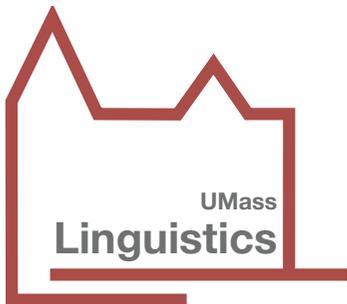


# One Too? The Meaning of Plural Morphology in English

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Jan Anderssen · UMass Linguistics

joint work with Uli Sauerland and Kazuko Yatsushiro



# roadmap

- \* What linguists do
- \* The 'strong theory' of the plural
- \* Problems for the strong theory
- \* The 'weak theory' of the plural
- \* Implicatures / weak meanings go strong
- \* Evidence for implicatures in plural meanings

# what linguists do

- \* Observing (linguistic) behavior of language users
- \* Model the language faculty



# today's menu

- \* meaning of plural / singular distinction in English count nouns

# things to be ignored

[s] (as in *cats*)

[z] (as in *dogs*)

[ez] (as in *houses*)

[ ] (as in *fish*)

# things to be ignored

[s]

(as in *cats*)

[z]

(as in *dogs*)

[ez]

(as in *houses*)

[ ]

(as in *fish*)

Plural

# things to be ignored

Singular

[s]

(as in *cat*)

[z]

(*dog*)

[ez]

(*house*)

[ ]

(or *fish*)

Plural

# things to look at

- \* meaning of the singular and plural morpheme

# more particular

- \* *dog.singular* and *dog.plural* have a common element: dog (without singular or plural)

think of its meaning as your favorite  
“dog”-meaning

- \* this combines with singular or plural
- \* what do singular and plural contribute to the meaning

# scenarios & sentences

- \* judging sentences in scenarios

dog!

\* dog



dog!

\* dog



dog!

\* dog



dog!

\* dog



# dogs!

\* dogs



# dogs!

\* dogs



# dogs!

\* dogs



dogs?

\* dogs?



# the 'strong theory'

- \* [Singular] one
- \* [Plural] more than one /  
two or more

# Why a 'weak theory'?

- \* If we have a straightforward hypothesis about the meaning of the plural morpheme that corresponds to our intuitions, then why change it?

# no monkeys

\* There are no  
**two or more** monkeys  
in this  
picture.



# no monkeys

There are no monkeys in this picture

≠

There are no **two or more** monkeys in this picture

# soccer

- \* Every boy should bring his two or more sisters.



Every boy should bring his sisters.

≠

Every boy should bring his **two or more**  
sisters

# polite plurals

\* Could you maybe move over a bit?

\* Könnten Sie wohl  
↓  
Could they maybe  
etwas rücken?  
a bit move over



# polite plurals

- \* Thou speak'st in better phrase and matter than thou didst.
- \* Methinks you're better spoken



# polite plurals

- \* **Thou** speak'st in better phrase and matter than **thou** didst.
- \* Methinks **you're** better spoken



# polite plurals

Could you.pl please move over a bit?

≠

Could you **two/all** please move over a bit?

# the 'weak theory'

- \* [Singular]: one
- \* [Plural]: any number

# the 'weak theory'

- |               |            |             |
|---------------|------------|-------------|
|               |            | strong      |
| * [Singular]: | one        | one         |
| * [Plural]:   | any number | two or more |

but...

