

LING 97r:
Psycholinguistics of
Scalar Implicature

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Logistics

Tuesdays 3-5(ish) PM

6 Meetings:

1: 2/3	Intro
2: 2/10	Presentation or Reading Response 1
3: 2/17	Presentation or Reading Response 2
4: 2/24	Presentation or Reading Response 3
5: 3/3	Presentation or Reading Response 4
6: 3/13	Outline of Final Paper

Final paper due ???

Policies

30% Attendance & Participation

40% Reading Response/Presentation

30% Final Paper

Policies

30% Attendance & Participation

40% Reading Response/Presentation

30% Final Paper

- Meet with me at least once to pass
- Meet with me every week to make up lost points

Reading Response/Presentation

Presentation

- ~20 min
- Can be done in groups
- Thorough summary, interpretation

Response Paper

- 3-5pp
- No late submissions
- Criticism, interpretation, synthesis, expansion

Reading Response/Presentation

Presentation

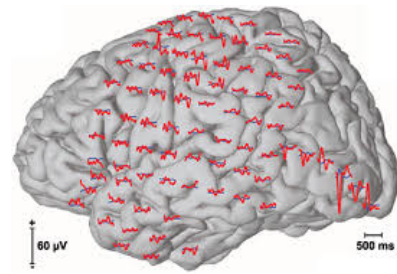
- ~20 min
- Can be done in groups
- Thorough summary, interpretation

Response Paper

- 3-5pp
- No late submissions
- Criticism, interpretation, synthesis, expansion

If you miss an assignment, you can write a make-up reading response (6-8pp)

Materials



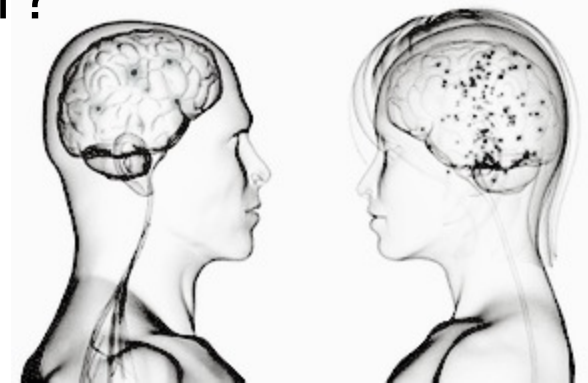
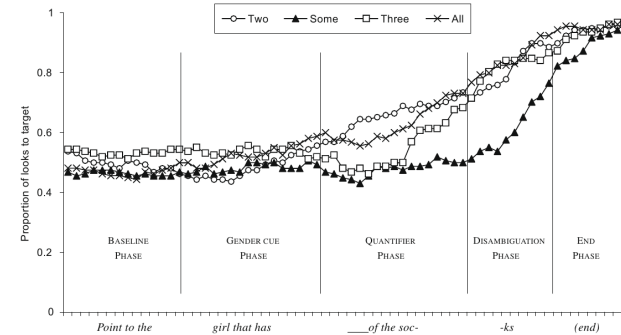
A tiny but representative smattering of experimental papers in psycholinguistics:

- Relationship between theory and evidence
- Methods (truth value judgement, reaction time, eye-tracking, ERP)
- Experimental research



What We Will Cover

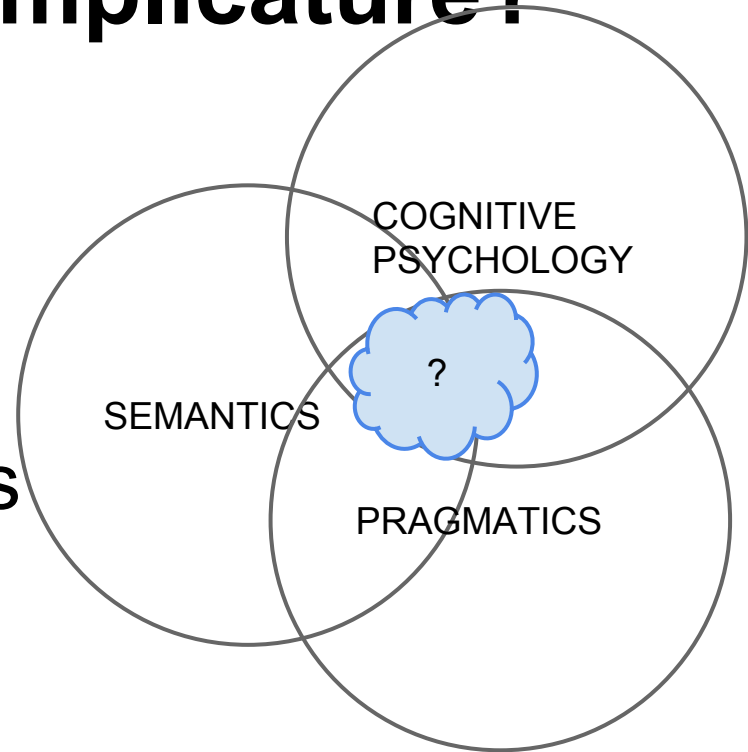
- What is scalar implicature?
- When does it happen? (Modular vs. incremental)
- How does it happen? (Automatic vs. deliberate/optional)
- How widespread is it? (Numerals?)
- When in development does it appear?
- How social is it? (Theory of mind?)



