



Interlanguage Grammar in Second Language Acquisition

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“Error”? Dictionary views

- ★ An act that through ignorance, deficiency, or accident departs from or fails to achieve what should be done.
(Meriam-Webster Dictionary)
- ★ An error is something that you have done which is considered to be incorrect or wrong, or which should not have been done.
(Cobuild English Dictionary)
- ★ A mistake.
(dictionary.com)

“Errors” in Second Language Acquisition

- ★ Errors in second language acquisition may mean something totally different.
 - L2-learners’ errors are not random. [cf. mistake]
 - L2-learners’ errors reflect learners’ systematic knowledge of grammar. [cf. accident act]
 - L2-learners’ errors are informative data that we can use to probe into sophisticated linguistic hypotheses and predictions. [cf. incorrect/wrong act]

L2-Errors => Interlanguage Hypothesis

- ★ Learners have an **interlanguage grammar** (= a mental representation of grammatical knowledge) at every stage of the acquisition process (Corder 1967, 1981; Selinker 1972).
- ★ Errors are evidence of hypotheses being tested; they are a sign of progress in learning; **Interlanguage grammars are systematic and continuously evolving.**
- ★ Learners acquire some aspects of the L2 grammar through similar stages, **regardless of their L1**. L1 transfer is not the only process in L2 acquisition.

Today's class

- ★ We will discuss some important issues in understanding the interlanguage grammar in second language acquisition.

Today's class

- ★ What factors may contribute to the development of L2 interlanguage grammars?
- ★ What is the role of L1 for L2 interlanguage grammar?
- ★ How do L2-learners acquire abstract and subtle grammatical properties without proper input or L1-transfer? Universal Grammar?
- ★ How do we study the L2 interlanguage grammar? (methodology)
- ★ **A case study: L2-acquisition of English articles**



L1 influence

L1 and L2 acquisition: differences

- ★ Knowledge of a language: L2-learners already have a language in place.
- ★ Age: L2-learners are older than L1-learners
- ★ Ultimate attainment: In the absence of impairment or deprivation, all children succeed in acquiring their L1. But many L2-learners fail to acquire their L2 fully.
- ★ Explicit instruction: Children aren't taught their first language. But many L2-learners do receive explicit instruction about the L2 grammar.

L1 and L2 acquisition: differences

- ★ Knowledge of a language:
L2-learners already have a
language in place.

Behaviorism: the role of L1 for SLA

- ★ Behaviorism: language as a set of habits
L1-acquisition as imitation and learning by analogy
L2-acquisition = learning new habits

positive transfer: facilitation

L1 habit = L2 habit

negative transfer: interference

L1 habit \neq L2 habit

Contrastive Analysis

Language learning = Learning a new habit
major source of errors in L2 is L1

comparing the L1 and the L2
when $L1 = L2$, learning is easy
when $L1 \neq L2$, learning is difficult

- ★ **strong version:** *predicting* where L2-errors should occur
- ★ **weak version:** *explaining* why L2-errors occur

L1-influence

One of the differences between FLA and SLA is that L2 learners already have a set of knowledge about their L1.



How does knowledge of L1 affect acquisition of L2 grammar?



Behaviorism and the contrast analysis hypothesis (CAH) would expect that errors by L2 learners are the result mainly of transfer from their L1.



BUT!

Problems with the CAH

Not all errors can be accounted for by L1 transfer alone.

