire the birdsong of its species (which emerges during 2nd spring)
- hearing the song before or after: useless
- they need direct trigger during specific period



Types of critical period in other species: kittens

- **sight** development in kittens
 - one eye temporarily closed when young
 - fail to “wire up” their neural circuitry for that eye
 - do not make up the deficit later



Types of critical period in other species: **chickens**

- **pecking** behaviour triggered by exposure to light during the first 2 weeks of life
- chickens raised in the dark and fed with droppers for 2 weeks will not learn to peck



Experiments on humans? No, of course.

- Humans cannot be directly tested in the same way.
- Cases of lunatic or criminal behaviour by parents:
 - well-studied case:
Genie (Harold's classes on language acquisition)
- Accidental situations (illness) have occasionally created such situations:
 - Chelsea
 - E. M.

Language is a biologically based ability

❖ E. Lenneberg (1967):

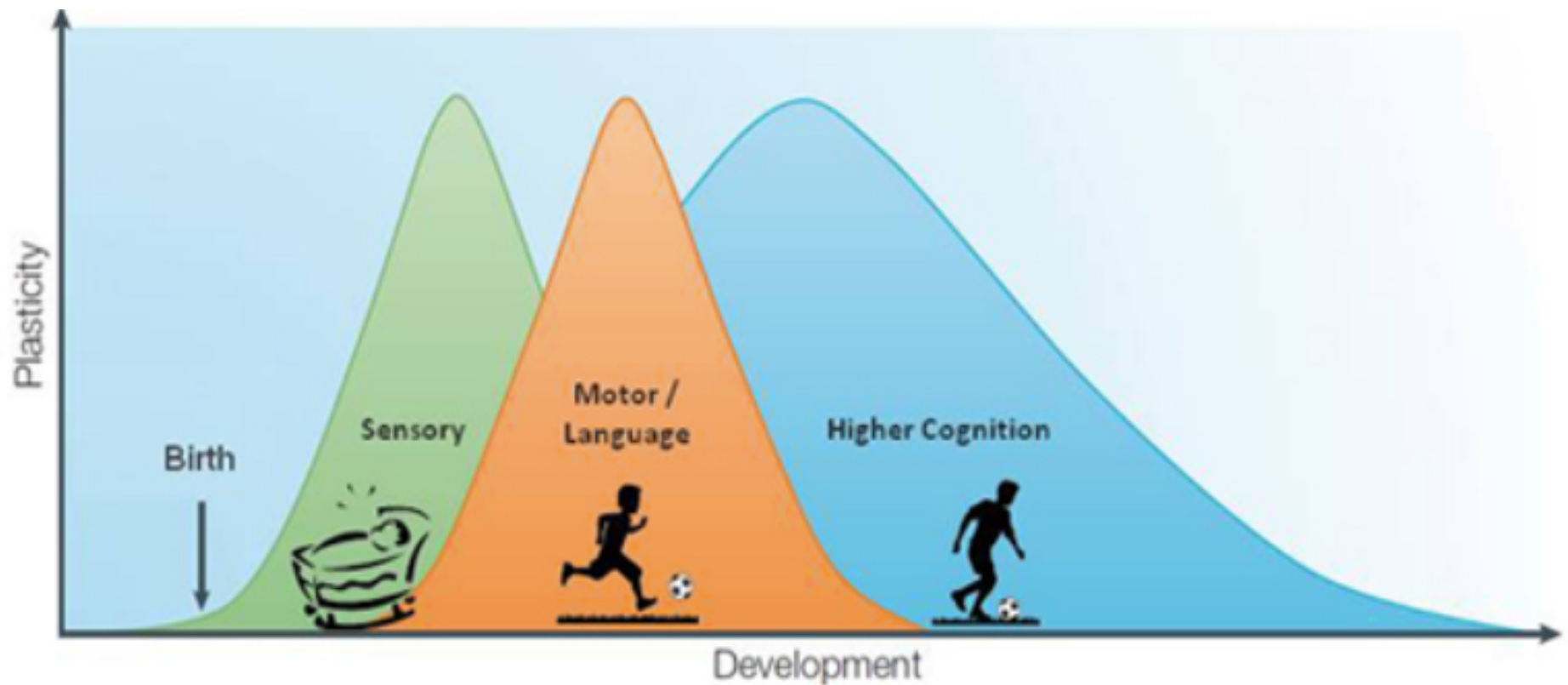
- hypothesized a critical period for language development
- biologically-determined ability
 - language = walking upright
- critical period: period of time when the brain is undergoing a process of **lateralization**

➤ Q: what do we mean by ***lateralization***?

Evidence for critical age hypothesis 1/2

- Lenneberg's hypothesis: based on studies of recovery after aphasia
 - children recover well, but adults do not
- maturational constraint on language acquisition:
 - issue of maturational changes in brain **plasticity**
 - time affects brain plasticity

Windows of plasticity in brain development (Nelson et al. 2000)



Evidence for critical age hypothesis 2/2

- different account: '**Neural commitment hypothesis**'

(Iverson et al. 2003)

- during language acquisition, brain adapts to the structure of L1(s)
- language exposure tunes the system to select the useful input
- neurons become 'committed' to encoding linguistically relevant properties of L1
- neurons *cannot* be recommitted upon L2 exposure!

