- **Rule "creation" in child language**
- **Cultural differences in parent-child interaction**
- **The Hart & Risley (1995) study**

Background preparation:

- *Kaplan (2016), Ch 5, "Children have to be taught language", sec 5.1–5.2*

1. Introduction

- Kaplan (2016: 79–80):

If language must be taught, then it's possible to teach it badly.

...And if some children are disadvantaged by inadequate parenting, then the solution is to train their parents to be better language teachers.

As we will see, there is a body of linguistic research that makes precisely this argument, and over the past few years several programs have been founded in the United States to combat the 'language gap' by changing parents' behavior.

1. Introduction

- Kaplan (2016: 79–80):

But there's another body of linguistic research that challenges the idea that a first language has to be explicitly taught, and it turns out that many of our ideas about 'good' parental talk are inextricably tied up with culture-specific beliefs about how to raise children.

There are no easy answers to the educational and economic disparities in the United States, but a healthy dose of caution is in order before we rush out to fix what we perceive to be other people's bad parenting.

1. Introduction

Topics for today:

- What is some of the evidence that much of what children are doing when they learn language is *not* coming from interactions with their parents?

- To what extent is "conventional wisdom" about how parents should interact with their children actually *culture-specific*?

- Can language acquisition actually be deficient, especially as a result of the child's language environment?

- What biases and confounds can arise in studying language assessment?

Question:

- What is some of the evidence that much of what children are doing when they learn language is not coming from interactions with their parents?

2. Overregularization

- What is the *regular* rule in English for forming…

    - a plural noun?

    - a past-tense verb?

    (Warning: These rules are more complex than the spelling system of English would suggest!)

- What are some examples of…

    - *irregular* plural nouns?

    - *irregular* past-tense verbs?

- What makes a rule or pattern *regular*, anyway?

2. Overregularization

- Children acquiring English often produce forms like these:

  - Plurals: *mouses, foots*
  - Past tense forms: *goed, eated*

- What is the explanation for this phenomenon?

2. Overregularization

- Children acquiring English often produce forms like these:

    - Plurals: *mouses, foots*
    - Past tense forms: *goed, eated*

- What is the explanation for this phenomenon?

    - Child *over*applies the regular rule to words that are actually exceptions in the target language: **overregularization**
    - Why is this phenomenon an important piece of evidence in linguistics?

3. Somebody else's rule

- Some ways of forming **yes-no questions**

    (a) Just use intonation
    - -Example: Māori
    - -Also used in English for surprise: *You ate that?!?*

    (b) Add question-marking word at beginning (end)
    - -Example: French

        C'est l'heure.   'It's time.'
        <u>Est-ce que</u> c'est l'heure?   'Is it time?'

3. Somebody else's rule

- Some ways of forming **yes-no questions**

  (c) Move a verb to the beginning

  - Example: English

  The book is red.   *You (did) read the book.*
  Is the book __ red?   *Did you __ read the book?*

3. Somebody else's rule

- Seen in some children acquiring English

  Is this is your book?

- What is the explanation for this phenomenon?

3. Somebody else's rule

- What is the explanation for this phenomenon?

  - The child notices that yes-no questions in English often begin with *is*

  - The child wrongly assumes English uses strategy (b) instead of the actual strategy (c)

- Note the implication here: the child seems to have a good handle on what the plausible strategies are in the first place

  - (Where does this knowledge come from?)

4. Acquisition from imperfect input

- What happens when children acquiring language get **no language input from native speakers**?

  - Simon: deaf child who acquired ASL from parents who are deaf, but who themselves acquired ASL after age 15 (Singleton & Newport 2004)

- Motion verbs in ASL: morphology

Seven Morpheme Categories of ASL Verbs of Motion

Root = Path along which object moves
Orientation = Orientation or direction in which the object moves
Manner = Manner in which the object moves
Location = Locative relationship of moving object to secondary object
Position = Position of the secondary object with respect to the central object path
Central Object Handshape = Class (category or size and shape) of the moving object
Secondary Object Handshape = Class (category or size and shape) of the secondary object

Fig. 1. ASL verb of motion example with a description of seven morpheme categories (based on T. Supalla, 1982).