- *Too weak*
occurrence of errors that are not predicted.
- *Too strong*
non-occurrence of errors that are predicted

Problems with the CAH (too weak)

- ★ occurrence of errors that are not predicted.
- ★ Second language learner data reflect errors that go beyond the native language. (like child L1 learner data)
 - *He comed yesterday.*

(Gass & Selinker 1994)

Problems with the CAH (too strong)

- ★ non-occurrence of errors that are predicted. (e.g. Zobl 1980)

French

Je les voi

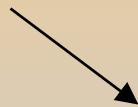
I them see

‘I see them’

English

I see them

**I them see.*



L1-French learners' L2-English : **I them see*

L2-English learner's L1-French: *Je voi les*

Error Analysis (Corder 1967)

focus on explaining existing errors

distinction between mistakes (performance) and errors (competence): systematic grammar/errors

comparison between L2-data and TL

- ★ error collection → error identification → error classification → quantification → analysis of error source → design of pedagogical materials

Problems: Error Analysis

- ★ disregard of number of obligatory contexts (avoidance issues, amount correct%)
- ★ usage ≠ correct interpretation
- ★ multiple interpretations of error sources (neither developmental nor TL-related)

The role of L1-transfer in L2-interlanguage grammars

- ★ Transfer as avoidance (Schachter 1974)

avoiding constructions in the TL that do not exist in the NL.

- ★ Differential learning rates

similarities between the NL and the TL facilitate the learning rate.

- ★ Overproduction

overuse of a TL structure that is similar to the NL
e.g., topic-comment structures in the L2-English of L1-Chinese speakers.

Neither the NL Nor the TL, but systematic

- ★ However, L2-learners' interlanguage grammars show ...
 - patterns that come from *neither* the NL *nor* the TL; not derived from any obvious overgeneralization, strategic inference, or formal instruction. Yet, **systematic!**



Beyond L1-influence: Universal Grammar and Second Language Acquisition

Motivating UG: L1 acquisition

- ★ UG is motivated by **learnability arguments**:
 - The primary linguistic data (the input that the child is exposed to) underdetermine unconscious knowledge of language (the grammar that the child acquires)
- ★ Child can learn grammatical properties that don't come from the L1 input, and that isn't explicitly taught.

Motivating UG: L1 acquisition

Let's suppose that the child learn question formation:

The girl **is** laughing →

Is the girl laughing?

Rule: front the “*is*”

Motivating UG: L1 acquisition

★ What about complex questions?

The girl who **is** in the room **is** laughing

How do you turn this into a question?

Motivating UG: L1 acquisition

- ★ What about complex questions?

Possibility 1: move the first *is*
(a linear order rule)

The girl who **is** in the room **is** laughing

→

Is the girl who __ in the room **is** laughing?

WRONG!

Motivating UG: L1 acquisition

- ★ What about complex questions?

Possibility 2: move the *is* that's the main verb
of the sentence (a structural rule)

The girl who **is** in the room **is** laughing

→

Is the girl who **is** in the room _ laughing?

RIGHT! => Children know it!

Motivating UG: L1 acquisition

- ★ UG is motivated by **learnability arguments**:
 - The primary linguistic data (the input that the child is exposed to) underdetermine unconscious knowledge of language (the grammar that the child acquires)
 - Given the under-determination, it would be impossible to account for L1 acquirers' achievement without postulating *genetically built-in universal linguistic principles*. => **UG** (Chomsky 1965).

Universal Grammar

- Principles: invariant properties of language
- Parameters: principles with a set of built-in options (*values, settings*)

Motivating UG: L2 acquisition

- ★ In L2 acquisition, learners are faced, at least potentially, with a similar task to that of L1 acquirer.
 - There are abstract, complex, and subtle properties of grammar that are underdetermined by the L2 input and by L1 grammar.

Motivating UG: L2 acquisition

- ★ If it turns out that L2 learners acquire abstract properties that could not have been induced from the input (or their L1), it can strongly indicate that UG constrains L2 *interlanguage grammars* systematically.

Motivating UG: L2 acquisition

- ★ **L2-study:** knowledge of complex question formation (Otsu and Naoi 1986)
 - Subjects: 11 adolescent L1-Japanese L2-English learners
 - Japanese doesn't front anything in questions
 - The L2-learners were taught how to form simple questions (*Is the girl in the room?*) but not how to form complex questions

Motivating UG: L2 acquisition

★ Results:

- 7 out of 11 L2-learners correctly applied the structural rule:
 - **Is** the girl who is the room ___ laughing?
- Only 1 L2-learner incorrectly applied the linear order rule:
 - **Is** the girl who _ in the room is laughing?

