

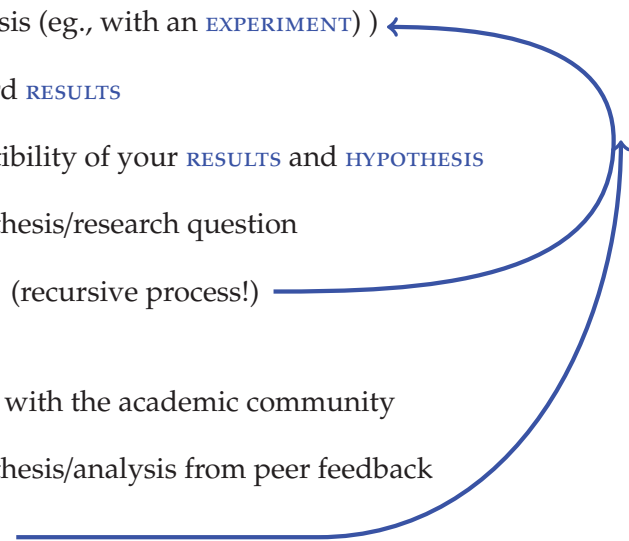
# Week 1: The Building Blocks of Linguistic Research

## Research Methods in Linguistics

### 1 Introduction

- **Q: What is linguistics?**  
→ Linguistics is the *systematic* investigation of language
- **Q: So what SYSTEM do we use to investigate language?**  
→ The **SCIENTIFIC METHOD**

#### The Scientific Method

1. Observe some language phenomenon
  2. Ask a **RESEARCH QUESTION**
  3. Make a **HYPOTHESIS**
  4. Test your hypothesis (eg., with an **EXPERIMENT**)
  5. Observe and record **RESULTS**
  6. Assess the compatibility of your **RESULTS** and **HYPOTHESIS**
  7. Revise your hypothesis/research question
  8. Return to Step 4.... (recursive process!)
  - ...
  - n. Share your results with the academic community
  - n+1 Revise your hypothesis/analysis from peer feedback
  - n+2 Return to Step 4....
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- The diagram illustrates the recursive nature of the scientific method. A blue arrow curves from step 8 back to step 4. Another blue arrow curves from step n+2 back to step 4. A third blue arrow curves from step n+1 back to step 6.

- **Q: So what do you need to know, to do linguistic research?**

#### Research Skills

1. How to collect data
  2. **How to ask questions**
  3. **How to make (informed) hypotheses**
  4. **How to make predictions**
  5. How to test predictions
  6. **How to interpret your results**
  7. **How to present/share your results**
- Skills 2, 3, and 4 are grouped by a right-facing curly bracket with the label **LINGUISTIC THEORY!** to their right.
- Skills 6 and 7 are grouped by a right-facing curly bracket with the label **LINGUISTIC THEORY!** to their right.

- Most of these skills are easier with knowledge of **LINGUISTIC THEORY**
- Acquiring knowledge of **LINGUISTIC THEORY** requires you to know
  1. How to find linguistic literature
  2. How to read linguistic literature
  3. How to assess linguistic literature
- Skills 1 and 5 require knowledge of **DATA COLLECTION** methods, eg.
  - Natural Observation
  - Elicitation
  - Experimentation
- **Today:** Asking (theoretically-informed) questions  
→ in order to generate research topics and data

## 2 Asking Questions/Setting Objectives

### STEP 1: Observe some language phenomenon

- Spoken language (eg., in your daily life, on t.v., radio)
- Casual written language (eg., online forums, sms, twitter ...)
- Formal written language (eg., in books, newspapers, ...)

### STEP 2: Ask some questions about the phenomenon

1. Does this phenomenon show \_\_\_\_?  
*eg., arbitrariness, compositionality, discreteness, duality of patterning,...*
2. What are the components/building blocks of this phenomenon?
3. What are the rules about how these components combine?
4. What types of rules are these?  
*eg., lexical, syntactic, phonological, semantic...*
5. Are these two elements/phenomena the same or different?  
*eg., in terms of form, meaning, distribution...*
6. Is this element/phenomenon **SIMPLE** or **COMPLEX**?
7. Is this element a \_\_\_\_?  
*eg., phoneme, morpheme, N/V/Adj/P, lexical/functional category, head/modifier/adjunct, tense/aspect/modal, ...*
8. Is this data compatible with \_\_\_\_ theory?  
*eg., X'-Theory, UTAH, Theta-Criterion, rule-based phonological theory,...*
9. Is this data evidence for/against \_\_\_\_?

