LING300

Introduction to Syntax

NOTE: This class has a Prerequisite of LING201 or PSYC201

- If you have not already taken LING201 or an equivalent approved by the linguistics advisor, you may not enroll in LING300.
- INDV101, LING211, LING210, LING 322 are not an acceptable alternative.
- No, You may not take this class while simultaneously enrolled in LING/PSYC201.
- There are no exceptions! I will check and admin drop anyone without the prereq.
- LING300 will be offered again in the fall.

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- Professor: Andrew Carnie
- carnie@u.arizona.edu
- Douglass 212, phone: 621 2802
- Office hours by appointment (However I have an open door policy)

Teaching Team

Dave Medeiros

- medeiros@u.arizona.edu
- Office Location: Douglass 110E
- Office Hours: Th 12-1, F10-11
- If you need help and can't come to office hours, then you should definitely set up appointments. We're here to help you!

The Douglass Building

Please....

- Turn off your cell phones every class (or at the very least put them on vibrate)

The web page for this class

http://d2l.arizona.edu

- handouts
- homeworks
- syllabus
- links
- slides
- Grades
- All auxiliary readings

Prerequisites

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- LING/PSYC201 is REQUIRED.

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Prerequisites

- LING/PSYC201 is REQUIRED.
- If you haven't taken LING201/PSYC201 or equivalent you may NOT take this class.

Textbooks

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- Carnie, A (forthcoming) *Syntax: A Generative Introduction*. SECOND EDITION. Oxford:Blackwell Publishers. Available only on the D2L Site

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- Carnie, A (forthcoming) *Syntax: A Generative Introduction*. SECOND EDITION. Oxford:Blackwell Publishers. Available only on the D2L Site
- Baker, Mark (2001) *The Atoms of Language.* New York: Basic Books

Course Requirements

Weekly Assignments	35%	Tuesdays
In-class Midterm	20%	Feb 21
Language Research Project	12%	May 3, 4pm
Library Session	1%	Feb 23
Consent Form	2%	January 31
Draft of LRP	5%	April 4, 11-1
Final Exam	22%	May 9, 2-4
Participation	3%	throughout

Cheating and Plagiarism

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- 99.9% of you wouldn't do this, but unfortunately I still have to address it.

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- I have a zero-tolerance policy on cheating. If you are caught cheating (including plagiarism), you will receive an E in the class, and I will recommend that you be expelled from the University.

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- I have a zero-tolerance policy on cheating. If you are caught cheating (including plagiarism), you will receive an E in the class, and I will recommend that you be expelled from the University.
- Please read the handout on plagiarism and sign the statement at the bottom of the student questionnaire agreeing that you understand what plagiarism is and that you won't do it.

Language Project

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Language Project

- First: Don't Panic! This is an easy project to do. We'll guide you through it!

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Language Project

- First: Don't Panic! This is an easy project to do. We'll guide you through it!
- Goal: Investigate the syntax of some language, using the tools we learn in class. Write up a short report. This is your chance to do some REAL research.

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Language Project

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Language Project

- *Soon:* find a speaker of a language. Have them sign the release form.

©Andrew Carnie, 2006

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- *January 31:* Due date for release form

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- *February-March:* data collection, analysis.

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- *April 4*:* Draft version due

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- *May 3:* Final Version Due date; 4pm

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- *April 4*:* Draft version due
- *May 3:* Final Version Due date; 4pm
- If you get an A on the Draft you do not have to turn in the final version. (Or if you are happy with the grade you got on your draft)

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*correct your handouts

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Language Project

Gathering Data

©Andrew Carnie, 2006

Language Project

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I suggest you wait until we've done some of the work in this class so you know what kind of data to look for.

©Andrew Carnie, 2006

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Gathering Data

I suggest you wait until we've done some of the work in this class so you know what kind of data to look for.

- *I will give you precisely the kind of data you need to elicit.*

©Andrew Carnie, 2006

Language Project

Gathering Data

I suggest you wait until we've done some of the work in this class so you know what kind of data to look for.