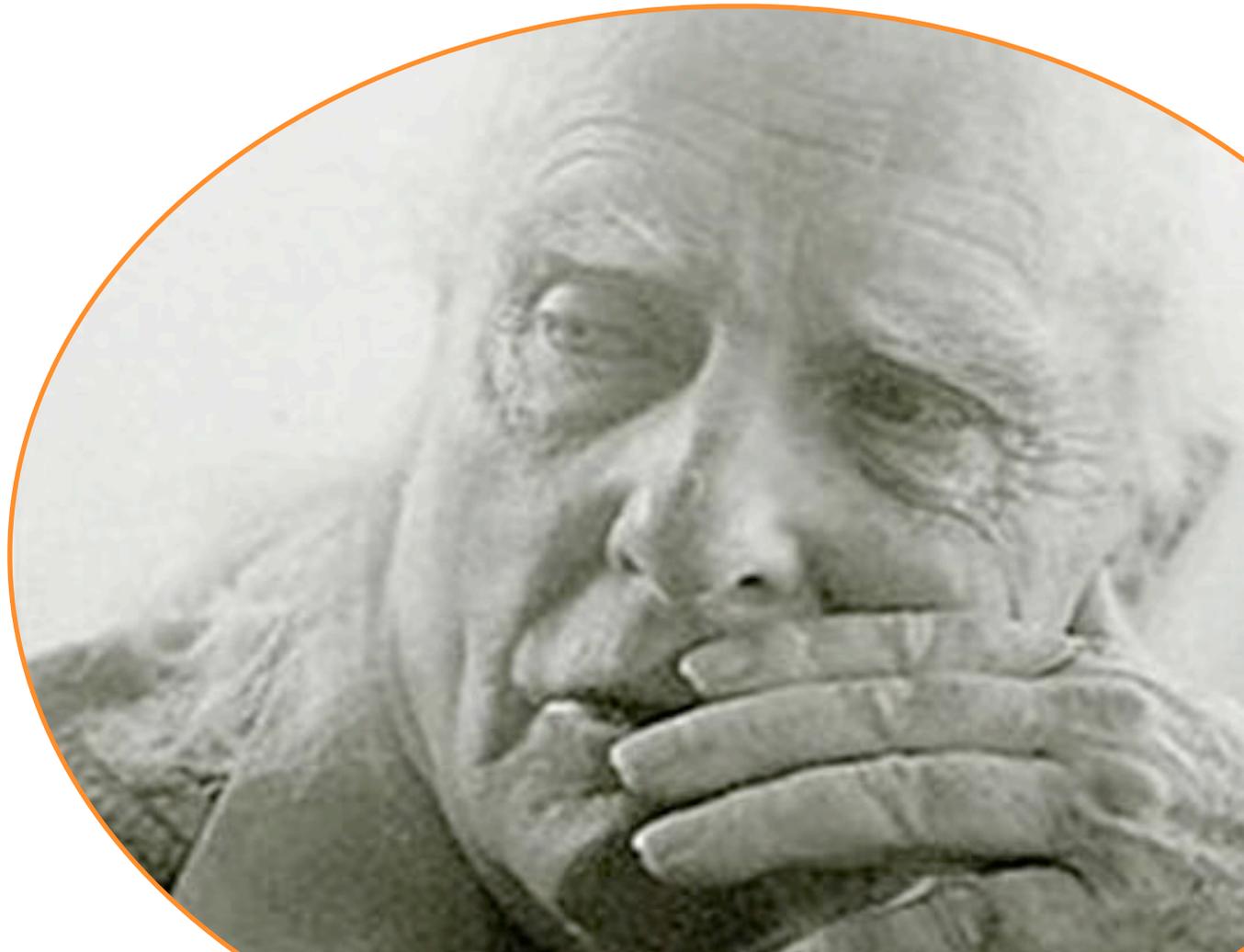
\* dogs?



a puzzle



**weak meanings go strong**



H. P. Grice

# implicatures [preliminaries]

- \* (scalar implicatures)
- \* *X entails Y*: whenever *X* is the case, then *Y* is necessarily the case as well

# implicatures [preliminaries]

\* Earlier I met some of my students.

\* Earlier I met all of my students.

more informative

# implicatures

Why didn't she say that she met all of her students? If it was true, it would have been more informative, and she surely would have know if it was true... I guess it isn't true then.



# implicatures

“Earlier, I met  
some of my students”



She met some, but not all, of  
her students earlier.



# implicatures

\* Earlier I met some of my students.



\* Earlier I met all of my students.

more informative

# implicatures

more informative

\* If you have fulfilled some of the requirements,  
you may come back.

\* If you have fulfilled all of the requirements,  
you may come back.

# implicatures

- \* If you have fulfilled some of the requirements, you may come back.
- \* Certainly, if you have fulfilled all of the requirements, you may come back as well.
- \* no implicature
- \* ~~If you have fulfilled some, though not all, of your requirements, you may come back.~~

# for plurals

- \* under the weak theory of the plural, the singular is more informative
- \* “Grice corollary”  
you should use the singular,  
unless it is blocked

# blocking the singular...

- \* when the intended referent is plural



# blocking the singular...

- \* if some boys have more than one sister.