- The more linguistic theory and concepts that you learn, the more types of question you can ask
- **Objectives:** Assertions regarding how to answer these questions
  - Determine whether \_\_\_\_ shows \_\_\_\_
  - Investigate what the component parts of \_\_\_\_ are
  - Assess whether \_\_\_\_ is a \_\_\_\_
  - Assess the similarities and differences of \_\_\_\_ and \_\_\_\_ ...

### W1 Homework: Topic Hunting

Due Week 2

**Activity Goal:** Find interesting language phenomena to analyze by actively applying analysis and asking questions

- **Step 1:** Find some song lyrics, an excerpt from a book, some bit of conversation, and try to analyze it (how could I draw a tree? what phonological process is going on here?)
- **Step 2:** When you run into trouble, **ASK YOURSELF WHY** - consider multiple possible hypotheses, and try to find/generate data that can support/disconfirm these hypotheses (**ASK: HOW CAN I TEST THIS?**)
- **Step 3:** Check if there's already linguistic literature on the topic

### Assignment 1: Research Proposal

Due Week 5

1. **Introduction** (language, phenomenon)
2. **Data Presentation** (transcription, gloss, translation)
3. **Research Question/Objectives**
4. **Preliminary Hypotheses**
5. **Bibliography/Reading List** (5+ sources)

## 2.1 Case Study I: “All I wanted to do”-Subjects

### Excerpt from J.K. Rowling’s “Harry Potter and the Cursed Child.”

SCORPIUS: All I ever wanted to do was go to Hogwarts and have a mate to get up to mayhem with. Just like Harry Potter. And I got his son. How crazily fortunate is that?

- **Hypothesis II:** “All I wanted to do” subjects are like relative clauses with a null “the things”
- **Prediction for Hypothesis II:** “All I ever wanted to do” subjects should behave the same as cases with an overt “the things” - i.e., behave the same as “All the things that I ever wanted to do”
- **Observation:** Subjects with headed RCs don’t behave the same way; they trigger different plural agreement morphology

- **Observation:** The subject “All I ever wanted to do” has some components of a DP (eg., “all” ) and some components of a CP (eg., a finite verb “wanted”).

- **Q:** Is the subject “All I ever wanted to do” a CP or a DP?

- **Q:** What are its components?

How do they combine to form this type of phrase?

- **Observation:** You can add “that” into this sort of subject:

- (1) a. [All I wanted] was a book  
b. [All that I wanted] was a book

- This suggests that there is definitely a CP-component...

- **Q:** But does that mean this is a CP, or that there’s just a modifying CP/relative clause inside a DP? Are there other, similar sorts of phrases?

- (2) a. I gave him [what<sub>i</sub> [ he was dreading  $\emptyset_i$  ]]<sub>NP</sub> Free/Headless Relative Clause  
b. I gave him [the thing<sub>N</sub> [OP<sub>i</sub> that he was dreading t<sub>i</sub> ]]<sub>NP(Headed) Relative Clause</sub>

- **Hypothesis I:** “All I wanted to do” subjects are like free/headless relative clauses

- (3) a. [All that I wanted] **was** a book  
b. \*[All the things that I wanted] **was** a book  
c. \*[All the things that I wanted] **were** books

- **Prediction for Hypothesis I:** “All I ever wanted to do” subjects should behave the same as free/headless relative clauses

**Observation:** They trigger the same (lack of) plural agreement morphology

- (4) a. [All that I wanted] **was** a book  
b. [What I wanted] **was** a book

- **Q:** What is the status of “all” in these subjects? Can an initial “all” occur in a free-relative? Is it required in the “All I ever wanted” subject?

- **Observation:** “All” seems to be required in the “all I ever wanted” subjects; it is not allowed into free relatives,<sup>1</sup> unless you add in an *of*

<sup>1</sup>I think some people can say “What all I wanted...” though. I don’t speak that dialect though, so I don’t have any judgements about its grammaticality/meaning.

- (5) a. \*[(that) I wanted] **was** a book  
 b. \*[All what I wanted] was a book  
 c. [All **of** what I wanted] **were** books

- **Q:** Is the wh-element in free-relatives in **COMPLEMENTARY DISTRIBUTION** with the *all*? Why would this be the case?
- At this point, it makes sense to start wondering about what people have proposed for the syntax of free relatives...eg., [Bresnan & Grimshaw 1978](#), [Larson 1987](#), [Ott 2011](#), ...

## 2.2 Case Study II: Marking FOCUS with Clefts VS Focus-Intonation

- **Observation:** If you want to emphasize something in English, you can<sup>2</sup>
  - **phonologically** emphasize it,  
by increasing pitch, loudness and length (6a)
  - **syntactically** emphasize it,  
by putting it into a cleft-construction (6b, c)

- (6) a. I want to eat the SANDWICH. FOCUS-INTONATION  
 b. It's the sandwich that I want to eat. IT-CLEFT  
 c. The sandwich is what I want to eat. PSEUDOCLEFT

- **Question:** What is the difference between (a) and (b) and (c)?<sup>3</sup>
  - What are the component meanings of these sentences?  
Do they have the same components?

