591B
Second Language Acquisition

Week 4a. UG and L2A:
Background, principles, parameters

Universal Grammar

- We started off talking about the human capacity for language, which seems almost necessarily to involve an innate (genetically specified) component of the human brain that constrains the kinds of languages children can learn and promotes the rapid acquisition of L1.

- Nearly all of the background motivation for the existence of UG comes from consideration of L1A.

Universal Grammar and L2A

- This raises a question with respect to L2A, namely: how much like L1A is it? Is UG involved in L2A like it is in L1A?

- Immediate concerns: L1A is fast, effortless, and uniformly successful, whereas (adult) L2A seems to be slow, effortful, and typified by incomplete success. If UG is involved, why are they different?

Universal Grammar and L2A

- Another suggestive observation is that whereas children can learn a second language quickly and successfully, adult second language learners have a harder and less successful time, indicating some form of "sensitive period". Is the difference between child and adult L2A tied to the ability to "use UG" in the acquisition process?

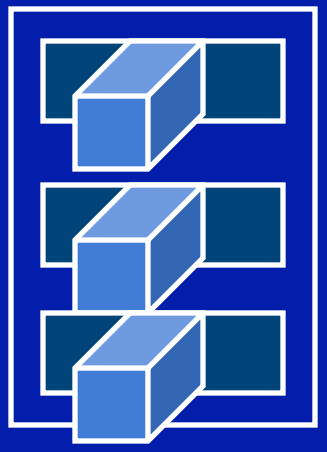
Universal Grammar and L2A

- This all seems to lead to an initial guess that "UG," the mechanism that prompts the rapid acquisition of L1, is not operative in L2A.

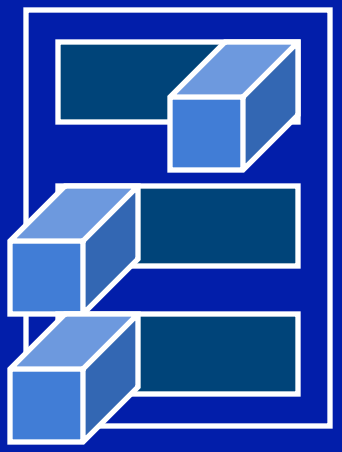
- Let's look closer at what UG is, and what evidence we can find.

Principles and Parameters

- Recall that the model of language we're working with is one in which languages are for the most part *the same*, but differ in the settings of certain parameters, such as word order.

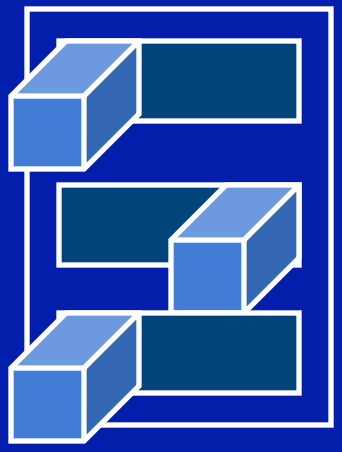


UG



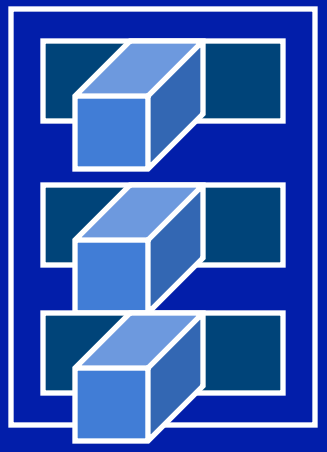
Japanese

English

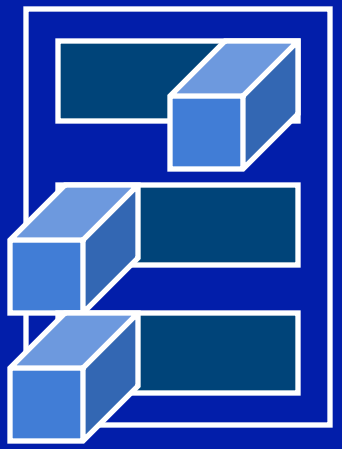


Principles and Parameters

- This model is called “Principles and Parameters” and these are the “Parameters” part.