L2-study knowledge of complex question formation
(Otsu and Naoi 1986)

UG-Access and L2 Acquisition

- ★ The phenomenon **underdetermined by the L2 input.**
 - It cannot be acquired by observation of the L2 input, including statistical inference, analogy, or instruction.
- ★ The phenomenon **underdetermined by the L1 grammar as well.**
 - Transfer of surface properties is ruled out as an explanation of knowledge that L2 learners attain. (White 2003:23)

Motivating UG: L2 acquisition

- ★ If it turns out that the L2 learner acquires abstract properties that could not have been induced from the input, it can strongly indicate that UG constrains L2 *interlanguage grammars*.
- => **Systematic L2 errors are predicted by linguistic theory about UG!**

For example ...

- Reflexive binding (Finer and Broselow 1986; Finer 1991; Thomas 1991)
- Verb-adverb placement (Eubank et al. 1997; Ionin and Wexler 2002)
- Case-checking and Word order (Schwartz and Sprouse 1994)
- Metrical parameters associated with stress assignment (Dresher and Kaye, 1990), Archibald (1992, 1993), Pater (1993)
- Minimal Sonority Distance parameter (Broselow and Finer 1991).

UG and Article Semantics in L2-English

★ A experimental study on L2 acquisition
of English articles by L1-Korean
learners and L1-Russian speakers

UG and Article Semantics in L2-English

- Korean and Russian lack articles => no obvious L1 transfer.
- The usage of English articles is a subtle and complex phenomenon, so that there is no obvious L2 input or formal instruction on articles.
 - Note. even if L1 has an article, L2-acquisition of articles is not a straightforward matter (e.g. L1-Spanish: Murphy 1997, for an overview)

Background: Article Misuse in L2-English

★ L2-English learners make errors when using English articles:

- 1) Article omission
- 2) Article substitution, specifically...

Overuse of *the* in the context “a” is correct

Overuse of *a* in the context “the” is correct

[Huebner 1983; Master 1987; Parrish 1987; Thomas 1989; Young 1996, Murphy 1997, Robertson 2000, Leung 2001, Ionin, Ko, Wexler 2003, to appear, Ionin 2003, Ko, Ionin, Wexler 2004, a.o.]

Examples: Article Misuse in L2-English

- ★ Production data from L1-Korean speakers:
 - “When he gave me the bible, he attached the memo which was written about the his love about me.”
 - “The most valuable object that I have received is the ball and the signature of the famous baseball player is signed on it”

(Ionin 2003, Ionin, Ko, & Wexler 2003)

Examples: Article Misuse in L2-English

- ★ Production data from L1-Russian speakers:
 - “When I was living in Ulan-Ude yet unmarried my friends presented me the small seamese kitten.”
 - “I lost the health tooth, and I have realized after some time how it was valuable for me. It happened unexpectedly – I bit off the solid sweet and that’s all: my nice – facial! – tooth was fractured.”

(Ionin 2003, Ionin, Ko, & Wexler 2003)

Understanding Article Misuse

- ★ Consensus: L2-English learners make errors when using English articles.
- ★ But, there has been no consensus for what causes L2-English errors (Thomas 1989).
- ★ Insight: **L2 learners may be sensitive to the fine-grained semantics of articles in English, guided by UG.**
 - Linguistic perspectives are much needed in studying L2-English articles!

Studies on Article Semantics

- ★ Articles cross-linguistically can encode the discourse-related distinctions of *definiteness* and *specificity*, where specificity is viewed as *speaker intent to refer* (cf. Fodor and Sag 1982).
 - See Fodor and Sag 1982, Abusch 1994, Reinhart 1997, Winter 1997, Kratzer 1998, among others, for discussion of specific indefinites.