- *I will give you precisely the kind of data you need to elicit.*
- You will need at least 1 hour with your native speaker. (Maybe more -- it depends on your language)

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Language Project

Where do I find a native speaker?

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Language Project

Where do I find a native speaker?

- Your native speaker can be a classmate, a friend, a parent, a friend of a parent, someone who lives in your dorm, the guy who runs the coffee shop, etc. They don't need any special qualifications except that they spoke the language as their primary language at home when they were growing up.

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- If after *really* searching you absolutely cannot find someone, come and talk to me or Dave. We'll probably be able to find someone for you

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Language Project

You may NOT do any of the following languages:

English
French
Spanish
German
Russian
Japanese
Irish

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Language Project

You may NOT do any of the following languages:

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Length (KEEP IT SHORT):

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Length (KEEP IT SHORT):

1 person 5 -10 double spaced pages
2 people 10-15 double spaced pages
Honors students should aim for 10-15 pages per person.

Double Spaced.
You may work in teams!

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Language Project

- The paper should be written like a social science paper:

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Language Project

- The paper should be written like a social science paper:
  - A title

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- The paper should be written like a social science paper:
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  - An introduction, summarizing the basic results and goals of your paper

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  - A presentation of the main points of analysis of your paper, including illustrative data and trees.

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  - A conclusion, summarizing what you've shown

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  - A presentation of the main points of analysis of your paper, including illustrative data and trees.
  - A conclusion, summarizing what you've shown
  - A bibliography/reference list

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Language Project

1. **Introduction.**

   It is standard in Linguistics to use section numbers.

2. **But I was taught that using section numbers was poor writing!**

   Every discipline has their own "style." Linguistics uses a model more like the writing of the hard sciences. A paper that is organized the way you'd write a paper in an English lit class shows poor linguistics writing. (i.e., for the purposes of your linguistics classes, forget everything you were taught in freshman comp; it doesn't apply here.)

3. **Conclusion**

   If you are going to be a linguist, you have to learn how to write like one. That includes organizational devices such as section numbers, and a logical, mathematical and technical presentation of the facts.

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The Language Project

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The Language Project

If you have ANY problems, come talk to me or Dave. We're here to help you.

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Be prepared: use the data I give you as a starting point. I'll hand this out in October.

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Don't go overboard!!!

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Don't go overboard!!!

Don't leave it until the last minute.

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Field Work Ethics

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- You must get a release form from your speaker

©Andrew Carnie, 2006

Field Work Ethics

- You must get a release form from your speaker
- You may not coerce your native speaker in any way and your speaker can quit at any time.

©Andrew Carnie, 2006

Field Work Ethics

- You must get a release form from your speaker
- You may not coerce your native speaker in any way and your speaker can quit at any time.
- The data you gather belongs to the native speaker, not you. You may not publish or reproduce the data any where except in your research paper.

©Andrew Carnie, 2006

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- You may not coerce your native speaker in any way and your speaker can quit at any time.
- The data you gather belongs to the native speaker, not you. You may not publish or reproduce the data any where except in your research paper.
- You are representing me and the university in this research, you are expected to behave in a professional manner.

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Field Work Ethics

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Field Work Ethics

- Be respectful of the cultural norms of the speaker you are working with. Avoid taboo topics for your sentences. Be aware of cultural differences in politeness and appropriateness.

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Field Work Ethics

- Be respectful of the cultural norms of the speaker you are working with. Avoid taboo topics for your sentences. Be aware of cultural differences in politeness and appropriateness.

- Be particularly careful if you are working with Native Americans. Many tribes do not want people studying their languages or cultures (for a variety of historical reasons). You may need to get permission from the tribe to do the research. I suggest if this is the case you find a different language.

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Field Work Ethics

©Andrew Carnie, 2006

Field Work Ethics

- Don’t treat your native speaker consultant as an “object of study”. It is best to treat them as you would a professor (or better!), they are there to teach you and you are there to learn from them.