UG



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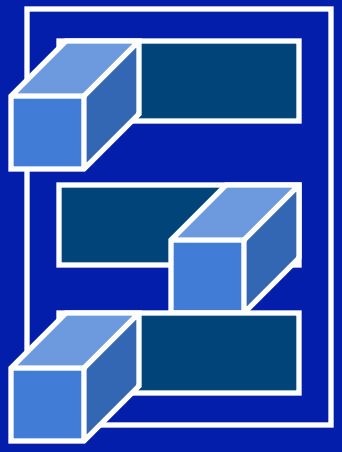


Principles and Parameters

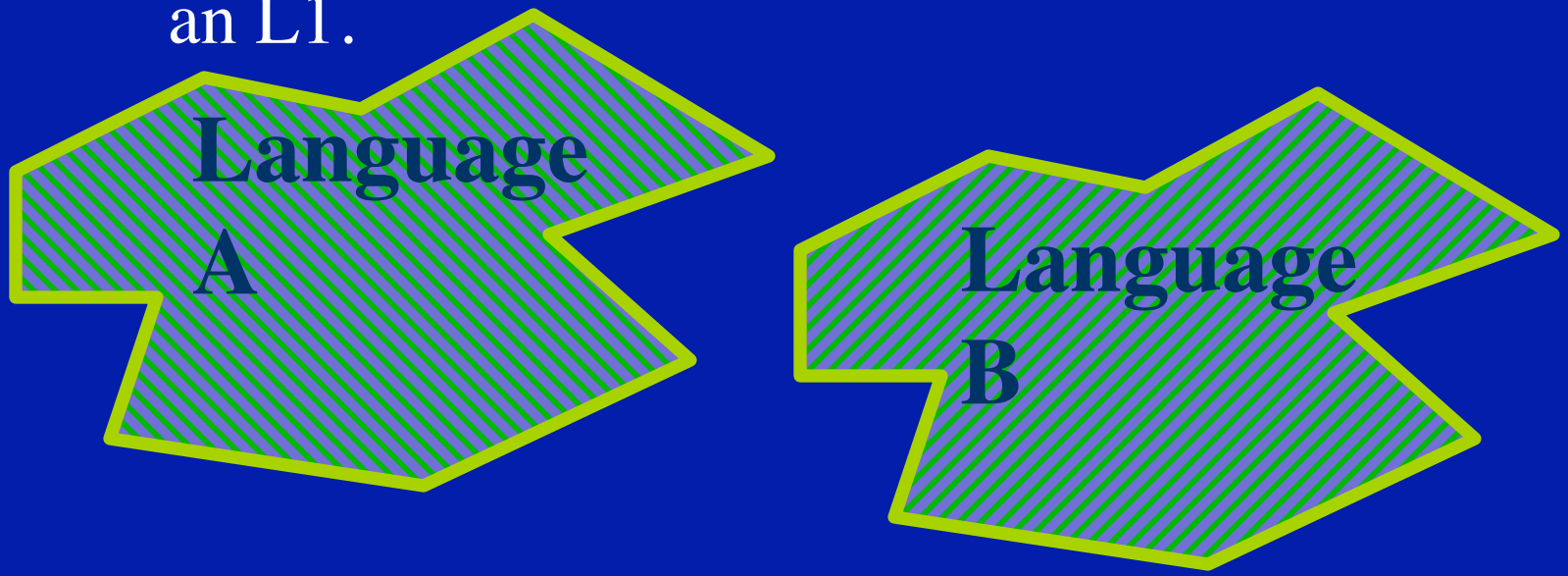
- The parameters are only a part of the story, however; these allow us an explanation of a) why languages seem to differ in such limited ways, and b) how children are able to acquire their first language so quickly.
- The other part of the story are the principles. The idea is that all languages are systems which have certain properties and obey certain principles, the identification of which has been one of the main concerns of formal linguistics.