Specific Indefinites and Non-specific Indefinites

★ *Specific indefinite “a”*

- 1) A man just proposed to me in the orangery (though I'm much too embarrassed to tell you who it was). (Fodor & Sag 1982, ex. (7))

★ *Non-specific indefinite “a”*

- 2) A man is in the women's bathroom (but I haven't dared to go in there to see who it is). (Fodor & Sag 1982, ex. (8))

Specific Indefinites and Non-specific Indefinites

★ *Specific “this” in English*

- John has {a, this} weird purple telephone.
- John has {a, #this} telephone, so you can reach me there.

(Maclaran 1982: 88, ex. (85))

Definiteness and specificity: (for a singular DP)

- ★ If a DP of the form [D NP] is [+definite], the speaker and the hearer presuppose the existence of a unique individual in the set denoted by the NP. (for formal definitions, see Heim 1991). => ***the* in English**
- ★ If an DP is the form [D NP] is [+specific], the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property (cf. Fodor and Sag 1982; for formal definition, see Ionin 2003).

=> no morphological marking in English, but ***le* in Samoan.**

* Hypothesis

L2-learners are sensitive to the fine-grained semantic notion of *specificity* and *definiteness* available in UG.

Specific “a” => “the”

Prediction: Systematic Errors

★ Specific indefinite => “*the*” overuse

1) William: I am here for a week. **I am visiting (a, the, --) friend from college – his name is Sam Bolton, and he lives in Cambridge now.**

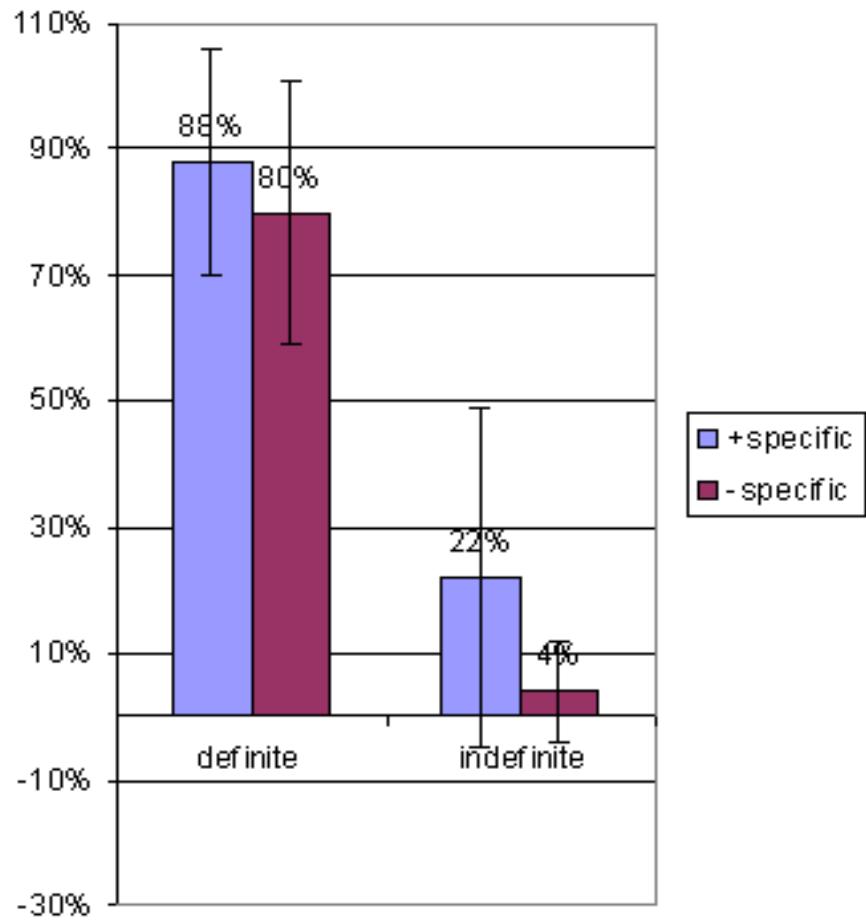
★ Non-specific indefinite => *correct “a” use*

2) Professor Clark: What is Professor Peterson doing?