(Singleton & Newport 2004: 378)

4. Acquisition from imperfect input

- Verbs of Motion Production (VMP) test
    - 120 short videos of motion events shown one at a time
    - Participant is asked to describe each using ASL
    - Video of responses is later scored by a trained native ASL signer for accuracy on the 7 morpheme categories shown above

4. Acquisition from imperfect input

- How do Simon and his parents score on VMP, versus native-ASL children of native-ASL parents?

Handshape
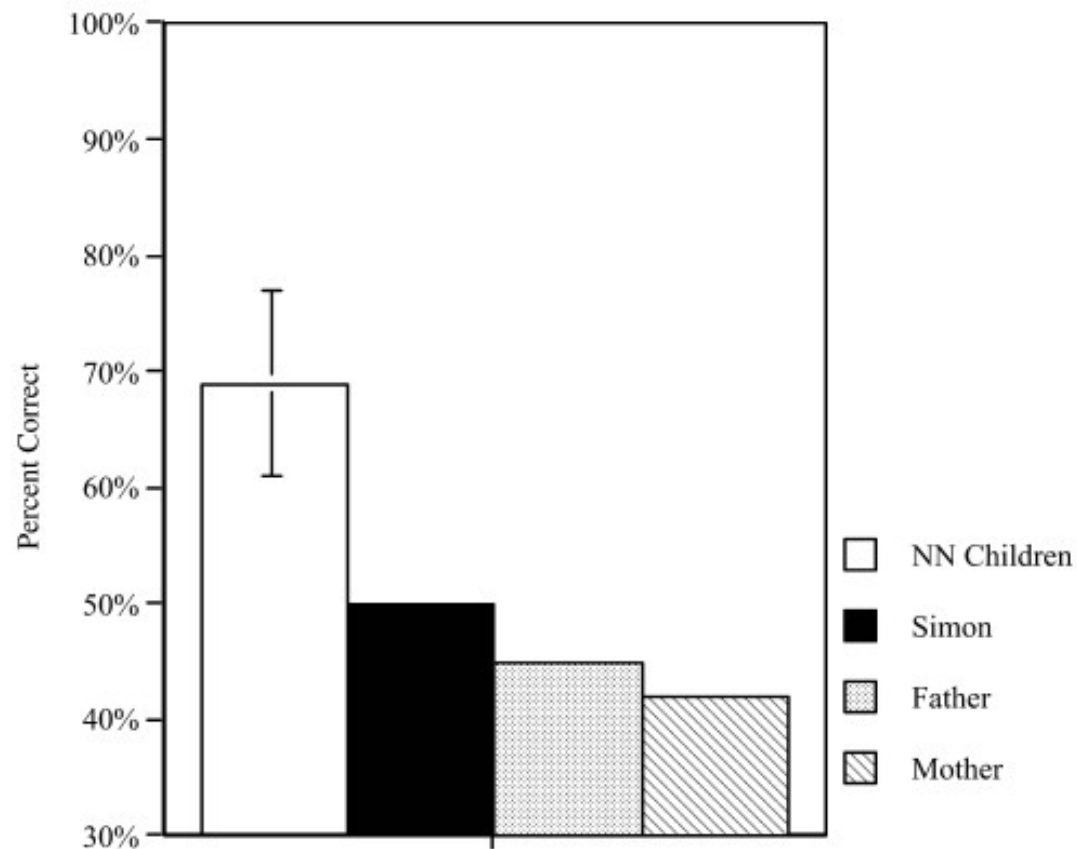(Singleton & Newport 2004: 389)

Fig. 6. Simon's mean handshape (across two morpheme categories) VMP percent correct scores compared to his parents and his native (NN) ASL signing peers.

- How do Simon and his parents score on VMP, versus native-ASL children of native-ASL parents?