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Field Work Ethics

- Don't treat your native speaker consultant as an "object of study". It is best to treat them as you would a professor (or better!), they are there to teach you and you are there to learn from them.
- If there are any problems (your speaker is unhelpful, or hits on you, or you can't get hold of them) come and tell me *immediately*.

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Gathering the Data

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Gathering the Data

- You have a list of the data that you can gather. You don't have to gather it all. There are several ways to narrow the paper (do a paper on word order parameters, on binding, on movement etc.) In order to know what to look for, you may want to wait until we've made some progress in the class.

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Gathering the Data

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- After gathering some words, there are really 2 kinds of tasks you can use:
  - Elicitation of Forms
  - Elicitation of Judgment

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Gathering the Data

- Elicitation of Forms:
  - How do you say X?
- Elicitation of Judgments
  - Does the following sentence sound like a sentence you might hear or say? Does it sound “right” to you?

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How to write and read a syntactic example

Duirt	Daithí	an	abairt
Say.PAST	Dave	the	sentence

"Dave said the sentence."

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How to write and read a syntactic example

Example in the original language

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Aligned Gloss: A word by word translation (the line most useful to you)

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Aligned Gloss: A word by word translation (the line most useful to you)

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Say.PAST	Dave		the sentence

"Dave said the sentence."

Loose English Translation. This is for information purposes only; don't try to tree the English sentence

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Topic 1: Syntax:
Some Background

- What is syntax?
- Syntax as a (cognitive) science
- Rules
- prescriptivism vs. descriptivism
- Evaluating Grammars
- Language as an instinct

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Q. What is Syntax??

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- The scientific study of sentence structure

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- We are interested in what you know about your language.

©Andrew Carnie, 2006

Q. What is Syntax??

- The scientific study of sentence structure
- Perspective: The psychological (or cognitive) organization of sentence structure in the mind.
- We are interested in what you know about your language.
- This is a different question from how we use it or what we actually produce.

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Q. What is a sentence??

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Q. What is a sentence??

- A hierarchically organized structure of words that maps sound to meaning and vice versa.

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sounds ⇔ sentences ⇔ meaning

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Scientific Method

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Scientific Method

- Study of syntax is a *science*.

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Scientific Method

- Study of syntax is a *science*.
- Uses the scientific method
  - Observe some data
  - Make some generalizations
  - Develop a hypothesis
  - Test against more data

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Which comes first? The data or the hypothesis?

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The Scientific Method Throughout this Class

- We are going to apply the scientific principle both on the small scale (applied to specific problems) and to bigger issues.
- An example of the latter:
  - Units 2-5: starting hypothesis: Phrase Structure Rules. We're going to explore the intricacies of these rules—what they can do, and what they can't.
  - Units 6-7: revised hypothesis: we propose a special kind of phrase structure rule called an X-bar rule. These are a more fine-tuned version of phrase structure rules.
  - Unit 8: we refine the system further by adding a constraint on X-bar theory called the Theta Criterion.
  - Units 9-12: We explore some more data and find the need for not only X-bar + the theta criterion, but that we also need a new rule type called a Movement Rule (and constraints on them)
- With each step we revise and refine our hypotheses to account for new data

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Scientific method

Anaphor: A noun that refers back to a previously mentioned noun: “self” nouns.

©Andrew Carnie, 2006

Scientific method

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1) John loves himself

2) Mary loves herself

3) John and Mary love themselves

©Andrew Carnie, 2006

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Generalization: The form of the “Xself” seems to be dependent upon the gender/number of the noun they refer to.

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Hypothesis: Anaphors (Xself) agree with the noun they refer to in number and gender.

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4) The boy loves himself/*herself/*themselves

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4) The boy loves himself/*herself/*themselves

* = unacceptable

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Falsifiability (Predictions)

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Falsifiability (Predictions)

- A hypothesis must make predictions.

