Why is it ~~better~~ / reasonable to treat PL as introducing a presupposition in acquisition?

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Outline

- The problem: How do we acquire the knowledge that a sentence has a presupposition?
- Definiteness
  - Semantic and pragmatic properties
  - What do we know about the acquisition of definiteness
- Number
  - Semantic and pragmatic properties
  - What we know about the acquisition of number morphology
- Acquisition steps: the beginnings of a proposal

Are presuppositions universal?

'All languages allow their speakers to express aspects of meaning which

a. are not asserted, but somehow taken for granted,

b. impose some constraints on when an utterance is felicitous, and

c. project through certain entailment-canceling operators.'

(von Fintel & Matthewson 2008)

Presuppositions are hard for children

Presuppositions are considered hard for children and are blamed for slow mastery of various linguistic properties.

Learning presuppositions:

- The learner has to determine that some part of the meaning of a sentence is not asserted.
- The learner has to identify the presupposition trigger and what it presupposes.
  - Can we presuppose that the speaker is not only saying the truth but is also nice?
  - Can we presuppose that the speaker is tall?
- The learner has to meet the felicity constraints for that particular presupposition.

On the felicity constraints

Common ground and timing (Chemla 2007)

> A sentence with presupposition p is felicitous if p becomes **common belief** early on after the utterance of the sentence.

Maximize presupposition (Heim 1991)

> Among a set of alternatives use the felicitous sentence with the strongest presupposition.

(1) #John has interviewed **a** father of the victim.

(2) #John had tea and I had tea yesterday.

The case of the definite

Acquisition, potential explanations and potential problems with the explanations

The king of France is bald.

- Regardless of the utterance context,

  the king of France is bald

  expresses that proposition which is
  - **True** in the context where there is one king of France and he is bald.
  - **False** in the context where there is one king of France and he is not bald.
- **Existence presupposition**
- Neither true nor false if there is no king of France.
- **Uniqueness presupposition**
- Neither true nor false if there is more than one king of France.

Examples that work perfectly

(1) a. Two children came in. #The child sat down.

b. Three children came in. #The children (2) sat down.

(2) John climbed the highest mountain in Tibet.

Children's (mis)use of definites
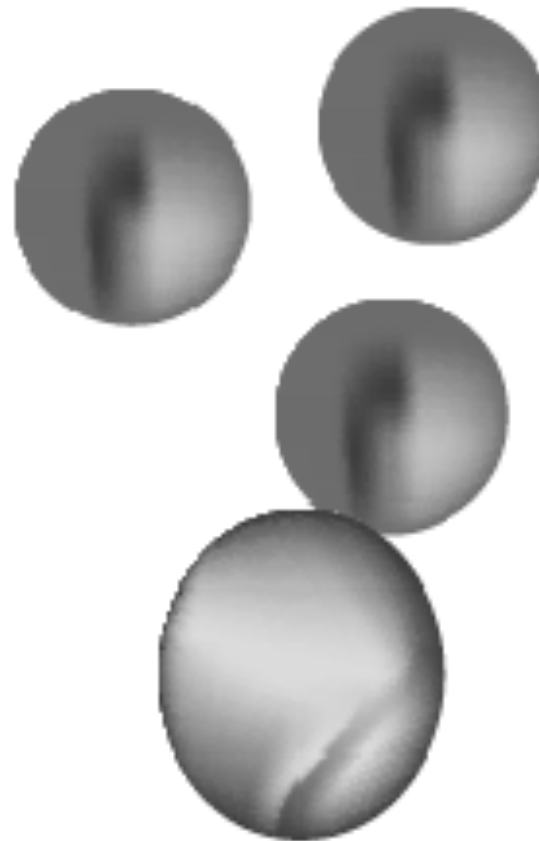
- Children often misuse definite determiners.

  Karmiloff-Smith/Maratsos

- Adult
  - Give me the yellow ball.
  - Give me a blue ball.

- Child
  - Give me the yellow ball.
  - Give me the blue ball.

Accounting for the uses of the definite in children

Karmiloff-Smith

 Children go through an egocentric stage.

Wexler

 Children lack the Maximality Presupposition of the definite determiner.

Matthewson et al.

- Parametric difference between languages

 English-acquiring children go through a 'Salish period' in their determiner system. These children do not yet know that *the* forces the accessing of a referent in the common ground.

A question

How does a child go from a definite with no uniqueness presupposition to a definite with uniqueness?

Positive data?
Careful, the input is messy.

(1) Please pick up *the children* from school.

(2) *The Americans* voted for *the Americans.*

(3) Meet me at *the corner* of North Bridge and Princes street.

(3) Can you please open *the window*!