Principles

- The principles of language are *invariant*—they are the same for all grammars. Children do not need to learn these, these are part of the genetic endowment.

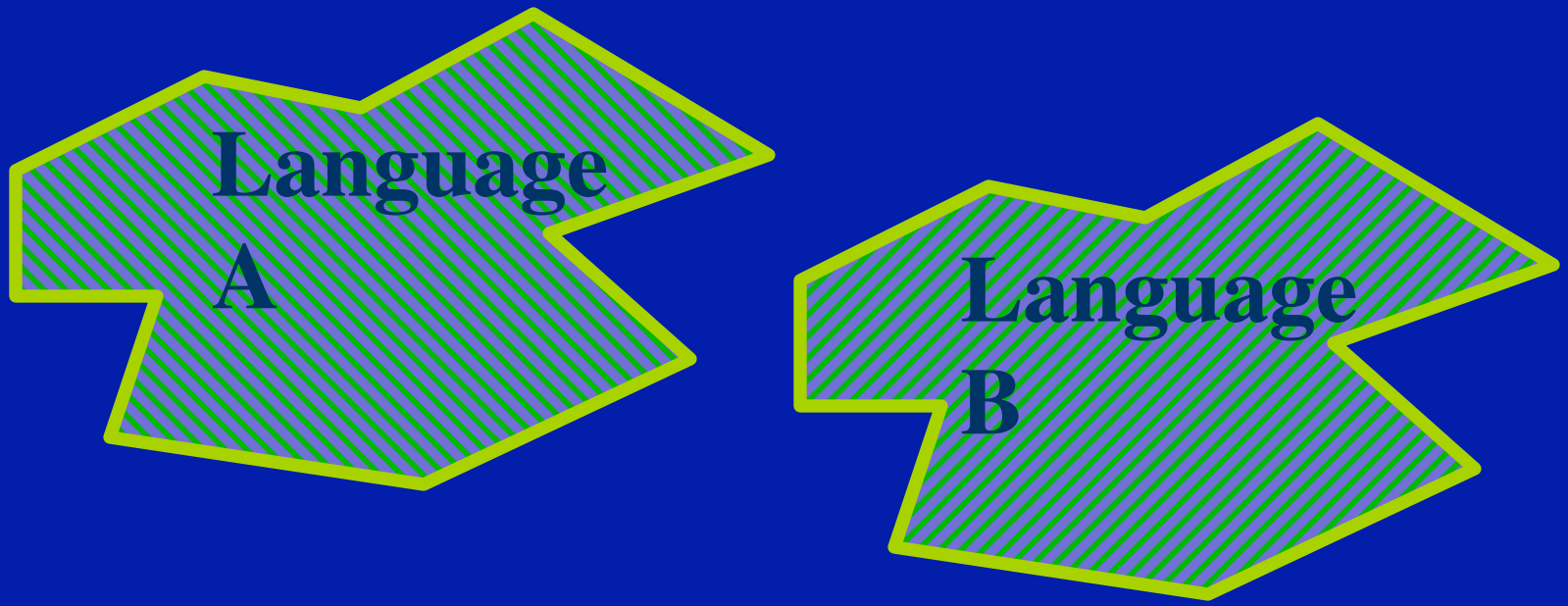
Principles and Parameters

- Recall the illustration from before—the principles are represented by the "shape" of the language knowledge; only languages with this "shape" (with these principles) can be learned as an L1.



Principles and Parameters

- The parameters are represented by variation within the confines of the shape (in the picture, the direction of the pinstripes).