<sup>2</sup>Other languages also have morphologically-marked focus.

<sup>3</sup>Besides, obviously, the phonology and the syntax. Although you can ask interesting questions about those too.

- Do they have the same **TRUTH-CONDITIONS**?
- Do they have the same **USE-CONDITIONS**?

- (7) I want to eat the sandwich

1. There is a sandwich, **c**
2. I want to eat **c**

- **Question:** Is “There is a sandwich” part of the **TRUTH-CONDITIONS**, or part of the **USE-CONDITIONS**? i.e., is it an **ENTAILMENT** or a **PRESUPPOSITION**?
- **How do I test this?** - There are **DIAGNOSTICS** to distinguish
  - **ENTAILMENTS** (which are part of the **TRUTH-CONDITIONS**), and
  - **PRESUPPOSITIONS** (which are part of the **USE-CONDITIONS**)
  - **IMPLICATURES** (are tricky; often they follow from Gricean Maxims)

### Family of Sentences Test for Projective Meaning

#### Embedding Tests

Simons et al. 2010

1. **NEGATION**
2. **INTERROGATIVE/QUESTION**
3. **MODAL**
4. **ANTECEDENT OF CONDITIONAL**

**Diagnostic:** Embed the sentence into the above contexts.

If the meaning component

- remains, it is likely a **PRESUPPOSITION**
- remains, but is cancellable, it is an **IMPLICATURE**
- is lost, it is likely part of the **ENTAILMENT**



(she wants the soup as well) (3T ✓)  
 (she wants the soup, and the salad too, in fact) (4 cancellable)

1. There is a sandwich, **c** **P**
2. There is something she wants to eat, **f** **P**
3. **c = f** **I**
4. There only one thing, **t**, where **t = f** **I**

## (12) It-Cleft; Negation Test

It's not the sandwich that she wants to eat  
 (#in fact, she doesn't want to eat *anything*) (2 req )  
 (she wants the soup, not the sandwich) (3F ✓)  
 (#she wants the soup as well) (3T ✗)  
 (she wants the soup, and the salad too, in fact) (4 cancellable)

1. There is a sandwich, **c** **P**
2. There is something she wants to eat, **f** **P**
3. **c = f** **E**
4. There only one thing, **t**, where **t = f** **I**

- **Note:** It must be that **c ≠ f**, as shown by (#she wants THE SOUP as well)

## (13) Pseudocleft; Family of Sentences Negation Test

The sandwich is not what she wants to eat  
 (in fact, she doesn't want to eat *anything*) (2 cancellable )  
 (she wants the soup, not the sandwich) (3F ✓)  
 (#she wants the soup as well) (3T ✗)  
 (she wants the soup, and the salad too, in fact) (4 cancellable)

1. There is a sandwich, **c** **P**
2. There is something she wants to eat, **f** **I**
3. **c = f** **E**
4. There only one thing, **t**, where **t = f** **I**

- **Note:** It must be that **c ≠ f**, as shown by (#she wants THE SOUP as well)

MC	Neg-Foc	Neg-Only-Foc	Neg It-Cleft	Neg Pseudocleft
1	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
2	<b>I</b>	<b>P</b>	<b>P</b>	<b>I</b>
3	<b>E</b>	<b>I</b>	<b>E</b>	<b>E</b>
4	<b>I</b>	<b>I</b>	<b>I</b>	<b>I</b>

- **What can we infer from these results?**
- The *only*-FOC and it-cleft have an existential (2) *presupposition*; this is only an *entailment* for the basic focus and pseudocleft constructions<sup>5</sup>
- The basic predication (3) is negated for the clefts and basic focus sentence, but its truth-value is unspecified for the *only*-FOC construction  
 → These are the basis of some initial hypotheses; I can use these to make predictions about how these constructions will behave if I embed them under a modal, in Y/N questions, in the antecedent of conditionals, etc.,
- Predictions are like another type of question (eg., Y/N questions - will this behave THIS way or THAT way?)
- **IS THERE LITERATURE ON THIS TOPIC?** (focus, clefts, focus-association elements like *only*, exhaustivity)

Yes! Lots! [Chomsky 1971](#), [Jackendoff 1972](#), [Rooth 1992](#)...

<sup>5</sup>Actually, most will state that this is an implicature. But this is not a pragmatics class.

