

Universal Grammar

in Second Language Acquisition

Definition of UG

- A set of principles and parameters that constrain all human languages.
- UG is part of the human genetic endowment and is encoded in the Language Acquisition Faculty (LAF).

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And what is the LAF?

- “An innate component of the human mind that yields a particular language through interaction with presented experience, a device that converts experience into a system of knowledge attained: knowledge of one or another language.”

Chomsky (1986)

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Principles and Parameters of UG

- A principle of UG is a statement that is true for all human languages.
For example:
The principle of structure dependency
- A parameter must be set according to the requirements of the language being acquired. For example:
The null subject parameter

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Principle of Structural Dependency

- Grammatical rules do not depend on the linear ordering of the words in the sentence, but on how these words are structured within constituents of specific types.

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Principle of Structural Dependency

- Subject-auxiliary inversion in English
 - She will laugh.

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Principle of Structural Dependency

- Subject-auxiliary inversion in English
 - She will laugh.
 - Will she laugh?

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Principle of Structural Dependency

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 - She will laugh.
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 - The student who is taking good notes will get an A.

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 - Is the student who taking good notes will get an A?

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 - [_{NP}She] will laugh.
 - Will [_{NP}She] laugh?

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 - Will [_{NP}the student who is taking good notes] get an A?

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The Null (\emptyset) Subject Parameter

1. I ate shepherds pie.
2. Ho mangiato il risotto alla milanese.
3. Mary speaks English very well
4. because she was born in the US.
5. Vito parla l'italiano molto bene
6. ma è nato negli stati uniti.

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The Logical Problem of Language Acquisition

- The linguistic input available to children underdetermines the linguistic competence of adults.
- Thus children acquire properties of language that are not immediately obvious and that are not explicitly taught.
- If the child possesses only some general cognitive ability to make generalizations from input, many features of the adult language cannot be acquired.

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Co-occurrence of NPs and Pronouns

- Jane_i washed her_j.
- She_i washed Jane_j.
- She_i washed her_j.
- *Jane_i washed her_i.
- *She_i washed Jane_i.
- *She_i washed her_i.
- Jane_i watched television before she_i had her dinner.
- *She_i watched television before Jane_i had her dinner.

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Binding Theory

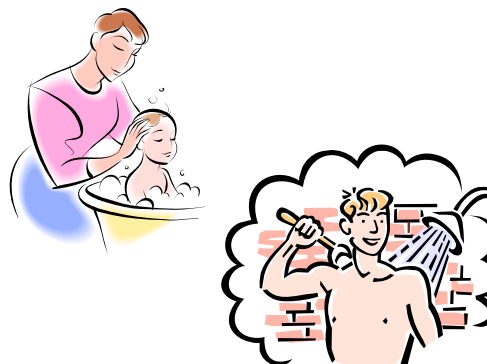
- **Binding**: The association between a pronoun and an antecedent.
- **Anaphoric**: A term to describe an element (e.g. a pronoun) that derives its interpretation from some other expression in the discourse.
- **Antecedent**: The expression an anaphoric expression derives its interpretation from.
- **Anaphora**: The relationship between an anaphoric expression and its antecedent.

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Binding Theory

1. *John_i saw him_i.
 2. John saw himself.
 3. *Himself saw John.
 4. *John_i saw John_i.
- **Principle A** states that reflexives (and reciprocals, such as "each other") must always be bound in their domains.
 - **Principle B** states that a pronoun must never be bound within its domain.
 - **Principle C** states that R-expressions must never be bound. R-expressions are referential expressions: non-pronoun, uniquely identifiable entities, such as "the dog", or proper names such as "John".

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The Logical Problem of Language Acquisition

- If the child comes to the acquisition task solely equipped with abilities to make generalizations from the input data, it would seem impossible to arrive at the correct generalizations without a great many errors, if at all.
- In addition, the child appears to get little or no negative evidence because adults react to meaning and sociolinguistic appropriateness not to errors of form.
- The UG solution: Knowledge about what is and is not possible in adult language stems in part from an innate universal grammar, containing principles and parameters which constrain grammars in various ways.

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UG and SLA

- Are L1 and L2 acquisition comparable?
- What would constitute evidence for UG in SLA?
 - A learners' knowledge of L2 goes beyond what could be induced from the input.
 - A learners' knowledge of L2 goes beyond what could be reconstructed from the L1 (e.g., resetting parameters).
 - There are no violations of UG in interlanguage (no "wild grammars").

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A Test for the Availability of UG in Adult SLA

- Schachter, J. (1989). "Testing a proposed universal." In S. M. Gass & J. Schachter (Eds.), *Linguistic perspectives on second language acquisition* (pp. 73-88). New York: Cambridge University Press.

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Subjacency

- The Principle of Subjacency is a constraint on movement:
- *Movement of wh- elements is cyclical. It may not take place over more than one bounding node at a time.*

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Wh- movement in English

1. What did he say that he was reading?
2. What does she believe that he said that he was reading?
3. What are they claiming that she believes that he said that he was reading?
4. What do you think that they are claiming that she believes that he said that he was reading?

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Derivation of wh- movement

Two theories:

1. Cyclic: Each successively higher clause (=CP) forms a separate cycle in the derivation of the question. Each cycle leaves an intermediate trace.

What_i did he say [t_i that he was reading t_i?]