# blocking the singular...

- \* if the singular form is blocked for politeness reasons



- \* nothing blocked the singular
- \* strengthening happens
- \* that is, using the plural triggers a *not singular* implicature



# kids and implicatures

- \* computing implicatures is something that kids master late
- \* if plurals depend on implicatures, they will be hard if not impossible for kids

# help the puppet

- \* “Does a dog have tails?”
- \* 14 mono-lingual children 3;4 - 5;9  
13 questions, among them 5 target items



# help the puppet

	adults	kids
* “Does a dog have tails?”	no	yes

\* In test items, kids showed non-adult behavior 96% of the time, while in controls only 3% of the time

( $p < .00001$ )

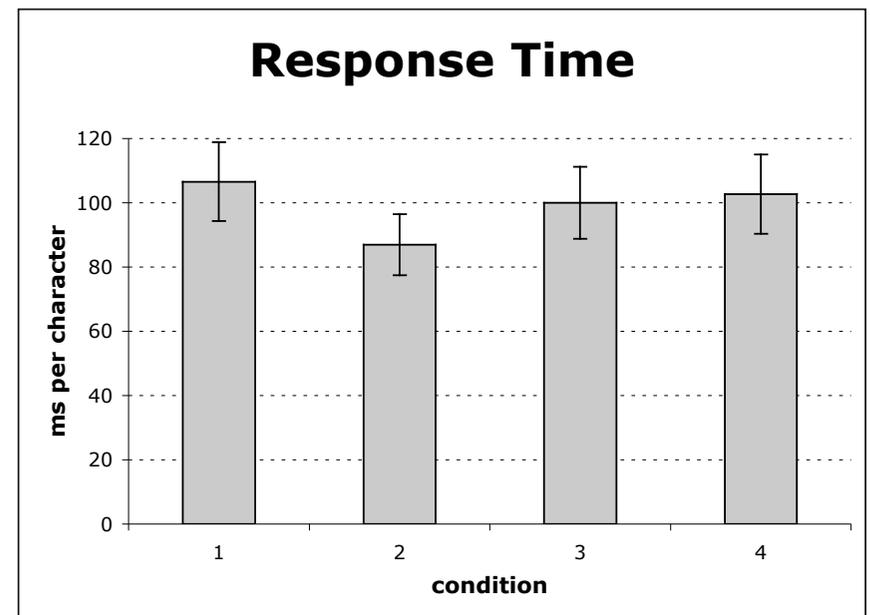
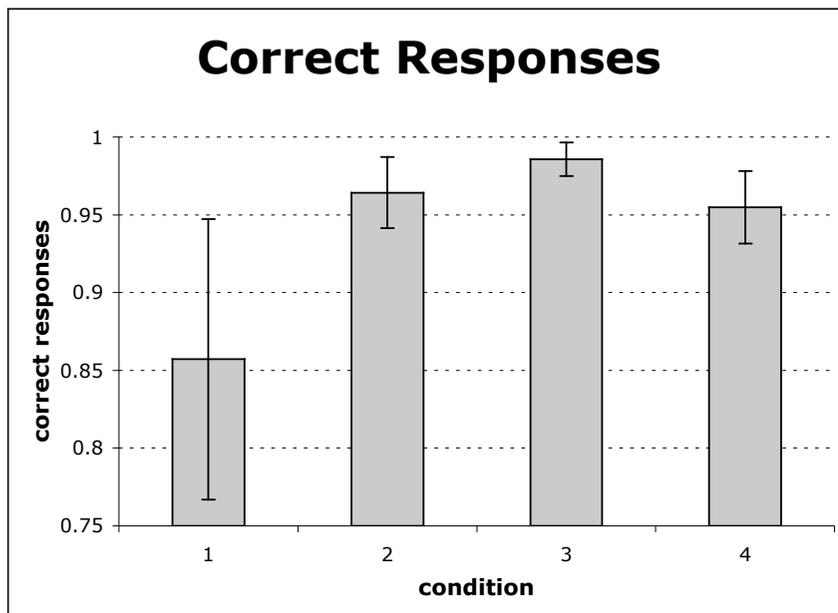


# adults and implicatures

- \* if something is impossible for kids, it might be hard for adults...
- \* similar questions, timed yes/no response

# adults and implicatures

- 1 Does a dog have tails?
- 2 Does a dog have two tails?
- 3 Does a goat have horns?
- 4 Does a goat have two horns?



**you made it!**



Thank you!