Why Study Scalar Implicature?

It is...

- well-defined
- [research is] well-developed
- completely mysterious
- at many interfaces
 - semantics
 - social reasoning
 - conceptual structure



Why Experimental Methods?

a) The questions require it:

- *When* do implicatures happen? (ms scale)
- *How* do they happen? (Memory, modularity)

b) Linguistics is changing

- Ancestors: Philosophy, philology, theoretical computer science
- Influences: Social sciences (psychology, sociology), physical sciences (acoustics), applied math & CS (corpus research)



Intermission

5 minutes:

1. Name
2. Year in school
3. What interests you most about language?
4. What, if any, semantics/pragmatics or psycholinguistics/cognitive psychology courses have you taken?
5. Least favorite fictional character & why



Division of Labor

Division of Labor

Pragmatics

Semantics

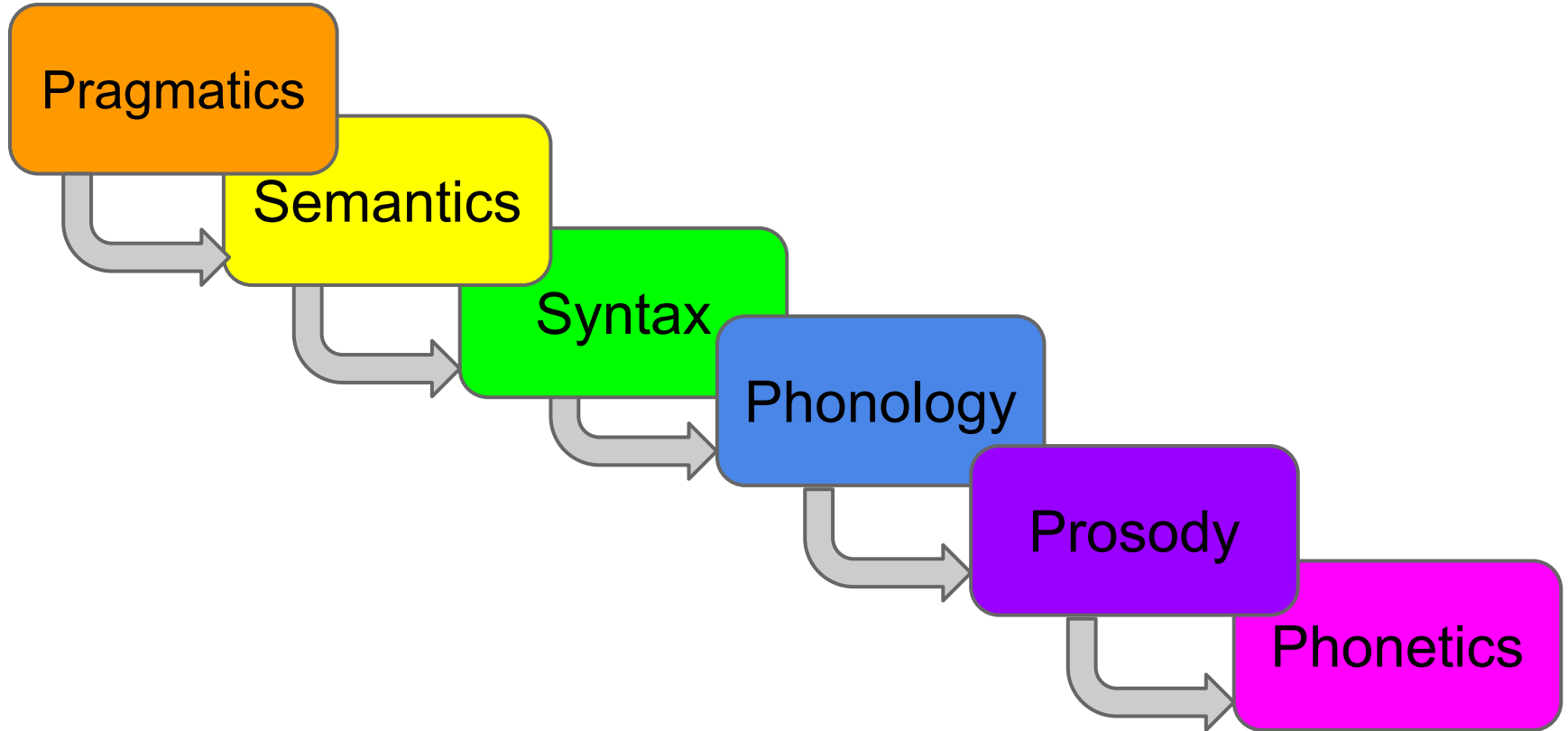
Syntax

Phonology

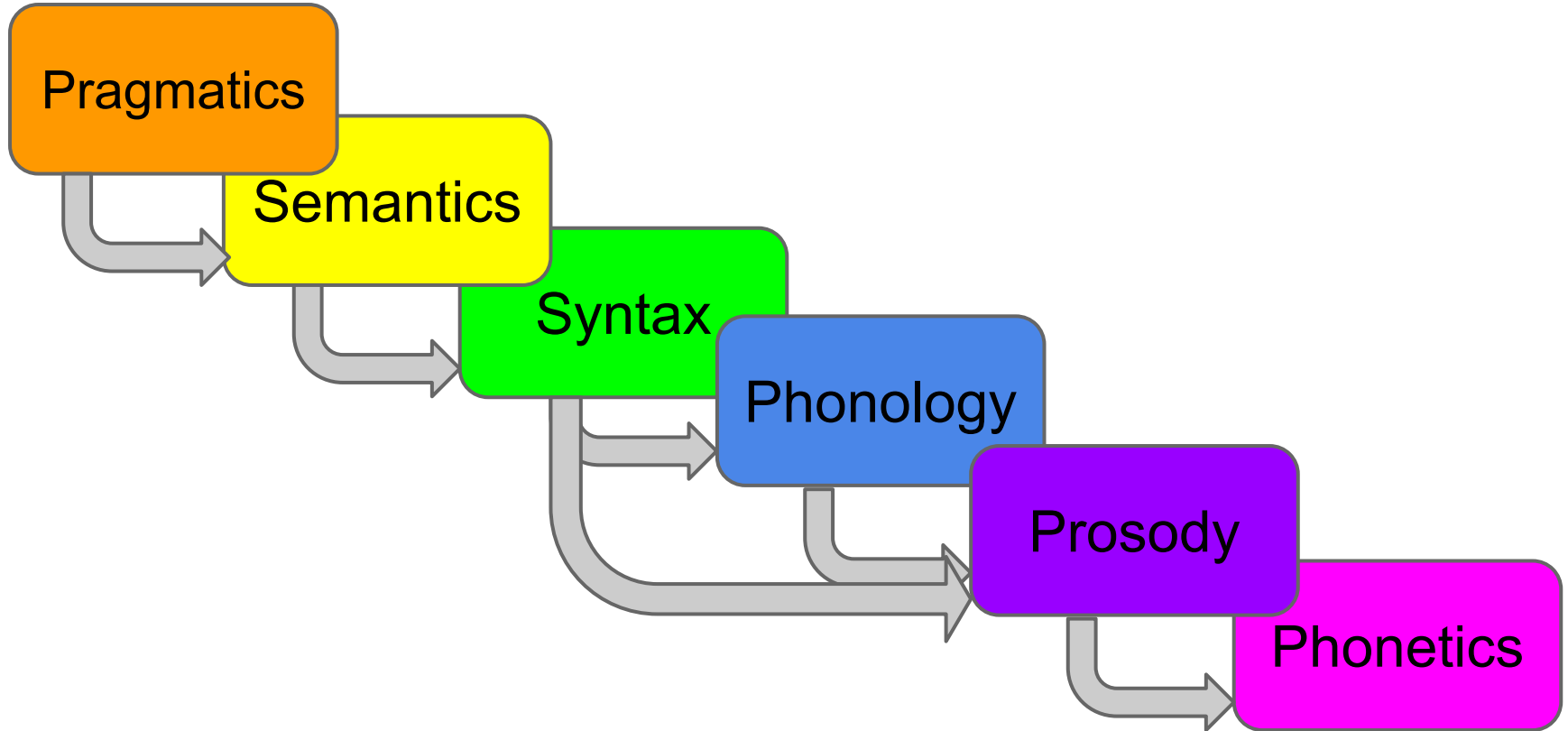
Prosody

Phonetics

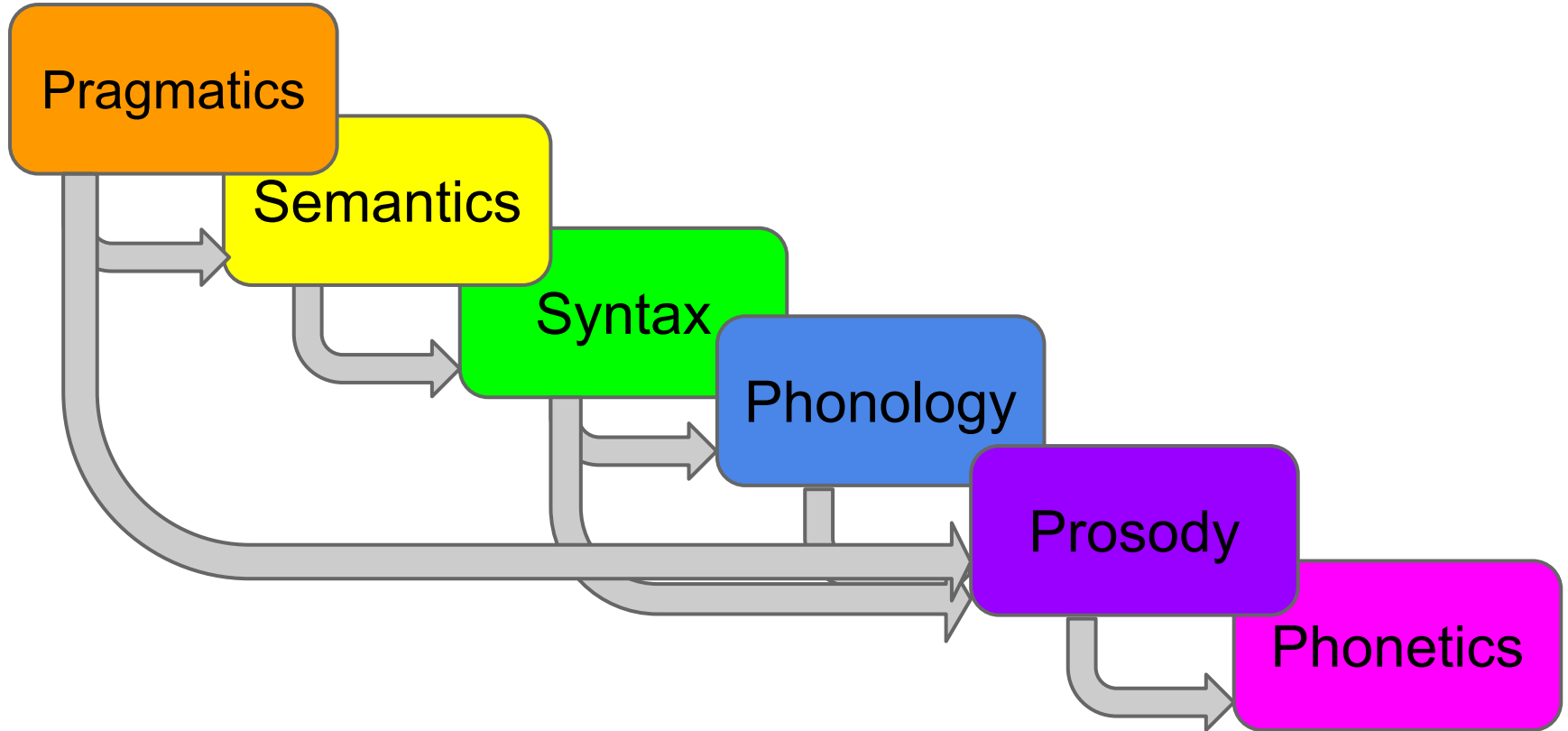
Division of Labor