(4) Bill hit Mary *in the arm.*

[SG] carries a presupposition
or [PL] carries a presupposition

Sauerland (2005, 2007)

de Swart & Farkas (2003)

Plurals: the Classical view

Noun

a⊕b⊕c
a⊕b a⊕c b⊕c
a b c

PLURAL

a⊕b⊕c
a⊕b a⊕c b⊕c
a b c

SINGULAR

a⊕b⊕c
a⊕b a⊕c b⊕c
a b c

Where is plural interpretable?

- On D?
- On N?
- On D and on N?
- On NumP?
- On ClP?

All agreement contributes a presupposition

- Sauerland 2005 (English and German)
  - Singular is the marked member *a dog*: Plural has no inherent semantics and is interpreted by implicature *dogs*.
- Farkas and de Swart 2003 (Hungarian)
  - Plural is the marked member Ns. Singular is interpreted as a singleton by default on N.

Sauerland 2005
Weak theory of the plural

(1) Do you have children? Yes, one.

(2) Every boy should bring his sisters to the party.

More-than-one interpretation is an implicature.

- All number morphology is agreement
- Number is interpreted in a projection above DP φP
- In the φP, [SG] is associated with a presupposition that the DP is atomic.
- In the φP, [PL] is not associated with any presupposition.

Farkas & de Swart 2003

- #Do you have masters' degrees?
- PLURAL *"contributes a presupposed discourse referent and predicates plurality of it."*
- SINGULAR has no presupposition associated with it.

A prediction about children's behavior

- If children are bad at presuppositions then they should do badly at number distinctions in both production and comprehension.

- Sauerland

- If they don't know the presupposition associated with the [SG] or [PL], then there should be lots of errors.

Definites and plurals

- Give me **the frogs** next to the barn.
  - The maximal set of frogs next to the barn
  - The [PL] is interpreted as >than one by implicature

- Give me **the frog** next to the barn.
  - The maximal singleton frog next to the barn
  - A singleton frog next to the barn
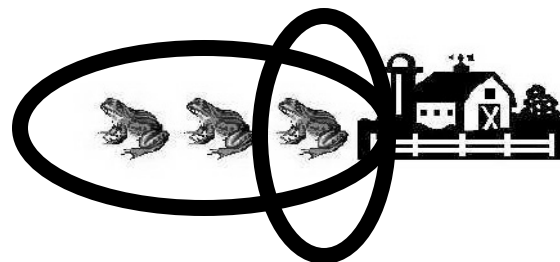
What we know about acquisition of plural morphology in the DP

Plural vs. singular

- Production
  - No (mis)-use reported for English and MexSpanish (by age 5).
- Comprehension
  - Adult like in most cases by 5.
  - Problems with generic sentences.

Attempting a solution:
Building on Matthewson et al.

We don't 'grow' presuppositions on certain functional elements

Some things we probably agree on

- Functional elements form paradigms.
  - D {a, the}
  - T {past, non-past}
  - C { factive, non-factive}
  - # {singular, plural}
- The choice of one member vs. some other member allows inferences to be made of the inadequacy of the other form.
  - Anti-presuppositions
  - Anti-assertions

Making a stronger assumption to simplify the learner's task

- In C, T and D, one member of the pair, if there is a pair, carries a presupposition.
- The task is now simpler:
  - to map pieces of morphology to syntactic features;
  - to figure out the members of the set that compete;
  - to figure out which is the marked member;
  - control for felicity conditions.

Making some assumptions about the functional domain

- For each C, D, T there is a narrow set of what they each could presuppose and that is given universally.
  - D elements will
    - have a uniqueness presupposition or not
    - Person presupposition or not
  - T elements will have now/not now presuppositions
  - C elements will presuppose that their complements are true or not.

Can reconcile acquisition of definites with acquisition of number?

Acquisition of grammatical number in (at least) three steps:

Step 1: Distributional learning

(1) Two/three/many/lots of dogs/*dog

(2) A/one/every/each dog/*dogs

Step 2: Syntactic bootstrapping

- Rough meaning of certain determiners is learned and they systematically correlate with plural morphology.
- Map form(s) to syntactic feature.

Step 3 (&4): Mastery of the semantic properties

- Mastery of the ability to deal with presuppositions, domain restrictions and implicatures.

Acquisition of the definite in three steps

Step 1: Distributional learning

   (1) the dogs/*eat/of

Step 2: Syntactic bootstrapping
Two of the dogs/*dogs
The two/many pictures

Step 3 (&4): Mastery of the semantic properties

Mastery of the ability to deal with domain restrictions and implicatures.

Conclusion

- We can associate the delay with the definite to the fact that there is no way to figure out its properties without going to the context.

- Number co-occurrence with certain quantifiers helps.

- Evidence:
  - if there are no reliable distributional cues, learning is delayed (Miller 2007, Miller and Schmitt, to appear)

Acknowledgements