Null Subjects and Verbal Agreement in L1 Acquisition

Oiry/Hartman

LINGUIST 397LH

Agreement workshop

- In place of Thursday's class, come to the workshop on agreement hosted by our department!

- http://people.umass.edu/bwdillon/AgreementWorkshop/

- For homework, write a short response to the talk!

The facts

- **Young children (up to around age 3;6) frequently drop subjects, even in non-NS languages:**

(1)   a.   Ate meat   [English]
          b.   Helping Mommy
          c.   Want more apple.
          d.   Tickles me.

(2)   Ikke kore   traktor.   [Danish]
          Not drive.3sg   tractor

(3)   A   tout tout tout mangé   [French]
          has all   all   all   eaten

The facts (cont.)

- **Not imperatives; co-exist with overt subjects:**

(4)   a. Go in there … Foot goes over there.

        b. Fall … Stick fall.

        c. Push Stevie … Betty push Stevie.

        d. Want go get it … I want take this off.

           (subjectless sentences followed by an expanded version, from Hyams 1987)

The facts (cont.)

- **Subject drop is very robust, in contrast with object drop:**

  % of missing subjects and objects in obligatory context (from P. Bloom 1990):

	Adam	Eve	Sarah
Subjects	**57%**	**61%**	**43%**
Objects	**8%**	**7%**	**15%**

Theories of Missing Subjects in Child Language

- Processing theories (P. Bloom 1990)

- Grammatical theories
  - "Mis-set parameter" (Hyams 1987, 1992)
  - "Truncation" (Rizzi 1994, 2000, 2005)

The Processing Theory

- **Classic idea (L. Bloom, 1970):** kids can't produce long sentences because of memory limitations, so they drop constituents.

- **P. Bloom** (no relation)**, 1990:** young kids drop subjects because of processing limitations

- Idea: kids have the grammatical knowledge that English disallows null subjects…

  …. but still drop subjects because of a "processing bottleneck"

The Processing Theory (cont.)

- **Important prediction:** subjects more likely to be dropped when the processing load imposed by the rest of the sentence is higher.

- Bloom analyzed 20 hours of speech from 3 children (Adam, Eve, Sarah). Found significant **direct correlation** between VP length and likelihood of subject drop.