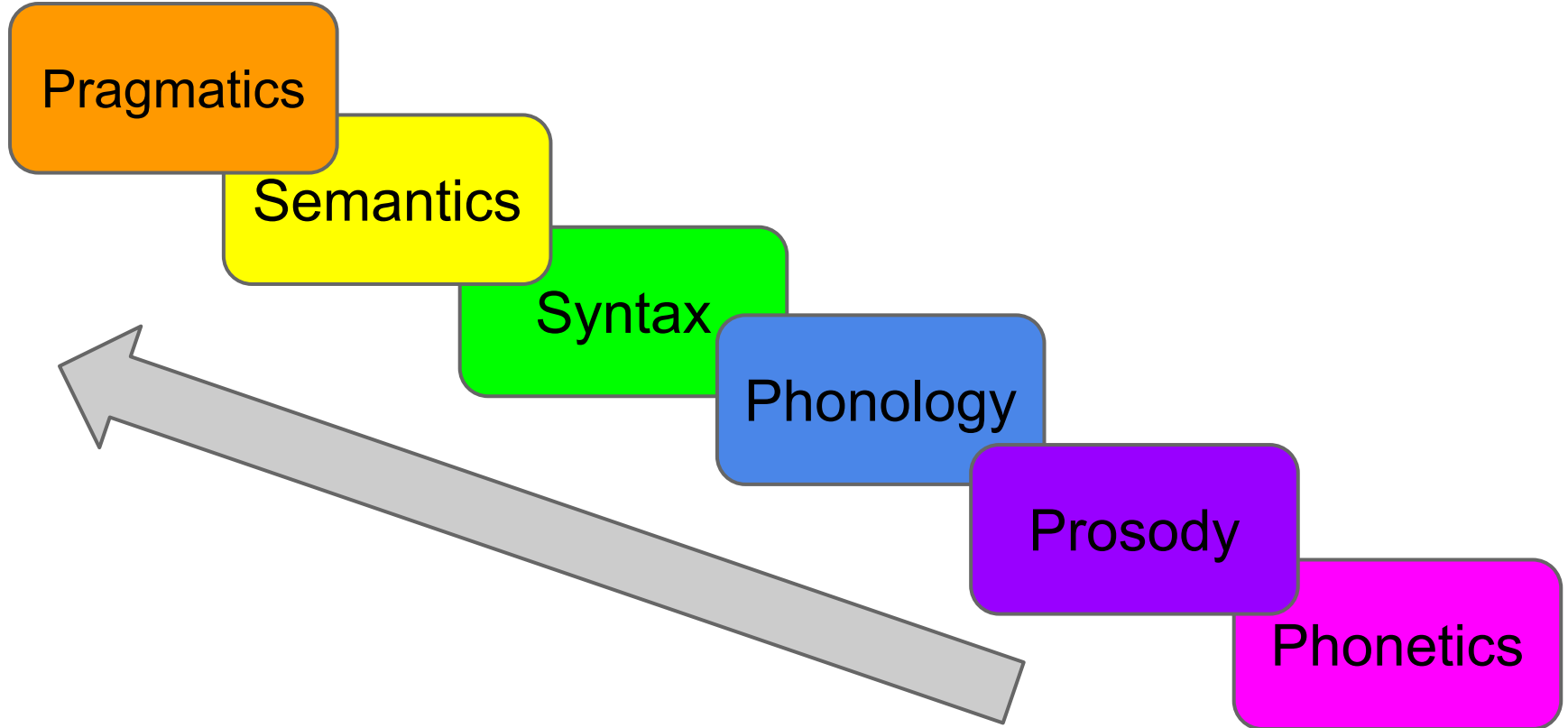
Division of Labor



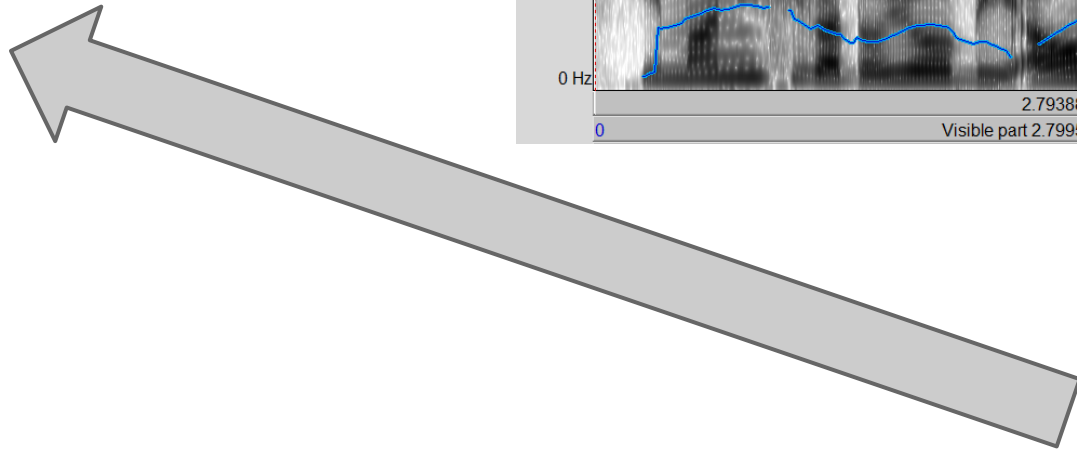
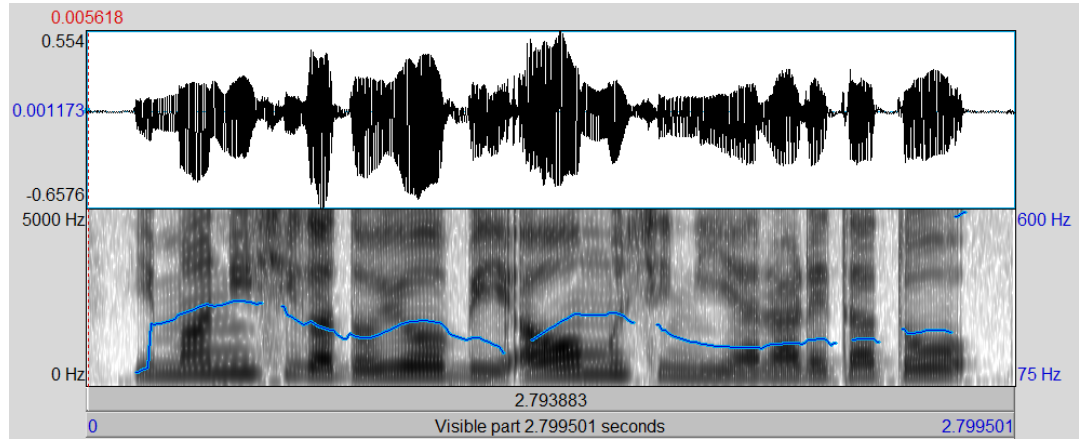
Division of Labor



Decoding a Linguistic Message



Decoding a Linguistic Message



Phonetics

Decoding a Linguistic Message

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

I saw him yesterday.