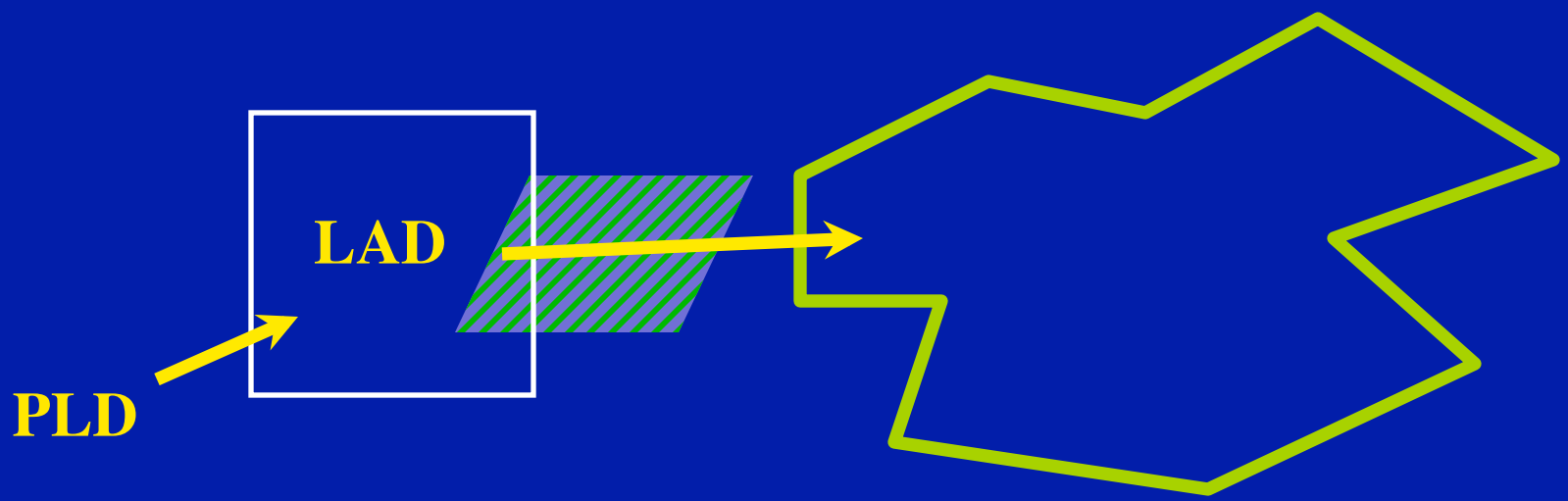
UG and L2A

- So, UG *provides the parameters* (and *provides the options* for each parameter) within the framework of the universal principles.

- We can distinguish this conceptually from the mechanism which converts the speech a child hears into the settings of parameters (the Language Acquisition Device, LAD).

Another picture from before

- The Language Acquisition Device (LAD) takes the Primary Linguistic Data (PLD) to determine the settings of the parameters (in L1 acquisition).



In case this seems too easy

- It is also conceptually possible that the *only* thing genetically specified is the LAD, which sets parameters, but is designed to only learn a grammar which has that specific shape. This may be what some people have had in mind when they lump the two concepts together (and it would be difficult to argue for one view over the other). But for now, let's try to keep them separate.

What are the principles like?

Structure dependence

- An example of a principle is the principle of Structure Dependence.
- Sentences have (hierarchical) *structure*.
- A sentence like *Mary ate the sandwich* has a subject (*Mary*) and a verb phrase (*ate the sandwich*); the verb phrase has a verb (*ate*) and an object (*the sandwich*). **VP**.

Structure dependence

- The subject noun *Mary* can be replaced by much more complicated noun phrases, yet in each case they play the same role in the sentence (picking out the eater of the sandwich).
  - Mary ate the sandwich.
  - The student ate the sandwich.
  - The boy on the hill ate the sandwich.
  - The woman I met in Newton ate the sandwich.

Structure dependence

- Rules that affect the word order of the sentence always take into account the *structure* of the sentence.
- The standard example is yes-no question formation:
  - The auxiliary (*is*, *are*) or modal (*might*, *will*, *should*, …) after the subject is placed before the subject.