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Falsifiability (Predictions)

- A hypothesis must make predictions.
- To see whether a hypothesis is correct you look for the prediction that will prove the hypothesis <u>wrong</u>.

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Falsifiability (Predictions)

- A hypothesis must make predictions.
- To see whether a hypothesis is correct you look for the prediction that will prove the hypothesis <u>wrong</u>.
- If the piece of evidence that would prove the hypothesis wrong is true, then the hypothesis must be revised.

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Rules: A kind of hypothesis

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Rules: A kind of hypothesis

- In this class, we will encode our hypotheses about sentence structure using rules.

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- A group of rules are called a Grammar.

©Andrew Carnie, 2006

Rules: A kind of hypothesis

- In this class, we will encode our hypotheses about sentence structure using rules.
- A group of rules are called a Grammar.
- Grammar is a scary word. A grammar in the linguistic sense is a cognitive structure. It is the part of the mind that generates and understands language.

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Prescriptive vs. Descriptive Rules

You've all heard this spiel before in 101 and 201, so I'll do it quickly:

©Andrew Carnie, 2006

Prescriptive vs. Descriptive Rules

You've all heard this spiel before in 101 and 201, so I'll do it quickly:

When we talk of rules we're not talking about rules that make the following sentence "ungrammatical":

©Andrew Carnie, 2006

Prescriptive vs. Descriptive Rules

You've all heard this spiel before in 101 and 201, so I'll do it quickly:

When we talk of rules we're not talking about rules that make the following sentence "ungrammatical":

We are always told to never split infinitives.

Who(m) did you give the book to?

Hopefully, we'll never learn the rules of grammar!

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We are always told to never split infinitives.

Who(m) did you give the book to?

Hopefully, we'll never learn the rules of grammar!

On the website there is an article by Pinker which you are to read for your first homework. It looks at why rules like the ones above don't have any linguistic motivation (and, in fact, can often obscure communication.)

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Prescriptive vs. Descriptive

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Prescriptive vs. Descriptive

- Prescriptive rules prescribe how we should speak

©Andrew Carnie, 2006

Prescriptive vs. Descriptive

- Prescriptive rules prescribe how we should speak
- Descriptive rules describe how we actually speak.

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Prescriptive vs. Descriptive

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- Descriptive rules describe how we actually speak.

Which is more scientific?

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Generative Grammar

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Generative Grammar

- The rules we will use are said to generate the sentences of the languages we are looking at.

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Generative Grammar

- The rules we will use are said to generate the sentences of the languages we are looking at.
- The kind of grammar we are looking at is called Generative Grammar (=group of rules that generate the sentences of a language)

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Generative Grammar

- The rules we will use are said to generate the sentences of the languages we are looking at.
- The kind of grammar we are looking at is called Generative Grammar (=group of rules that generate the sentences of a language)
- A warning: when we say the grammar "generates": we are not talking about *actual* production of sentences as we are speaking. We're talking about what we *know* about the sentences of our language. We are not claiming that a speaker uses their generative grammar to speak. However, their generative grammar is a model of what they know and how they learned it. (This is a subtle but important point).

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Sources of Data

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Sources of Data

- Corpora of Spoken & Written Language
  - Collections of recorded real world speech
  - Telephone recordings (LDC)
  - Newspapers, Books, Magazines
  - Folk tales etc recorded in the field.
  - The Web

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Sources of Data

©Andrew Carnie, 2006

Sources of Data

*Where do you wonder if he lives?

©Andrew Carnie, 2006

Sources of Data

*Where do you wonder if he lives?

- Will the fact that this sentence is ungrammatical appear in any corpus?

©Andrew Carnie, 2006

Sources of Data

*Where do you wonder if he lives?

- Will the fact that this sentence is ungrammatical appear in any corpus?
- Have you ever heard this sentence uttered?

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Sources of Data

*Where do you wonder if he lives?