2. Noncyclic: Derivation occurs in one fell swoop.

What_i did he say that he was reading t_i?

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Cyclic derivation of wh- movement

1. What_i did he say [t_i that he was reading t_i?]
2. What_i does she believe [t_i that he said [t_i that he was reading t_i?]]
3. What_i are they claiming [t_i that she believes [t_i that he said [t_i that he was reading t_i?]]]
4. What_i do you think [t_i that they are claiming [t_i that she believes [t_i that he said [t_i that he was reading t_i?]]]]]

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The fact that there are barriers to wh-movement shows that derivation must be cyclic.

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Barriers to *wh*- movement: Sentential subject

That Tom got an 'A' on his first exam pleased him.

That Tom got an 'A' on his first exam pleased him.

*What did that he got on his first exam please Tom?

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Barriers to *wh*- movement: Noun complement

The fact that you didn't send your resume shows your lack of interest.

The fact that you didn't send your resume shows your lack of interest.

*What does the fact that you didn't send prove your lack of interest?

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Barriers to *wh*- movement: Relative clause

Bill found a principle that solves the problem of equilibrium.

Bill found a principle that solves the problem of equilibrium.

*Which problem did Bill find a principle that solves?

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Barriers to *wh*- movement: Embedded question

They don't know why Sue tolerates Larry.

They don't know why Sue tolerates Larry.

*Who don't they know why Sue tolerates?

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Subjacency

■ The Principle of Subjacency is a constraint on movement:

– *Movement of *wh*- elements is cyclical. It may not take place over more than one bounding node at a time.*

■ In English, bounding nodes are IP and DP.

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A test for the availability of the principle of subjacency in adult SLA

■ Do SL learners know about subjacency constraints on *wh*- movement in English?

■ If so, where does this knowledge come from?

– Transfer from learners' L1

– If there is no movement in L1, then the knowledge of adult second language learners must be innate. That is, adult second language learners have access to UG.

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Schachter's Method

- A syntax test e.g.,
 - That oil prices will rise again is nearly certain.
 - There is a possibility that we can obtain the information elsewhere.
 - Vicki doesn't like deserts that have cream in them.
 - The police didn't discover who the murderer was.

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Schachter's Method

- A subjacency test e.g.,
 - What did that he got on his midterm please Andy?
 - What does the fact that you didn't send prove your lack of interest?
 - What did Marian visit the store that had in stock?
 - What can't you remember that you ate three days ago?

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Schachter's Method

		Syntax Test	
		Pass	Fail
Subjacency Test	Pass	A	B
	Fail	C	D

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Native Speaker Results

		Syntax Test	
		Pass	Fail
Subjacency Test	Pass	14	1.8
	Fail	2.8	0.5

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Results from Indonesian Learners

		Syntax Test	
		Pass	Fail
Subjacency Test	Pass	7	0.8
	Fail	9.3	3

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Results from Chinese Learners

		Syntax Test	
		Pass	Fail
Subjacency Test	Pass	8.8	1.8
	Fail	7.8	1.8

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Results from Korean Learners

		Syntax Test	
		Pass	Fail
Subjacency Test	Pass	3.3	0.5
	Fail	10.8	6.5

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Results are Mixed

- Schachter (1989) concluded that UG is unavailable or of limited access in SLA.
- Bley-Vroman, Felix & Ioup (1988) also tested L2 learners' knowledge of subjacency violations. They concluded that UG must still be active.
- White (1988) investigated whether NSs of French acquire knowledge of the boundary status of the *I*-node in English. Low-intermediate group had not reset the parameter, while a high-intermediate group did.

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UG and SLA

- Complete access
- No access (the Fundamental Difference Hypothesis)
- Partial access
- Dual access

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UG and SLA

- Complete access
 - L2 learners have full access to UG principles.
 - L1 provides learners with a 'quick setting' for the L2 parameter if the value is the same, otherwise the L2 learner proceeds in the same way as the L1 learner.

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UG and SLA

- No access (the Fundamental Difference Hypothesis)
 - L2 learners no longer have access to the principles and parameters of UG.
 - General learning principles replace UG.

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UG and SLA

- Partial access
 - L2 learners have access to UG through their L1.
 - They may be able to reset L1 parameters by means of general learning strategies.
 - UG is accessible but the learning principles are not.

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UG and SLA

- Dual access
 - L2 learners have access to UG but this is partly blocked by the use of general learning strategies.

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Problems with UG as a theory of SLA

1. There is no learning theory in UG. How does the learner identify particular bits of language as relevant to the setting of certain parameters?

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Problems with UG as a theory of SLA

2. UG only applies to “core” grammar, but there is much more grammar to be learned than just the core. And what about the learning of lexicon, phonology, semantics, sociolinguistic competence, discourse structures, etc?

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Problems with UG as a theory of SLA

3. In order to test UG in SLA we must find extremely rare grammatical structures.

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Problems with UG as a theory of SLA

4. Even if we concede that the solution to the logical problem of language acquisition requires innate knowledge, need that knowledge be in the specific form of UG? Consider universal operating principles of language acquisition such as those of Slobin or Andersen.

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Problems with UG as a theory of SLA

5. Evidence in UG studies is obtained from grammaticality judgments, since these are supposed to reflect competence. But there are many problems with grammaticality judgments: they are just another kind of performance, learner's judgments are unstable, and individual differences among learners are ignored.

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