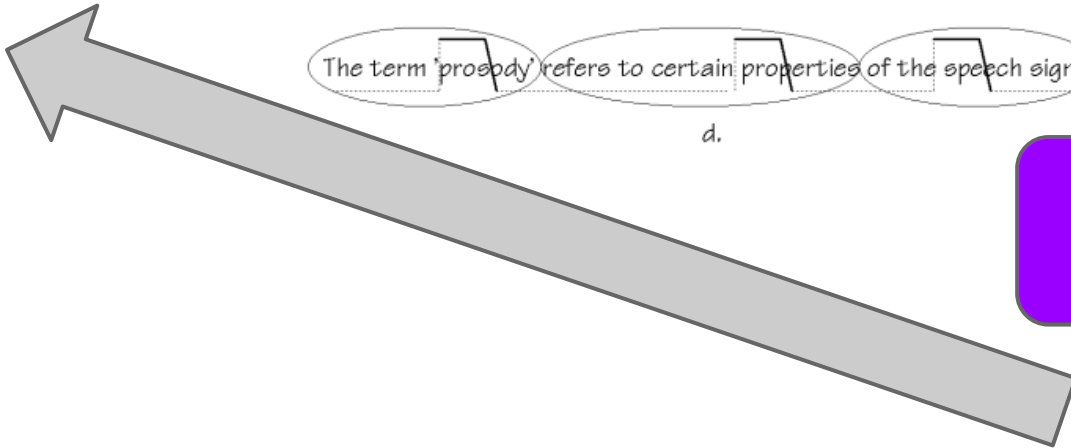
a.

b.

c.

The term 'prosody' refers to certain properties of the speech signal.

d.

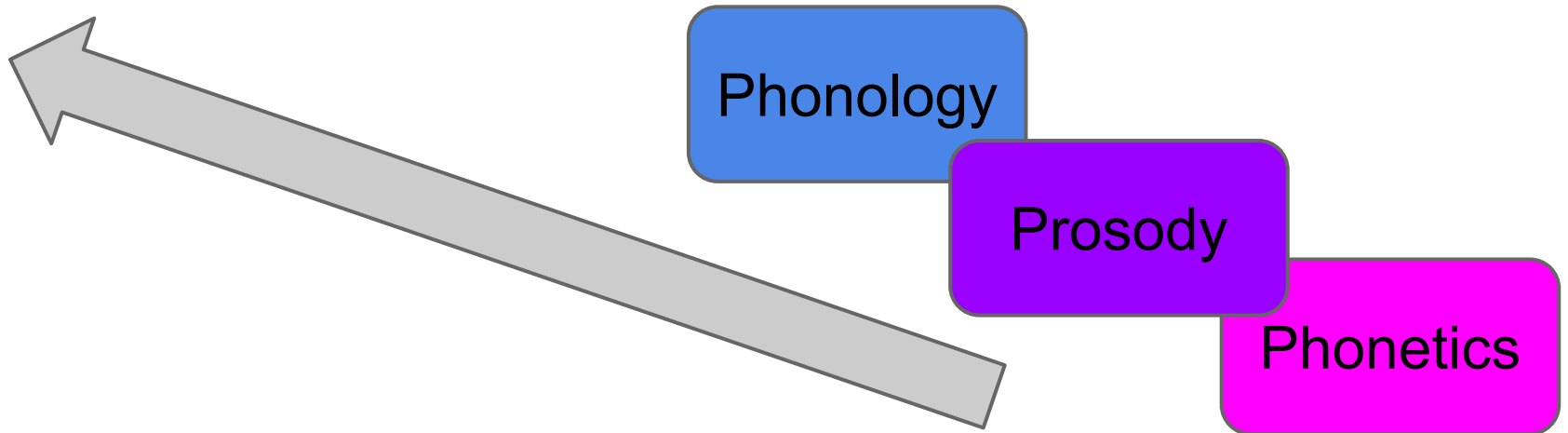


Prosody

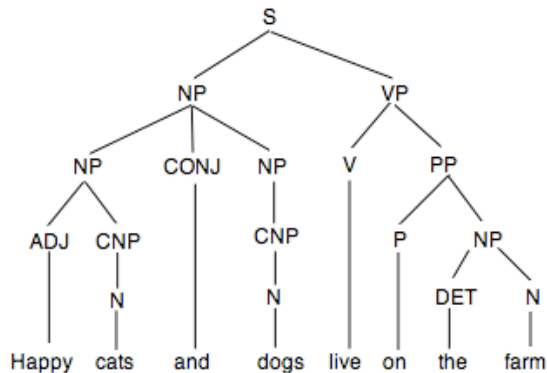
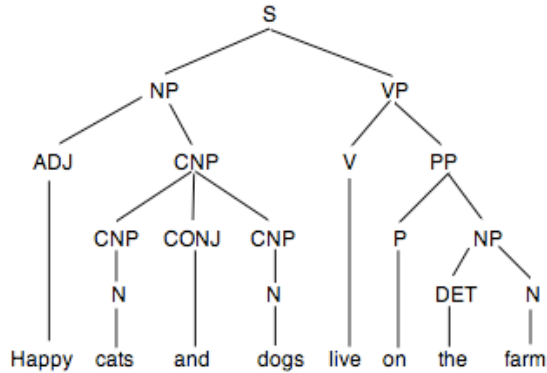
Phonetics