- Will the fact that this sentence is ungrammatical appear in any corpus?
- Have you ever heard this sentence uttered?
- How do you know this is ungrammatical?

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Sources of Data

*Where do you wonder if he lives?

- Will the fact that this sentence is ungrammatical appear in any corpus?
- Have you ever heard this sentence uttered?
- How do you know this is ungrammatical?
- Every day, you produce grammatical sentences that have never been uttered before.

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Corpora and Falsifiability

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Corpora and Falsifiability

- Do Corpora contain the information necessary to falsify a hypothesis?

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Corpora and Falsifiability

- Do Corpora contain the information necessary to falsify a hypothesis?
  - Sometimes they do, but more often they don't!

©Andrew Carnie, 2006

Corpora and Falsifiability

- Do Corpora contain the information necessary to falsify a hypothesis?
  - Sometimes they do, but more often they don't!
- The reason? *Often the sentence that will prove a hypothesis wrong is an unacceptable one*. Although corpora might contain speech errors, they don't include many of the kinds of unacceptability that could falsify our hypotheses.

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Sources of Data

©Andrew Carnie, 2006

Sources of Data

- Corpora are not sufficient. They don't contain negative information (such as what sentences are unacceptable), and they can never contain all the sentences of a language.

©Andrew Carnie, 2006

Sources of Data

- Corpora are not sufficient. They don't contain negative information (such as what sentences are unacceptable), and they can never contain all the sentences of a language.
- We need to access our mental knowledge (a.k.a. competence) about sentences.

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Sources of Data

We use a special experimental technique for tapping our syntactic knowledge. This technique is called the acceptability judgment. (In the psychology literature, this is sometimes also called magnitude estimation)

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Acceptability Judgments

- Unfortunately, sometimes acceptability judgments are called intuitions.
- The term 'intuition' has a negative connotation: makes us think of fortune tellers and psychics.
- However, acceptability judgments are both *experimentally valid* and *statistically sound*.

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Acceptability Judgments

- We will apply acceptability judgments in this class non-statistically. For the most part this will give us the right results. Statistical proof of judgments is possible, but we won't bother.

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Syntactic vs. Semantic Judgments

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Syntactic vs. Semantic Judgments

- Syntactic judgments concern the FORM of a sentence
  - *Where do you wonder if he lives?

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Syntactic vs. Semantic Judgments

- Syntactic judgments concern the FORM of a sentence
  - *Where do you wonder if he lives?
- Semantic judgments are about the MEANING of a sentence.
  - #Colorless green ideas sleep furiously
  - # My toothbrush is pregnant

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  - *Where do you wonder if he lives?
- Semantic judgments are about the MEANING of a sentence.
  - #Colorless green ideas sleep furiously
  - # My toothbrush is pregnant
- We may appeal to both, but we're mostly interested in syntactic judgments.

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Performance vs. Competence

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Performance vs. Competence

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Performance vs. Competence

- Performance: refers to what we actually produce.
- Competence: refers to what we know about language.
- The focus of generative grammar is *Competence*.

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Evaluating Grammars

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We aspire to Explanatorily Adequate Grammars.

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Learning vs. Acquisition

- *Learning* involves conscious gaining of knowledge
- *Acquisition* involves subconscious gaining of knowledge

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Chemistry is learned. Languages are acquired.

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How do we acquire languages?

- Obviously this question is too big to answer here, but ...
- Are we instructed by our parents?
- Do we mimic our parents?

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How do we acquire languages?

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NOPE!

1) Language is infinite: We produce sentences we've never heard before

2) We know things about our language that we've never been exposed to.

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Language as an instinct

You know things about your language that you've never been taught:

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Language as an instinct

You know things about your language that you've never been taught:

Who(m) did you think Shawn hit _____?
Who(m) did you think that Shawn hit _____?

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Who	did you think		_____ hit Bill?