Secretary: **She is meeting with (a, the, --) student, but I don’t know who it is.**

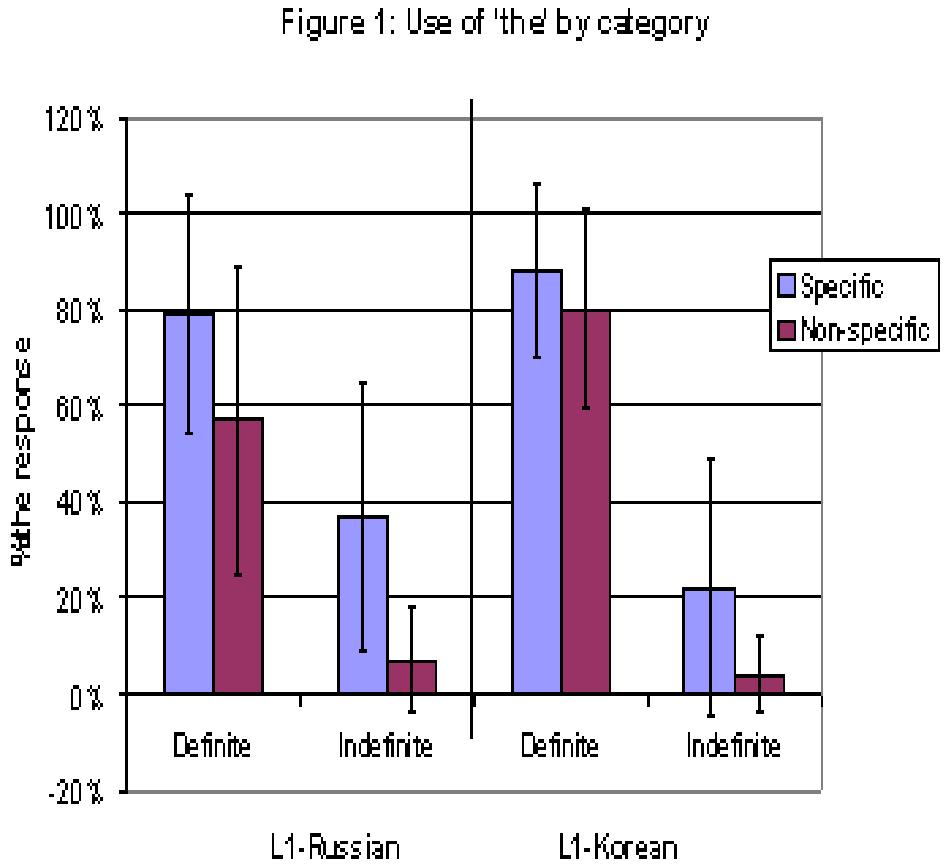
Results: article use across contexts (N=39)

Figure 1. use of 'the' across contexts



★ L1-Korean learners overuse *the* with specific indefinites (22%) significantly more than with non-specific indefinites (4%) [p<.001].

Results: article use across contexts (N=39)



★ Both L1-Korean and L1-Russian learners of English **overuse “the” with specific “a”** more than with non-specific “a”.

Discussion: New finding

- ★ The L2-learners' errors in article usage are not random, but systematic.
- ★ They occur primarily in **specific indefinite “a” contexts** (22%), but not in non-specific indefinite “a” contexts (4%).

Discussion

- ★ L2-English learners have access to universal semantic distinction “*specificity*” that is not encoded by the morphology of articles by either their L1 or their L2.
 - <= **no obvious L1-transfer account..**
 - <= **no obvious account based on simple analogy or L2 input/instruction ...**

Discussion: implication

- ★ The L2-learners' errors in article usage are not random, but occur primarily in specific indefinite “a” contexts. =>

**expected from the semantic theory
about English articles in UG.**

Discussion: Implication

★ Abstract and subtle (but systematic) errors such as article choice in L2 acquisition is explained by linguistic theory about the semantics of articles in UG.