Motion/ location
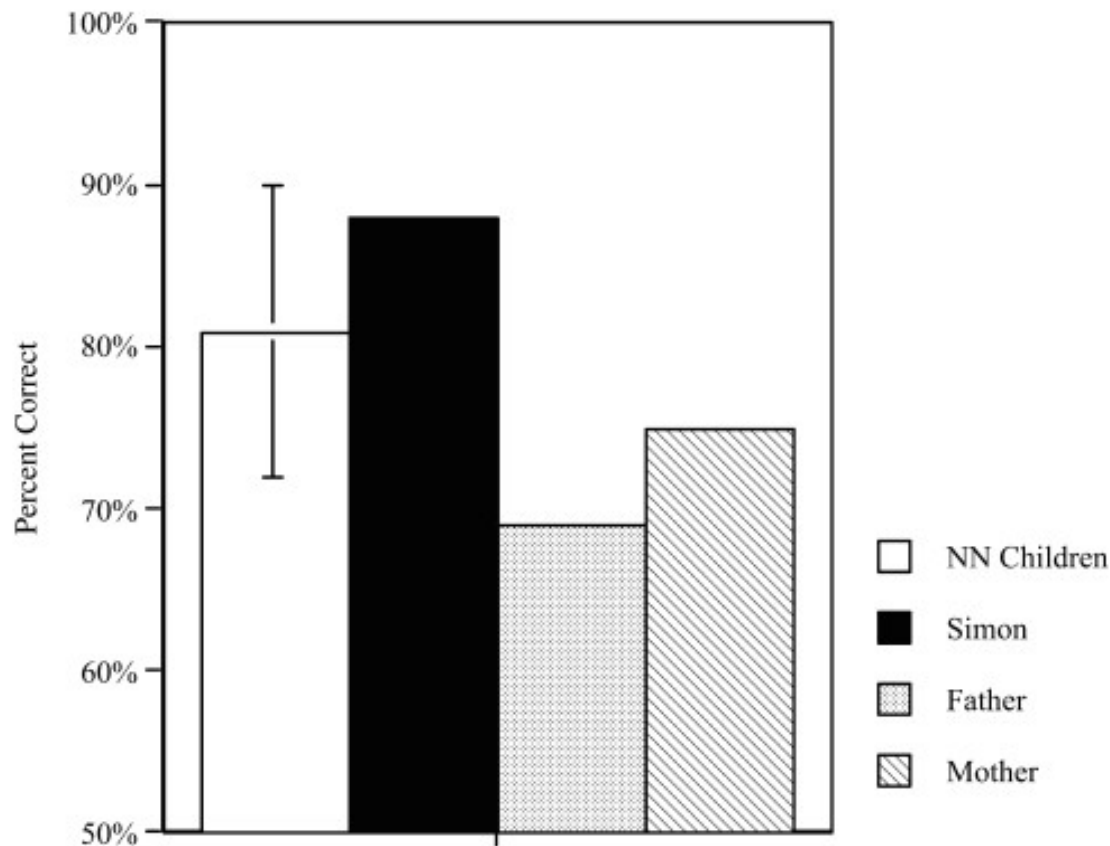
(Singleton & Newport 2004: 389)

Fig. 5. Simon's mean motion/location (across five morpheme categories) VMP percent correct scores compared to his parents and his native (NN) ASL signing peers.

4. Acquisition from imperfect input

- How do Simon and his parents score on VMP, versus native-ASL children of native-ASL parents?

  - Simon's parents are not native-like
  - Simon is like his parents on the handshape measures
  - Simon surpasses his parents on the other morphological measures

- Evidence that Simon has constructed grammatical rules that are **more systematic** than data in his environment would support

5. Pidgins and creoles

- What is a **pidgin**?

- What is a **creole**?

- Why is their **relationship** interesting in the context of our discussion today?

5. Pidgins and creoles

- Kaplan (2016: 86, emphasis added):

A **pidgin** is a contact language that develops when speakers of different languages need to find a way to communicate, but circumstances don't permit extensive bilingualism.

By definition, pidgins are **no one's native language**, and so the structure of a pidgin tends to be extremely simple and variable…

(However, the speakers of a pidgin may also converge on some basic grammatical rules, especially if their native languages have some patterns in common.)

5. Pidgins and creoles

- Kaplan (2016: 86, emphasis added):

A **creole** is a language that has evolved from a pidgin and has a sizeable number of native speakers.

Creoles follow regular grammatical rules and are **full-fledged natural languages**.

5. Pidgins and creoles

- What causes the change from a pidgin to a creole?