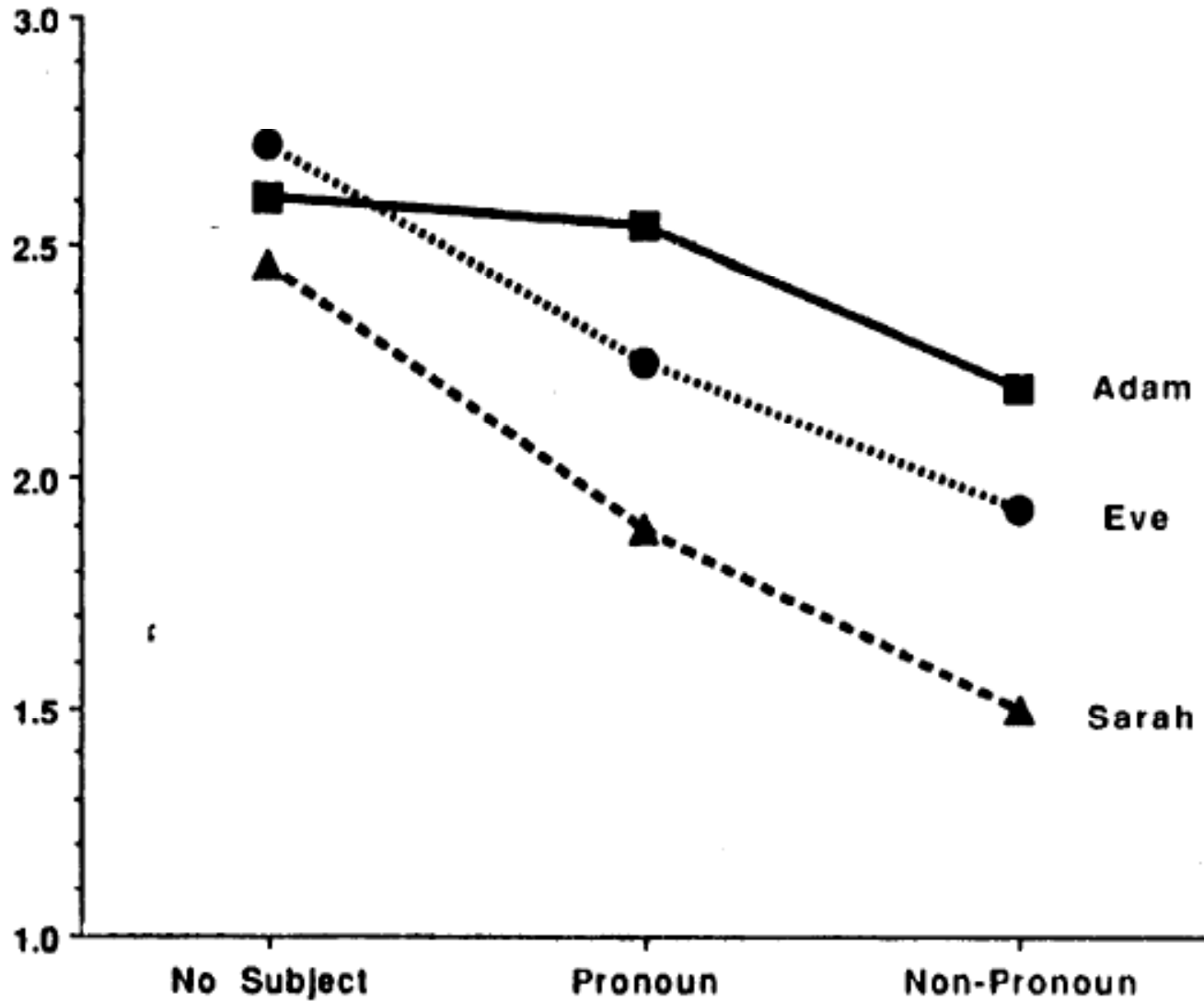# The "heavier" the subject, the shorter the VP:

Figure 1
VP length as a function of subject size for three English-speaking children. (From P. Bloom 1990:fig. 1.)

Mis-set parameter theory

- **Hyams (1987):** connection between subject-drop in child language and subject-drop in the *adult* grammar of "Null Subject" (NS) languages, e.g. Italian:

    pro   ha visto Maria.

    '(S/he) has seen Maria.

- **Idea:** English-learning kids go through a stage where they assume they are learning a NS language.

Some historical context

- **Popular idea at the time:** a correlation between "*pro-drop*"/NS parameter and other syntactic properties (Rizzi 1982, 1986)

- **Problem for Hyam's (1986) theory:** English *lacks* other characteristics of NS languages.
  - rich verbal inflection
  - no expletives
  - possibility of postverbal subjects

- **But, part of a more general problem:** not clear that the cluster of "NS" properties was standing up to cross-linguistic scrutiny.

Morphological Uniformity

- **Hyams (1992):** new idea, based on Jaeggli & Safir's (1989) "morphological uniformity":

  – Jaeggli & Safir (1989): "Null subjects are permitted in all and only **languages with morphologically uniform inflectional paradigms**"

  – Hyams (1992): "An inflectional paradigm is uniform if **all its forms are morphologically complex**, or **none of them are**."

Morphological Uniformity (cont.)