Linguistic isolation in children: the case of Chelsea (Curtiss 2014)

- profoundly deaf from birth
- came from a loving home
- initially misdiagnosed as being intellectually disabled
- started learning language at age 32 when she was correctly diagnosed
- developed a fairly good lexicon
- syntax was broken
- some functional items present but totally unprincipled

Linguistic isolation in children: the case of Chelsea

- (1) a. The small a the hat.
- b. Daddy are be were to work.
- c. Breakfast eating girl.**
- d. Wendy be drive come.
- e. The women is bus the going.**
- f. Airplane fly headache.

Linguistic isolation in children: the case of E.M. (Grimshaw et al. 1998)

- profoundly deaf from birth
- no contact with the deaf community
- hearing aids at 15 years
- normal IQ, cognitively functional
- severe deficiencies in verbal comprehension and production
 - after 4 years trying to learn Spanish

Linguistic isolation in children: the case of E.M. (Grimshaw et al. 1998)

- **Production**

- After 34months: asked to describe a 7min video
 - only able to say was *gato* 'cat'
- After 48months: he was then taught ASL
- After 16 months of being taught ASL: able to use 8 nouns
- After 48 months: able to produce 1 two-word utterance (*airplane stop*)

- **Comprehension**

- After 34months: performed above chance in 5/12 tasks:
 1. Modification: 'Show me the yellow/blue flowers'
 2. Plural: 'Show me the cat/cats'
 3. Possessive: 'Show me your/my nose'
 4. Comparatives: 'Which button is bigger?'
 5. Tense: 'Show me the picture were the children ate the chorizo'

What is a L2?

- natural (i.e. human) language acquired ***after*** the L1
 - after? when?
 - when the critical age of L1 acquisition is closed
- L1 vs L2 = **acquisitional differences!**
- L1 vs L2 = **not performance** differences
L1 does not always correspond to the language in which a L2er is more proficient!

Comparing L1 and L2 acquisition

A. Is second language acquisition (in adults) like first language acquisition (in children)?

- i. Is the final product the same? (ultimate attainment)
- ii. Are the processes involved the same? (developmental sequence)

B. How can we account for the differences and similarities in L1 and L2 acquisition?

Comparing L1 and L2 acquisition

- L1 and L2 acquisition are generally different
 - they start out differently
 - clear-cut distinction: native language or not?
- L1 and L2 acquisition are also comparable
 - L2ers, like L1ers, are creative in the process of language acquisition
 - L2ers construct grammars too!

Fundamental Differences Hypothesis

(Bley-Vroman 1985, 1990)

L1 and adult L2 acquisition = fundamentally different processes

❖ L1 acquisition

- a biologically-driven program specific to language
- uniformity, absence of error, speed and ease of acquisition

❖ L2 acquisition

- adults use general problem solving skills (e.g. playing chess, musical instruments etc.)
- learning process is goal-oriented, it uses feedback and direct instruction

The role of the learning context

- Positive influence of **naturalistic exposure** on L2 sociolinguistic development (vs classroom context)
 - Regan 1996, 2005
- Effects of context of acquisition exerts a significant effect on multilinguals' later **pragmatic use** of language (Dewaele 2010)
 - Languages learned only in a formal context:
 - use of L2 mostly in a formal context => lack of **socio-pragmatic** competence

First-hand experience: teaching Italian as L2 to immigrants and refugees

- voluntary cooperatives in Bologna
- complex classrooms with different backgrounds
- Italian learned mostly through classroom instruction
- also computer-based tasks (for some learners)
- **leap** in the acquisition of *pragmatic* features when social interactions increased
- leap in confidence > **positive integration**

Effects for educational *versus* naturalistic exposure on L2 acquisition of pragmatic features

naturalistic context > study abroad > immersion programs >
> regular classroom

Variation in L2 acquisition intersecting individual factors

- **PERSONALITY**
- **SOCIO-BIOGRAPHICAL FACTORS**
- **SOCIO-PSYCHOLOGICAL FACTORS**

Such as:

motivation, attitude, aptitude

I will see you **next Wednesday** -
what can we do in the meanwhile?

- Do the **readings**: - *An Introduction to Language*, pp. 446-467
- *Bilingual Aphasia*
- optional: *the case of Chelsea* (Curtiss 2014)
- Enjoy the **screenings**: - *Communication Between Cerebral Hemispheres*
- *The mind: Language* (optional)
- **Homework 2** due on **Sunday 10/25**
- Homework 3 posted on Sunday 10/25
- If you could not attend this class, you will have to take a **small quiz**
- quiz opens tomorrow morning (10/22) and closes on Sunday (10/25)

STAY SAFE !

- Tips on how to proceed **successfully** every week?

I suggest you take the following **6 steps** in this order:

1. Go through the **readings**.
2. Watch the recorded **lectures** and take detailed notes.
3. Take a look at the **quizzes** to see if you understand all the questions, before completing them.
4. Attend the **live** lecture.
5. Attend the live **discussion** sections.
6. Complete and submit your **assignments**.