Decoding a Linguistic Message

$\left[\begin{array}{l} + \text{stop} \\ + \text{consonant} \\ + \text{alveolar} \end{array} \right] \rightarrow [r] / \left[\begin{array}{l} + \text{vowel} \\ + \text{stressed} \end{array} \right] \text{ ____ } \left[\begin{array}{l} + \text{vowel} \\ - \text{stressed} \end{array} \right]$



Decoding a Linguistic Message



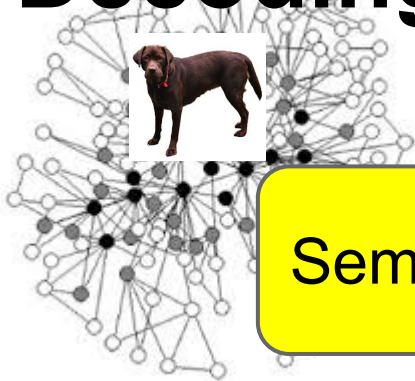
Syntax

Phonology

Prosody

Phonetics

Decoding a Linguistic Message



Semantics

Syntax

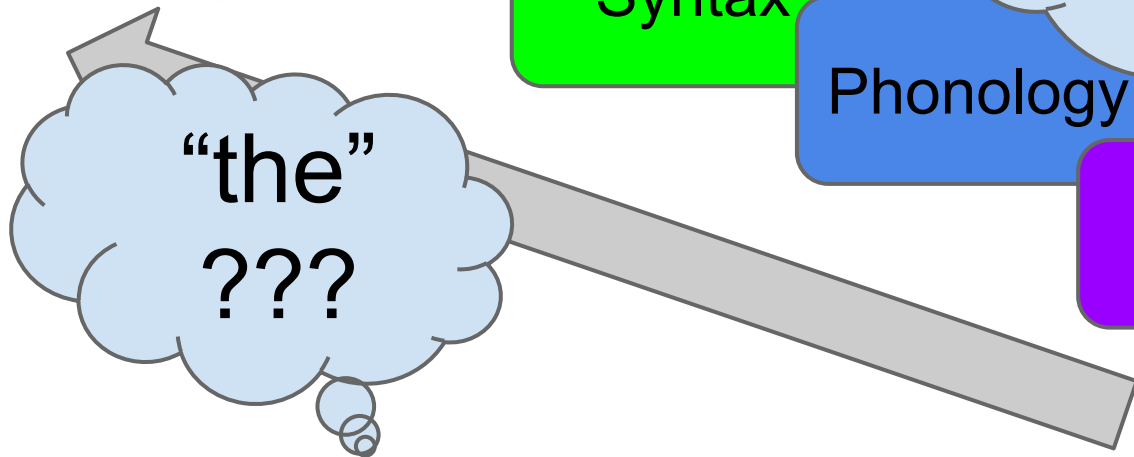
Phonology

Prosody

Phonetics

“seven”
???

“the”
???



Decoding a Linguistic Message

Pragmatics



Brrr.... It's
cold in here...



Implicature

Entailment

- Logical consequence
- Not optional
- Not cancellable

vs. Implicature

- Optional
- Cancellable
- Not part of literal meaning

Implicature

Entailment

- **Logical consequence**
- **Not optional**
- **Not cancellable**

vs. Implicature

- **Optional**
- **Cancellable**
- **Not part of literal meaning**

“I ate pepperoni pizza.”

----->

I ate pizza.

“John had salad and Bill had soup.”

----->

John had salad.

Implicature

Entailment

- Logical consequence
- Not optional
- Not cancellable

vs. Implicature

- **Optional**
- **Cancellable**
- **Not part of literal meaning**

“I did some of the homework.”

----->

I didn't do all of the homework.

“Sally's haircut is... interesting.”

----->

Sally's haircut is bad.

Implicature

Entailment

- Logical consequence
- Not optional
- Not cancellable

vs. Implicature

- **Optional**
- Cancellable
- Not part of literal meaning

“I did some of the homework.”

----->

...but we don't know if I did it all.

“Sally's haircut is... interesting.”

----->

Her haircut could be good or bad.

Implicature

Entailment

- Logical consequence
- Not optional
- Not cancellable

vs. Implicature

- Optional
- **Cancellable**
- Not part of literal meaning

“I did some of the homework.”

-----> ~~I didn't do all of it~~

“...in fact, I did it all.”

“Sally's haircut is... interesting.”

-----> ~~Her haircut is bad~~

“...in fact, I kinda like it!”

Special Case: Scales

“I did some of the homework.”

-----> I didn't do **all** of the homework

Special Case: Scales

“I did some of the homework.”