  - One hypothesis: Children acquiring a pidgin as their native language **expand it** into something with a fully fledged grammar → creole

    (Note: Another line of research, not discussed by Kaplan, looks at the role of second-language, adult speakers in creole formation)

  - Supporting evidence for the role of child language: Nicaraguan Sign Language was created when deaf children came together in a new school; younger speakers converged on a complex grammatical system

6. Summary: Rules in child grammar

- **Overregularization** in morphology (*foots*)

- Appearance of linguistic rules that exist in **other languages**, but not in the child's target language (*Is this is your book?*)

- Creation of **regular grammatical systems** by children exposed to inconsistent/insufficient input
  - Simon's ASL verb morphology; pidgins → creoles

What this means: In acquisition, children **create** and **extend** rules of grammar in ways that are not always based on the ambient language data

7. Adult/child interactions: Cross-cultural differences

Discussion:

- What are some common characteristics of adult/child interaction in middle-class US communities?

- What examples of differences seen in other cultural contexts does Kaplan present?

7. Adult/child cross-cultural differences

- Some common characteristics of adult/child interaction in middle-class US communities

  - Speak directly to pre-verbal infants
  - Treat pre-verbal infant behavior as communication, and respond to it
  - Use special characteristics in 'child-directed speech' (simple syntax, repetition, large pitch variation, etc.)
  - Ask questions they already know the answers to in order to engage the child / encourage the child to respond

7. Adult/child cross-cultural differences

- Some cross-cultural differences reviewed by Kaplan
  - Trackton: Young children are expected to figure out for themselves how to use language, interact with people, and learn about the world
  - Samoa: Young children are assumed not to be capable of interacting socially

- The point: Direct interaction with infants and lots of "vocabulary drilling" is just one cultural pattern

8. Can language acquisition be deficient?

Given this background in child language acquisition...

- Can language acquisition be deficient? What is 'deficiency'?

- What does the Hart & Risley (1995) study show us about children, language, and education?

  - What are the results of the study?

  - What do H&R think these results mean?

  - Are there any biases in the study or its interpretation? Do H&R's results prove the point that H&R would like to make?

8. Can language acquisition be deficient?

- What does 'language acquisition' refer to?

  - Why is this an important question?

- What does 'deficient' mean?

8. Can language acquisition be deficient?

- What does 'language acquisition' refer to?
  - Are we talking about the acquisition of the unconscious mental grammar, with systematic rules for syntax, morphology, phonology, etc.?
  - Are we talking about the acquisition of vocabulary, or reading skills, or other educational outcomes?

- Why is this an important question in the context of discussing research results?

8. Can language acquisition be deficient?

- Why is this an important question in the context of discussing research results?

  - Are these two areas of acquisition interchangeable in discussion?

  - What do we know (from previous chapters!) about the ability to acquire rules of syntax versus vocabulary?

8. Can language acquisition be deficient?

- What does 'deficient' mean?
  - In some cases, the **unconscious mental grammar** is not completely acquired — these are special cases involving language disorders or linguistic isolation
  - "…the idea is that maybe some groups **do poorly in school** (such as children from low-income families) **because their language skills are inadequate**, and their language skills are inadequate because their parents haven't taught them properly"
  (Kaplan 2016: 87–88)

9. Hart & Risley (1995)

- Hart & Risley (2003), a very short summary of their (1995) book, is available at:

  https://www.aft.org/ae/spring2003/hart_risley

  > (Note that Kaplan's citation in our textbook for this article may be wrong; the journal appears to be called *American Educator*.)

9. Hart & Risley (1995)

- What was the structure of this research project? Who was studied, how, and for how long?

- What are the key results (from Kaplan's summary)?

- Who was studied, how, and for how long?

  - 42 children and families

	Upper-SES	Middle-SES	Lower-SES	Welfare
African-American	1	3	7	6
White	12	7	6	0

  - From age 7-9 months to 3 years

  - Children and families were observed/recorded for 1 hour per month (time chosen by families)

  - Data were transcribed and coded:
    - Every utterance spoken directly to the child
   - Every utterance produced by the child

(from H&R 2003: 7)

Families' Language and Use Differ Across Income Groups

	Families					
	13 Professional		23 Working-class		6 Welfare	
Measures and scores	Parent	Child	Parent	Child	Parent	Child
Pretest score[a]	41		31		14	
Recorded vocabulary size	2,176	1,116	1,498	749	974	525
Average utterances per hour[b]	487	310	301	223	176	168
Average different words per hour	382	297	251	216	167	149

HART & RISLEY, 1995

[a] When we began the longitudinal study, we asked the parents to complete a vocabulary pretest. At the first observation each parent was asked to complete a form abstracted from the Peabody Picture Vocabulary Test (PPVT). We gave each parent a list of 46 vocabulary words and a series of pictures (four options per vocabulary word) and asked the parent to write beside each word the number of the picture that corresponded to the written word. Parent performance on the test was highly correlated with years of education ($r = .57$).