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You know things about your language that you've never been taught:

Who(m) did you think Shawn hit _____?
Who(m) did you think that Shawn hit _____?
Who did you think _____ hit Bill?
*Who did you think that _____ hit Bill?

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Language as an instinct

Despite what they may think, parents rarely teach their children to speak!

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Language as an instinct

Despite what they may think, parents rarely teach their children to speak!

They correct content not form:
(from Marcus et al. 1992)

Adult: Where is that big piece of paper I gave you yesterday?
Child: Remember? I writed on it.
Adult: Oh that's right, don't you have any paper down here, buddy?

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Language as an instinct

(from Pinker 1994, 281 – attributed to Martin Braine)

Child: Want other one spoon, Daddy
Adult: You mean, you want the other spoon.
Child: Yes, I want other one spoon, please Daddy.
Adult: Can you say “the other spoon”?
Child: Other … one … spoon
Adult: Say “other”
Child: other
Adult: “spoon”
Child: spoon.
Adult: “other … spoon”
Child: other … spoon. Now give me other one spoon.

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A shocking proposal!

Noam Chomsky

The ability of humans to use language is innate (an instinct). We are prewired to use language!

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From *Get Fuzzy*, July 24,2002

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Huh? languages differ?!?

How can language be an instinct if languages differ?

Proposal: Languages differ primarily in terms of what words are used, and in a set number of "parameters".

These things are learned but the rest (the basic architecture of the grammar) is innate.

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Parameters

A particular language is not innate (it is acquired), but the basic tools (parameters) that any given language uses are built in.

We'll be looking at these tools. Both within languages, and cross-linguistically to see what is universal (innate) and what varies among languages.

Baker's book is an attempt to categorize and organize a set of parameters (which form the atoms of language)

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The logical problem of language acquisition

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A proof showing the following:

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A proof showing the following:

Premise 1: Language is creative & infinite.

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Premise 2: Infinite systems are unlearnable/ unacquirable

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The logical problem of language acquisition

A proof showing the following:

Premise 1: Language is creative & infinite.

Premise 2: Infinite systems are unlearnable/ unacquirable

Conclusion: Language is unlearnable therefore it must be innate.

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Premise 1: Language is infinite

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- At the very least language is creative: there are many sentences you have never heard before:

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  - [Dan like peanut butter]

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  - Alina said that [Lynnika knows that [Dave thinks that [Dan likes peanut butter]]]
  - etc.

This means that the number of English sentences is countably infinite

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Premise 1: Language is infinite

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Premise 1: Language is infinite

- Other examples of language infinity:
  - I like very spicy salami
  - I like very very spicy salami
  - I like very very very spicy salami
  - I like very very very very very spicy salami
  - etc.

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  - etc.

  - Susan
  - Susan and Bill
  - Susan, Mary and Bill
  - Susan, Mary, Jaime and Bill
  - Susan, Mary, Jaime, Phil and Bill
  - Susan, Mary, Jaime, Diane, Mike and Bill
  - etc.

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Premise 2: Infinite systems are unlearnable: Task of a child acquiring English

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- Match up a sentence that they hear with a situation in the context around them.

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To make the proof let's turn this into an algebraic operation. We'll number sentences, and we'll number situations, and look for the rule that matches them up.

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Premise 2: Infinite systems are unlearnable: Task of a child acquiring English

The cat spied the kissing fishes = 1

1

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Matching sentences to situations

Sentence X	*Situation Y*
1	**1**
2	**2**
3	**3**
4	**4**
5	**5**

Given the sentence 6, what situation do you think it will match to?

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Matching sentences to situations

Sentence *X*	*Situation* *Y*
1	1
2	2
3	3
4	4
5	5
6	126

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Matching sentences to situations

Sentence *X*	*Situation* *Y*
1	**1**
2	**2**
3	**3**
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You assumed the rule was x = y

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Matching sentences to situations

Sentence *X*	*Situation* *Y*
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In fact: the rule is

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2	**2**
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4	**4**
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6	**126**

You assumed the rule was x = y

In fact: the rule is

[(x-5)*(x-4)*(x-3)*(x-2)*(x-1)]+x = y

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Premise 2: Infinite systems are unlearnable

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Premise 2: Infinite systems are unlearnable

- You have no way of knowing if you've heard the crucial piece of data that tells you that your rule is right or wrong. This is because there is no negative evidence in adult speech (speech errors aside -- but those should be construed as grammatical by children!)