Methodology

Methodology

- ★ data collection methods:
 - advantages & disadvantages of each
 - the choice of the method depends on the experimental question and hypothesis

- ★ types of studies:
 - longitudinal vs. cross-sectional
 - naturalistic vs. experimental

Data Collection Methods

- ★ spontaneous speech collection & transcription
 - ★ standardized language tests (e.g., TOEFL)
 - ★ tests from psychology (questionnaires)
-
- ★ elicitation tests
 - elicited imitation (repeating complex sentences)
 - elicited production (e.g., filling in the blank with the right word)
 - language games (e.g., giving directions)

Data Collection Methods

★**comprehension tasks**

- act-out tasks
- picture-matching

★**intuitive data**

- grammaticality judgments
- preference / acceptability judgments
- truth-value judgments
- online sentence-matching

Keep in mind...

- ★ Replication: a good empirical study should be replicable!
- ★ It should be possible to obtain similar results with the same experimental design and an equivalent group of participants.

Activity I

Adverb-verb order

In English, an adverb cannot intervene between a verb and its object:

- Mary is quietly eating soup.
- *Mary is eating quietly soup.

In some languages (e.g., French), the reverse order is correct. How would you determine whether L2-English learners are aware of adverb-verb order in English?

Activity II

The sentence *Every cat climbed up a tall tree in my back yard* has two potential interpretations:

- a) Every cat climbed up a different tall tree in my back yard.
- b) Every cat climbed one particular tall tree in my back yard.

However, this sentence does not have the reading, in which *every* modifies *tall tree* rather than *cat*:

- c) Every tall tree in my back yard was climbed on by a cat.

How might you determine that L2-English learners allow interpretations (a) and (b) for this sentence, and disallow interpretation (c)?

Activity III

★ The articles *the* and *a* have quite distinct meanings, as illustrated below:

- a) I saw a movie yesterday. The movie was interesting.
- b) I have five cats and two dogs. If I had to part with one of my pets, I would give away a cat.
- c) I have five cats and one dog. If I had to part with one of my pets, I would give away the dog.

How might you test L2-English learners' understanding of the meaning of *the* vs. *a*?

Take home message

- ★ L2-interlanguage grammars
- ★ L1-influence may explain some (but not all) L2-interlanguage grammars.
- ★ UG and linguistic theory provide a useful insight for studying L2-interlanguage grammars related to subtle and complex phenomena (e.g. article choice): neither L1 nor L2, but another natural language!
- ★ Methodological issues



Development of L2- interlanguage grammars

L1 and L2 acquisition: Differences

- ★ **Knowledge of a language:** L2-learners already have a language in place.
- ★ **Age:** L2-learners are older than L1-learners
- ★ **Ultimate attainment:** In the absence of impairment or deprivation, all children succeed in acquiring their L1. But many L2-learners fail to acquire their L2 fully.
- ★ **Explicit instruction:** Children aren't taught their first language. But many L2-learners do receive explicit instruction in the L2.

Age effect

★ Are children better than adults at learning a second language?

Age effect

- ★ Age effects in phonology:
 - later age of arrival to an English-speaking country → greater foreign accent in English
 - Flege, Munro, and MacKay (1995):
 - Subjects: 240 L1-Italian L2-English learners
 - 15 years residence in Canada
 - Accents judged by native English speakers

Age effect

★ Age effects in syntax:

- later age of arrival to an English-speaking country → lower self-reported English proficiency
- later age of arrival to an English-speaking country → on average, lower performance on tests of English grammar

e.g. Performance on tests of English by L1-Korean and L1-Chinese L2-English learners. Data from Johnson and Newport (1989), reproduced in Birdsong and Molis (2001).

Age effect

★ Possible explanations?

- Only child L2-learners have access to Universal Grammar
- Adults are more influenced by L1-transfer
- Children are more motivated than adults to learn a new language
- Children receive more input in the second language than adults do