Structure dependence

- Mary will eat the sandwich.
- Will Mary eat the sandwich?
- The student will eat the sandwich.
- Will the student eat the sandwich?
- The woman I met in Newton will eat the sandwich.
- Will the woman I met in Newton eat the sandwich?

Structure dependence

- The point is that all rules respect the *structure* of the sentence—there are no rules which will take the first occurrence of *is* and put it in the front of the sentence, even though such rules might be consistent with a lot of examples of yes-no questions.
  - Is the cat hungry?
  - Is the cat who is scratching at the door hungry?

Structure dependence

- So, structure dependence is a principle of grammar, it is a principle of UG. All natural languages obey this principle; that is, all natural languages have the property of being structure dependent.

- This principle does not seem to have any parameters. It is an invariant principle.

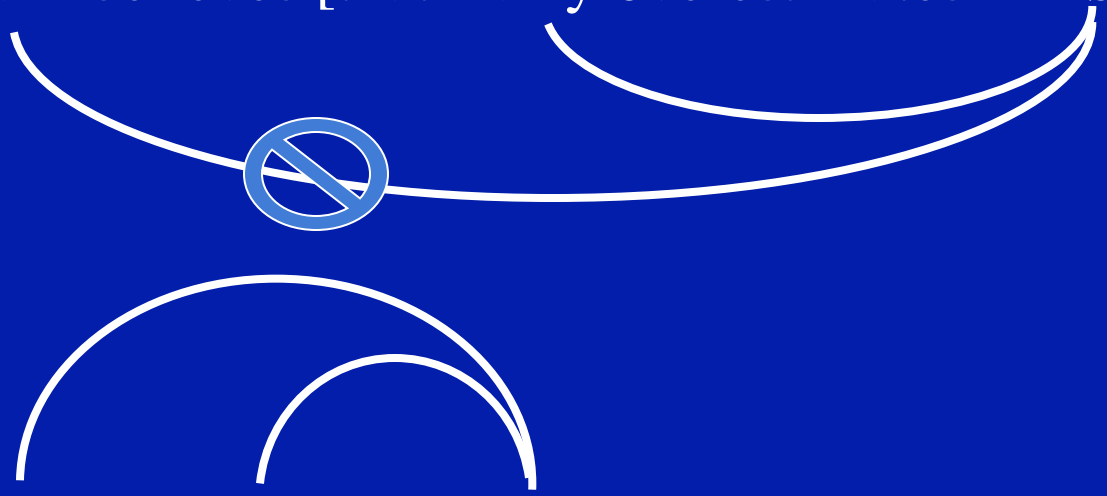
Binding Theory

1) *John* saw *himself*.
2) **Himself* saw *John*.
3) **John* said Mary saw *himself*.
4) **John* said *himself* saw Mary.
5) **John* saw *him*.
6) *John* said Mary saw *him*.
7) *John* said *he* saw Mary.

- Binding Theory. Principle A: Anaphors (like himself) need an "earlier" antecedent within its binding domain. Principle B: Pronouns (like him) *cannot* have an "earlier" antecedent within its binding domain.
- Parameter: Binding domain = sentence containing

Binding Theory parameter: the domain for anaphors

24) Sam believes [that Harry overestimates **himself**]



25) Sam-wa [Harry-ga **zibun**-o tunet-ta to] it-ta]
Sam-top Harry-nom **self**-acc pinch-past-that say-past
'Sam said that Harry pinched (him)self.'

Binding theory parameter: the domain for anaphors

- So, Principle A (anaphors need an antecedent in their binding domain) and Principle B (pronouns must not have an antecedent in their binding domain) are Principles, provided by UG. They are operative in all languages.
- What defines the binding domain varies by language:
  - English = smallest clause (sentence)
  - Japanese = entire sentence

Word order

- Languages can also differ in word order. We will focus here on the parameter that determines the order of the verb and the object.
  - English: Subject Verb Object
    - Word order parameter: VO
  - Japanese: Subject Object Verb
    - Word order parameter: OV