[b] Parent utterances and different words were averaged over 13-36 months of child age. Child utterances and different words were averaged for the four observations when the children were 33-36 months old.

(from H&R 2003: 7)
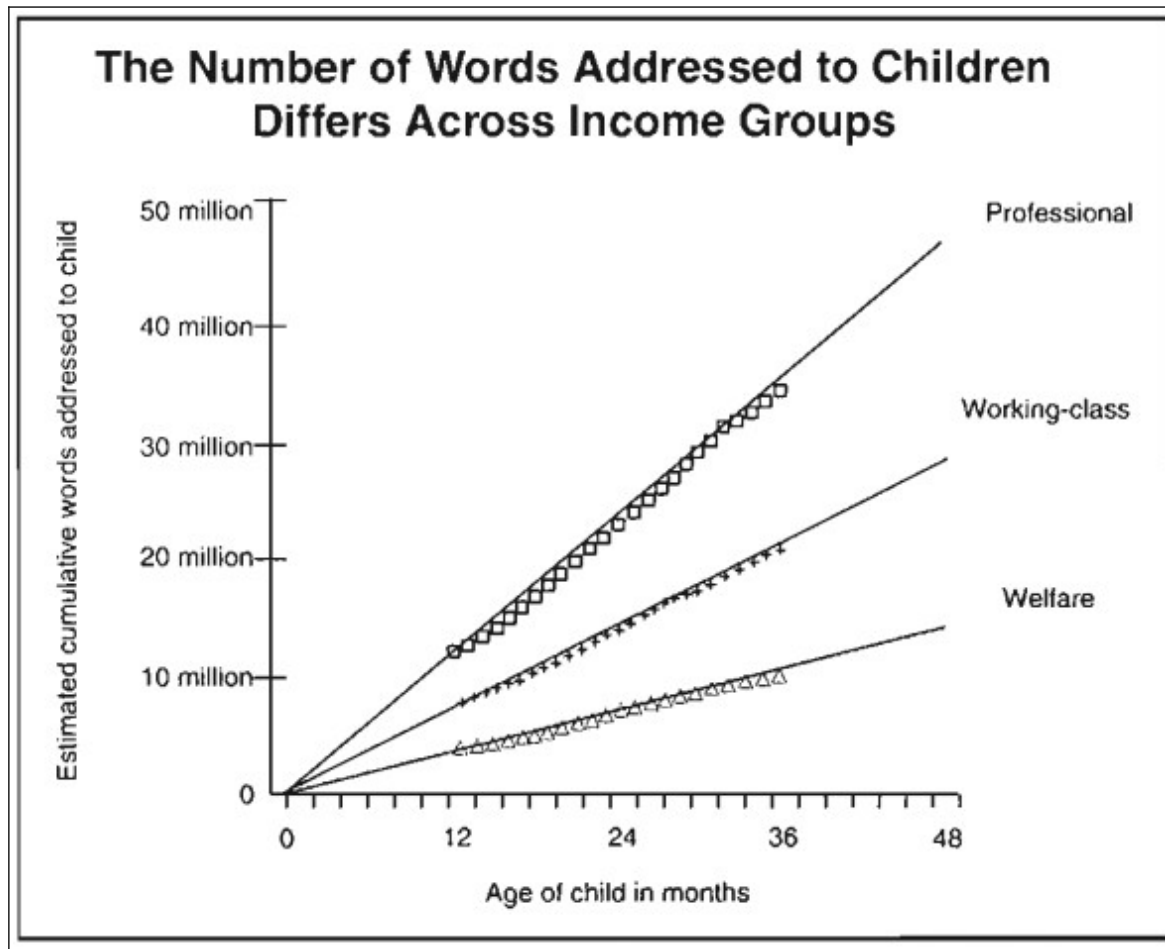
Children's Vocabulary Differs Greatly Across Income Groups
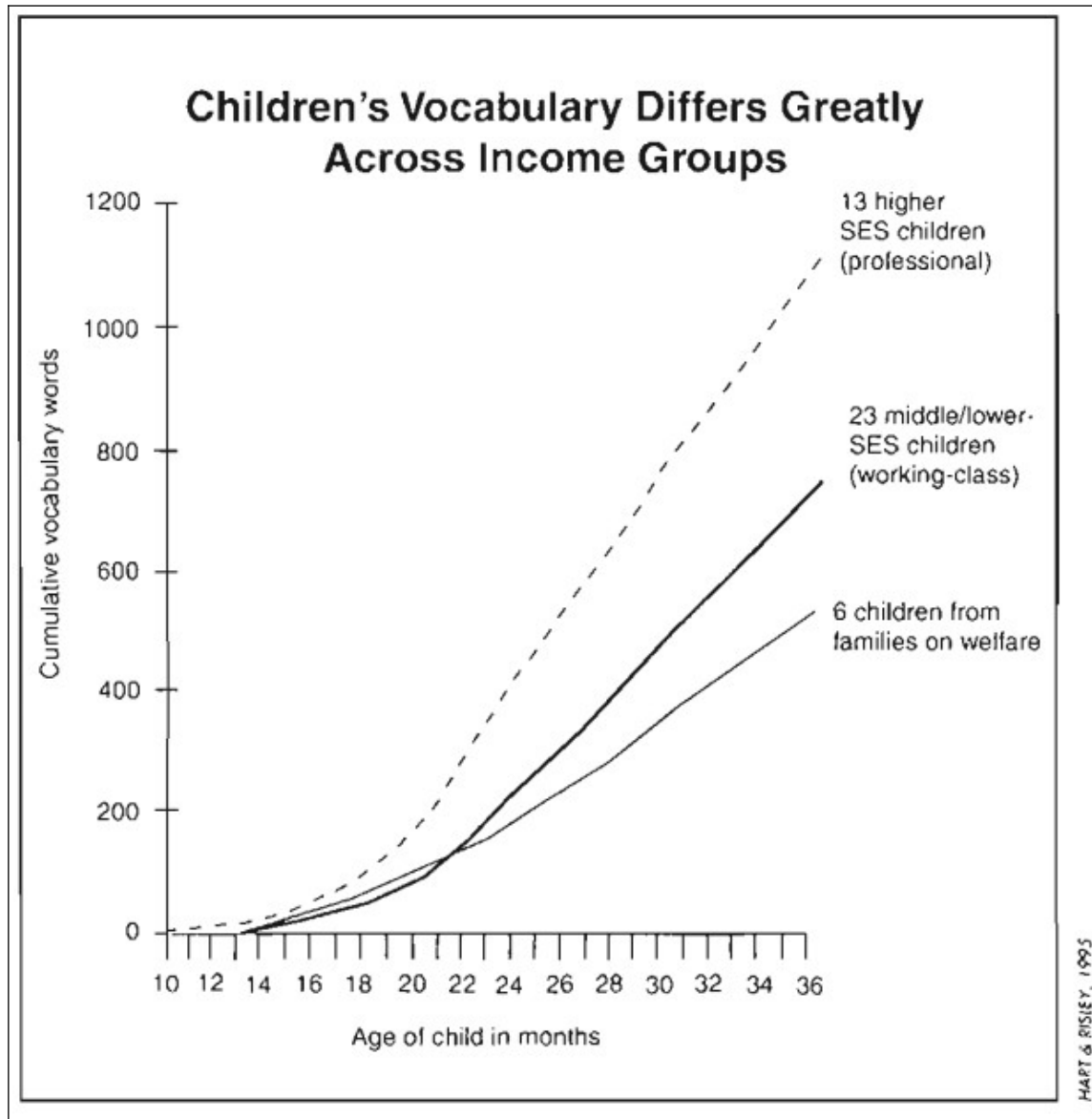
- Here is the original "30-million-word gap" claim