- Correctly predicts that both languages like Italian, and languages like Chinese, allow null subjects:

	Italian		Chinese	
	Singular	Plural	Singular	Plural.
1st	*parl-o*	*parl-iamo*	*shuo*	*shuo*
2nd	*parl-i*	*parl-ate*	*shuo*	*shuo*
3rd	*parl-a*	*parl-ono*	*shuo*	*shuo*

Morphological Uniformity and Subject Drop in Child English

- **Hyams (1992):** subject drop in child English occurs because young children treat English as morphologically uniform (no verbal inflection).

- Fits with independent data showing that children in NS stage also drop verbal inflection!

Verbal Agreement in L1

Basic facts

- Children frequently produce untensed verb forms in root clauses (Cazden 1968)

- Papa have it (Eve, 1;6)
- Cromer wear glasses (Eve, 2;0)
- Fraser not see him (Eve, 2;0)

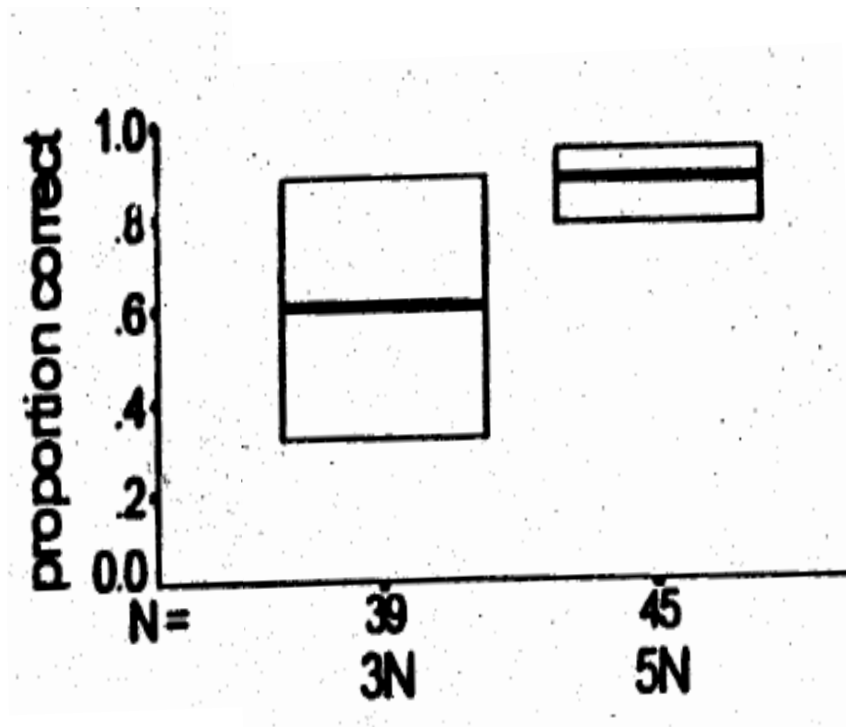"Root Infinitives"/"Optional Infinitives"
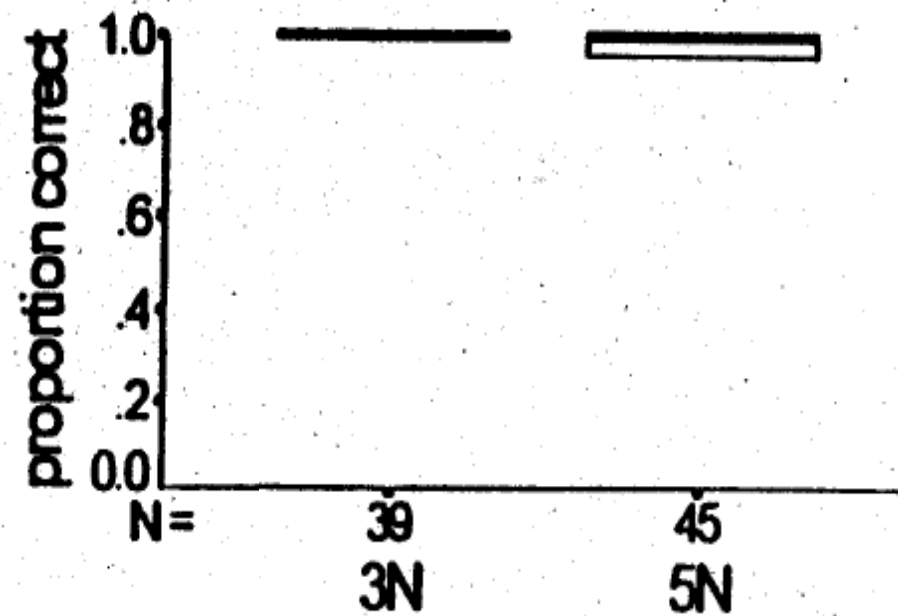
Not pronunciation