### 3 Asking Theoretically-Informed Questions

“If I have seen further than others,  
it is by standing upon the shoulders of giants.”

- To ask *theoretically-informed* questions,  
you need to be familiar with the relevant linguistic literature!

#### 1. How to find linguistic literature

- via linguistic databases
- via Google Scholar
- from the bibliographies of the literature you’ve already found!

#### 2. How to read/understand linguistic literature

- how to approach reading an article
- maximizing understanding/ retention of the claims/ concepts

#### 3. How to assess linguistic literature

- in terms of whether you are convinced of the claims
- in terms of how useful the theories/concepts are for your research
- in terms of whether it’s related to *other* linguistic literature

### 3.1 How to Find Linguistic Literature

- Linguistic Journals and Databases

#### 1. The LLBA (Linguistics and Language Behaviour Abstracts)

<http://proquest.libguides.com/llba>

#### 2. Journals

- (a) Linguistic Inquiry (LI)<sup>6</sup>
- (b) Language
- (c) Natural Language and Linguistic Theory (NLLT)

<sup>6</sup>These ones have articles in all the major subfields of formal linguistics; there are other journals for specific subfields, and applied/experimental subfields.

#### 3. Google Scholar

- 4. The bibliographies of the sources you’ve already found
- 5. (...also, physical libraries)

### 3.2 How to Read Linguistic Literature

#### How I Approach Reading an Article/Chapter

1. Read the title, then abstract
2. Read the introduction (look for main claim)
3. Read the conclusion (look for main claim)
4. Skim over the section/subsection titles
5. Assess whether the article might be relevant  
for your research (If so, continue, if not, move on to next article)
6. Start reading from the beginning  
- I start taking notes here
7. Skim over parts that are too difficult  
- You can come back to these later, if you have to
8. As you read, ask yourself (for each section)
  - What is the author’s main claim?
  - What is the author’s purpose/why are these words here?
  - What (implicit or explicit) assumptions is the author making?
  - Do I understand this? If not, why not?  
What are the different ways it could be interpreted?
  - Are the author’s claims/assumptions compatible with \_\_\_\_\_?

FIRST  
PASS

CRITICAL  
READ



- **Taking Notes**

- Summarize the important things: data generalizations, main claim, basic assumptions, empirical/theoretical consequences
- Make note of anything else you find interesting, or parts you don't understand
- Make note of anything that might be relevant for your own research - eg., how does the language you work on convey this meaning? How can you use the proposed theory to solve your own data problems? Can your data disprove their claims? Or support their claims?

### Assignment 2: Annotated Bibliography

Due Week 5

#### References for 5(+) Articles/Books/Book-Chapters, with "Annotations"

1. **Research Proposal Summary**
2. **Reference:** LastName<sub>Au1</sub>, FirstName<sub>Au1</sub> and FirstName<sub>Au2</sub> LastName<sub>Au2</sub>. YEAR. "Title." In "BookTitle," ed. by FirstName<sub>Ed</sub> LastName<sub>Ed</sub>, pp-pp. City, Province/State: PublisherName.
3. **Brief Summary:** What is the language phenomenon discussed? What is the author's main claim? What theoretical assumptions does the author make? How is the research relevant to linguistic theory as a whole?
4. **Relevance:** How is this article/chapter relevant to your research project? Is the data presented similar? Does the theory give you a way to analyze your own data? Does your data contradict the claims made by the author? Does the author's main claim contradict one of your main assumptions?

## 4 Starting a Research/Productivity Journal

- This is optional!
- But I found it very useful to keep a daily/weekly/whatever-works-for-you journal to keep track of my research progress when writing my thesis

- **Components of the Journal**

1. **Data File**

- for logging intriguing data, inchoate elicitation plans, attempts at generalizations

2. **Reading File**

- your summaries, thoughts, frustration at whatever article you are reading, or to-do list of things you need to read

3. **Writing File**

- your summary of what you wrote that day, a place to log your failed analyses (and the reasons for their failure) are preserved, a place to store parts of your lit. review/analysis that you ended up deleting/cutting from your current draft

4. **Committee/Supervisor Interaction File**

- summary of any meetings you had with your committee/supervisors

5. **Devil's Advocate File**

- questions you think that an antagonistic audience/committee-member might ask, possible ways to answer those questions

- This helped to keep my spirits up when it seemed like I had no tangible output from a day of work

- It also helped to maintain research/writing as a daily habit<sup>7</sup>

<sup>7</sup>...because you feel so guilty writing "I didn't do any work, I just read comics and ate cookies all day." If you write "I finished up my lit. review of Condoravdi 2002 and started summarizing Copley 2009, then I read comics and ate cookies for the rest of the day," you feel better.



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