(from H&R 2003: 8)

The Number of Words Addressed to Children Differs Across Income Groups

- What is actually being plotted here? Any issues? (!!)

9. Hart & Risley (1995)

- What are the key results (from K's summary)?
  - Parents and children in higher-income groups…
    - produced more different words overall
    - spoke more words in each hour observed

  - Children from higher-income groups…
    - had larger vocabularies
    - performed better on lg tests at 3, 3rd grade

9. Hart & Risley (1995)

- What are the key results (from K's summary)?

  - Correlation between parental talk and children's language also found **within a single social class**

    H&R's claim: "Children from high-income families do better in school because their parents talked to them more when they were very young." (as summarized by Kaplan 2016: 88)

10. Bias in H&R results or interpretation?

- What are some sources of potential bias we can identify to be concerned about here?

10. Bias in H&R results or interpretation?

- What are some sources of potential bias we can identify to be concerned about here?

  - Bias in the methodology by which data were collected or analyzed

  - Bias in the interpretation of the results

- In addition to Kaplan's own discussion on these points, see the sources she cites, including Dudley-Marling & Lucas (2009)

10. Bias in H&R results or interpretation?

- Bias in the methodology?

    - Was SES examined independently of ethnicity?

    - Which parental utterances were included?

    - From the included utterances (parent and child), which words were counted?

    - What other language characteristics counted by H&R might have been problematic, given differences between dialects?

    - Use of standardized tests to measure lg ability?

    - Other possible family-culture differences that might have influenced the results?

10. Bias in H&R results or interpretation?

- Bias in the methodology?
    - SES was confounded with ethnicity
    - Only parental utterances directed to the children were included — cultural differences here?
    - Only words listed in a dictionary of Standard English were counted — dialect differences here?
        - Probably from choosing automatic methods to analyze the large data set (but can we do better?)
    - Past-tense usage — dialect differences here?
    - Cultural differences in willingness to talk with a stranger present?

10. Bias in H&R results or interpretation?

- One test used by H&R was the PPVT-R (from 1981)

- Here's what the National Longitudinal Survey of Youth web site has to say about the Peabody tests, including the PPVT-R (see also the 1992 report):

  - "More than for any of the other assessments, substantial racial and ethnic variations exist for the PPVT[-R]…"
  - "Children in all other areas of the U.S. score better on the PPVT[-R] than do children living in the South."
  - "Black children score lower on the Peabody assessments but not on the other cognitive assessments."

10. Bias in H&R results or interpretation?

- From Rock & Stenner (2005: 19):

  "The PPVT-R finds substantial differences in black-white readiness for kindergarten. [...] But two puzzles have arisen about PPVT-R findings. First, the PPVT-R often finds a larger black-white readiness gap than do other readiness tests. Second, studies using the PPVT-R on different samples of children have produced estimates of the black-white readiness gap that vary relatively widely..."

- Note: The PPVT test was later revised; evidence suggests that the bias situation has been improved

10. Bias in H&R results or interpretation?

- Bias in the interpretation of the results?
    - Consider again: **Correlation** between parental talk and children's language also found within a single social class
    - Other issues in how to interpret the results?

10. Bias in H&R results or interpretation?

- **Correlation is not causation**

    - What if children in certain families are socialized in ways that…

    (a) give rise to "more language" observed in the H&R study, and

    (b) match expectations in school and on standardized tests? (see above on cultural biases)

- Are we safe in assuming that the parent and child language behavior in the study **causes** the different test results and outcomes?

10. Bias in H&R results or interpretation?

- Dudley-Marling & Lucas (2009)

  "Strong claims about the language and culture of families living in poverty based on a sample of 6 Black welfare families living in Kansas City are unwarranted. Nor is there reason to believe that Hart and Risley's welfare families—or other people living in poverty in the United States—share a "culture of poverty," as Hart and Risley and others (see Payne, 2005, for example) assert. The claim that there is a culture of poverty that limits the academic and vocational success of poor people is based on a flawed theory of culture that ignores the rich language and experience possessed by children from all cultural and linguistic groups (Foley, 1997; González, 2005; Jones & Luo, 1999)."

10. Bias in H&R results or interpretation?

- Dudley-Marling & Lucas (2009)

  "Further, assertions about the language and culture of parents and children living in poverty based on a sample of 6 welfare families, all of whom were Black, and 13 professional families, 12 of whom were White, reinforce harmful stereotypes that conflate poverty and race. The reality is that only 25% of the 33 million Americans living below the poverty line are Black (US Census Bureau, 2003)."

11. To consider (for next time)

- What is the structure of this chapter?

5.1 Culture-specific beliefs about language acquisition

(*5.2* The '30-million-word gap')

    5.2.1 Evidence for gramm. rules in young children
    5.2.2 Can language acquisition be deficient?
    5.2.3 Biases and confounds in lg. assessment

5.3 Case study: Do parents correct their children's mistakes? [next time!]

- To what extent is this chapter telling a 'single story'?