- A phonological problem?

- Probably not. Children successfully pronounce [s] elsewhere, and English-speaking children have no trouble with plural [s] from the earliest ages:

Not pronunciation

Children's spontaneous production of 3rd person singular -s on verbs:

Children's spontaneous production of plural -s on nouns:

Not just "simpler" forms

- Does it reflect a preference for "simpler" (root or zero-affixed) forms?

- Probably not. OI stage in other languages with non-zero infinitive morpheme:

Not just simpler forms

German: a. Thorsten das haben.
                         Thorsten that have-inf.

Dutch: b. Papa   schoenen wassen.
                         Daddy shoes   wash-inf.

French: c. Michel dormir.
                         Michel sleep-inf.

Swedish: d. Jag också hoppa   där å där.
                         I   also   hop-inf. there and there

"Surface omission"

- Maybe OI is a "surface" phenomenon - OI forms are just phonological variants of finite forms.

- Idea: kids' grammar is adult-like; they know that root clauses require finite forms. OIs are syntactically finite forms, just pronounced without inflection.

- Prediction: OIs behave otherwise syntactically like finite forms.

Against "surface omission"

- OIs show the syntax of infinitives

- In many languages, finite and non-finite verbs are distinguished by word order.

- French: verb placement w/r/t negation
- Germanic: V2 phenomena

Finiteness in Adult French

- Finite verbs precede negation (PAS):

  (1) Jean (n') aime PAS Henri
      John   likes   not   Henry

- Non-finite verbs follow negation:

  (2) (Ne) PAS sembler heureux…
           Not to.seem happy…

- French requires finite Verbs to move to I

- (Of course, adult main clauses cannot only have infinitive – they need Tense)

Root Clauses in Child French
(Pierce 1992)

a. Pas manger la poupee

    not eat.**inf** the doll

b. Patsy est pas la-bas

    Patsy is.**3s** not down there

c. Pas tomber bebe

    not fall.**inf** baby

d. Pas attraper une fleur

    not catch.**inf** a flower

e. Marche pas

    Walks.**3s** not

f. Trouve pas

    Finds.**3sg** not

Root Clauses in Child French
(Pierce 1992)

	Tensed	Untensed
PAS verb	11 (5.5%)	77 (97.5%)
Verb PAS	185 (94.5%)	2 (2.5%)

Children's grammars distinguish appropriately between
tensed and untensed verbs with respect to verb movement!

Finiteness in Adult Dutch

- Dutch is a V2 / OV language (~German)

  – Finite verb in second position
  – Nonfinite verb in last position
  – Underlying SOV order

(1)   Morgen   gaat   Saskia een boek kopen
     Tomorrow goes.**3sg** Saskia   a   book buy-**INF**
     'Saskia is going to buy a book tomorrow'

Root Clauses in Child Dutch
(Wexler, Schaeffer, and Bol 2004)

	V1/V2 position	Vfinal position
Finite verb	1953 (99%)	11　(2%)
Non-finite verb	20　(1%)	606 (98%)

- 47 normally developing Dutch children (1;7-3;2)
- V2 parameter set correctly at earliest observed age
- verbs placed correctly at the earliest observed age.