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- The crucial case may be sentence 6, as in the previous example, or it might be in sentence 68,909,753,138,216. You can never be sure that you've got all the facts.

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What's the flaw with this premise?

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What's the flaw with this premise?

- There are plenty of smart people out there who don't believe in innateness. What possible objections might they have to this premise?

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- Could a really large number of examples be sufficient then kids simply assume they've heard all the relevant cases?

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What's the flaw with this premise?

- There are plenty of smart people out there who don't believe in innateness. What possible objections might they have to this premise?
- Could a really large number of examples be sufficient then kids simply assume they've heard all the relevant cases?
- ***Problem***: There are many sentence types you don't hear. E.g. sentences with 8 embeddings, people rarely hear these, but we know they are grammatical (awkward but grammatical).

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Logical Problem: in layman's terms

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- It is (apparently) impossible to learn the rule(s) governing a system until you have ALL the data.

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Logical Problem: in layman's terms

- It is (apparently) impossible to learn the rule(s) governing a system until you have ALL the data.
- Language is infinite & creative: you can never hear all the relevant data. (It is impossible to know if you have just coincidentally missed hearing the crucial fact)
- Therefore: The basic building blocks of language cannot be learned or acquired. Instead they must be innate (an instinct)

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The Logical Problem

- It's ok to be skeptical of this proof. One of its premises is certainly dubious! But as we'll see, assuming that syntax is innate constrains the types of hypotheses we make, and makes the grammar more explanatory. There are plenty of other reasons to believe that the principles of syntax might be innate.

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A Common Confusion

- ***Acquired is NOT the same thing as innateness*.**
- Innate knowledge is built in; hard-wired
- Acquired knowledge is gathered subconsciously and comes from external sources (like parents)
- Learned knowledge is consciously gathered knowledge and comes from external sources (like parents or teachers)

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Universal Grammar (UG)

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Universal Grammar (UG)

- In this class, we will be looking at the innate principles that govern sentence structure. (Universal Grammar or UG)

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Universal Grammar (UG)

- In this class, we will be looking at the innate principles that govern sentence structure. (Universal Grammar or UG)
- And we will be looking at the different ways in which languages implement these innate principles. (The parameters)

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Universal Grammar (UG)

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- The building blocks that all languages use to construct the sentences of their languages.

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Universal Grammar (UG)

- The building blocks that all languages use to construct the sentences of their languages.
- All languages use the same basic hardwired tools. It is the *particular implementation* of these tools that varies between languages.
- Notice this gives us a very explanatory theory. If most of language is innate and the rest are parameters, then why languages are the way they are (and relatively easy to learn) is explained.

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Universal Grammar (UG)

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Universal Grammar (UG)

- Other evidence for UG

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  - Human Specificity of Language

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  - Distinct area of the brain
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  - Lack of overt instruction
  - Language Universals
  - Genetic Evidence -- see links to various BBC news articles on d2l.

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Summary

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- Syntax: A science; uses scientific method; studies sentence structure.

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- Syntax: A science; uses scientific method; studies sentence structure.
- Prescriptive/Descriptive Rules
- Generative Rules as Hypotheses
- Sources of Data:
  - Corpora
  - Judgment tasks

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Summary

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  - Observationally Adequate
  - Descriptively Adequate
  - Explanatorily Adequate
- Learning vs. Acquisition
- Innateness of Language
- Universal Grammar: innate, hard-wired building blocks of syntax.
  - Principles (fixed, universal properties)
  - Parameters (universal sources of limited variation)

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