NONE, VERY LITTLE, A LITTLE, **SOME**, A BUNCH, MOST, ALMOST ALL, ALL

- > I didn't do **a bunch** of the homework
- > I didn't do **most** of the homework
- > I didn't do **almost all** of the homework
- > I didn't do **all** of the homework

Special Case: Scales

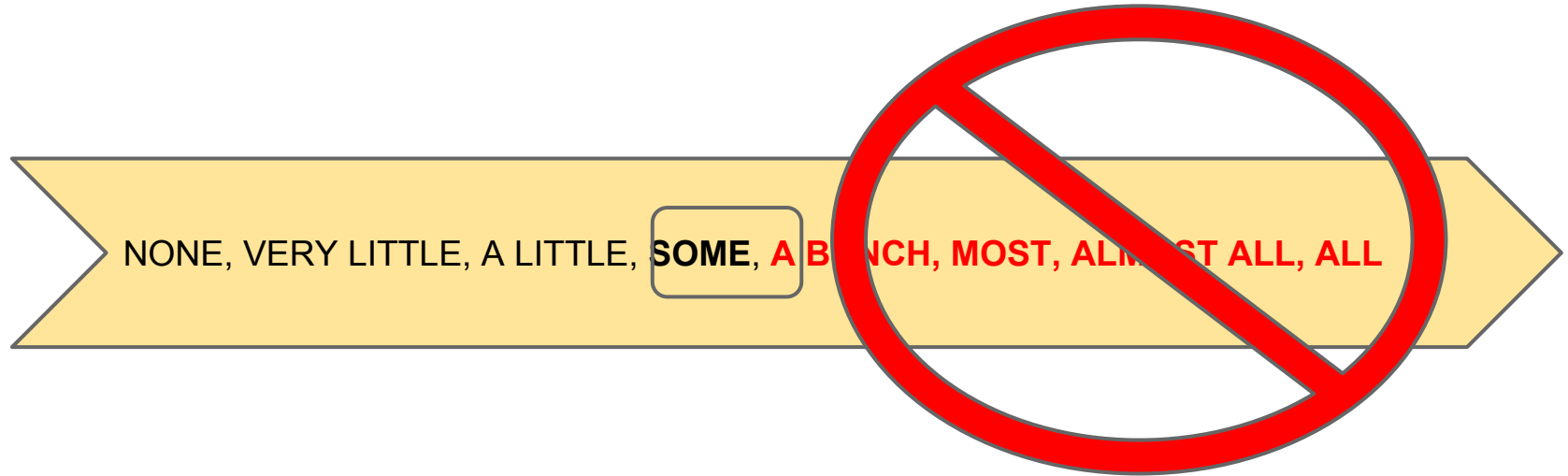
“I did some of the homework.”



NONE, VERY LITTLE, A LITTLE, **SOME**, **A BUNCH**, **MOST**, **ALMOST ALL**, **ALL**

- > I didn't do **a bunch** of the homework
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Scalar Implicature



Scalar Implicature: Examples

- “It’s **warm** today.” → It’s not **hot**.
- “I’m taking **three** classes.” → I’m not taking **four**.
- “I **think** the homework is due Friday.” → I’m not **sure**.
- ...
- ...
- ...
- ...
- ...
- ...



Scalar Implicature: Examples

- “It’s **warm** today.” → It’s not **hot**.
- “I’m taking **three** classes.” → I’m not taking **four**.
- “I **think** the homework is due Friday.” → I’m not **sure**.

EXERCISE:

- Come up with some examples of
- scales, and some scalar
- implicatures that seem to be
- computed based on them.
-
-



Next Time

More (exclusively theoretical) background on scalar implicatures

READING*: Horn (2006) “Implicature”

→ Presentation (Outline, main concepts/distinctions, theoretical disagreements, history)

→ Reading response: In light of new concepts, distinctions, and theoretical frameworks proposed, analyze three *real* interactions you had during the week using some of the new tools you acquire after doing the reading

*skepticism 

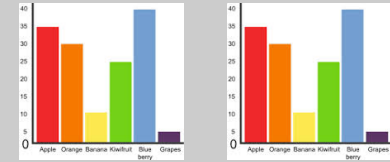
See you next week...

Email me if you need help!

Reading Tips

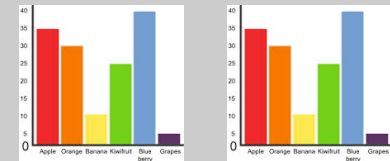
- Skim overly detailed methods sections
- Skim statistics
- Try to understand graphs & be able to extract primary phenomenon and what it means (if anything) for the theory
- Follow up on theoretical background if you don't quite grasp the (importance of) the question

1. **Abstract**
2. **Introduction**
3. Experiment 1
 - a. Methods
 - b. **Results**



- c. **Discussion**

4. Experiment 2
 - a. Methods
 - b. **Results**



- c. **Discussion**

5. **General Discussion**
6. Conclusion

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5 minutes:

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- 5.

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background on scalar implicatures

READING: Horn (2006) “Implicature”
→ Presentations & Response
Papers?

Next Time

Experimental evidence for post-semantic computation of scalar implicatures (or not?*)

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“Some utterances are underinformative: The onset and timecourse of scalar inferences”

→ Presentations & Response Papers?



*skepticism

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