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# The role of contexts of use in the study of learner language

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# Goal of talk

- This talk will explore the notion of Context of Use and its application in exploring learner language.
- I won't say anything particularly original,
- My goal is to shine more light on a theoretical construct which is usually left undefined and used in an ad hoc manner.

# What is Context of Use?

- **Context of use** -  
“discourse that surrounds a language unit and helps to determine its interpretation”
- Not quite: seems to define the context as simply the co-text (the text around the language unit)
- The way it is often used is closer to “referential context” - what meaning was the speaker conveying by using the structure.
  - e.g., the context of use of a definite article includes knowledge of what the speaker was referring to (specific or generic entity, known to hearer, etc.)
  - e.g., the context of use of the present perfect includes the realis status of the event being expressed: completed event, ongoing event, with implied consequence for the present, etc.

# What is Context of Use?

- **Context of use:** My definition
  - The facts that motivate the speaker/writer to choose this particular form over other alternative forms.
  - Excluding purely syntactic constraints, e.g., the choice of a third person singular verb after a singular 3ps subject is not considered a context of use issue.
  - I am here concerned with the context of use of lexical items and syntactic forms (e.g., passive, definite article), although we could extend the discussion to cover the context of use of discourse structures (e.g., the context of use of Narration or Description).

# What is Context of Use?

- Context of Use is **not** Halliday's "Context of Situation" or "Social Context" -
  - **Context of Situation** is the set of relevant factors that constrain the appropriate linguistic **patterns of choices** over a **text as a whole**.
  - **Context of Use** is the set of relevant factors that pertain to a **single syntactic or lexical choice**.
  - Although aspects of the context of situation may sometime constrain the individual form choice.



# What is Context of Use?

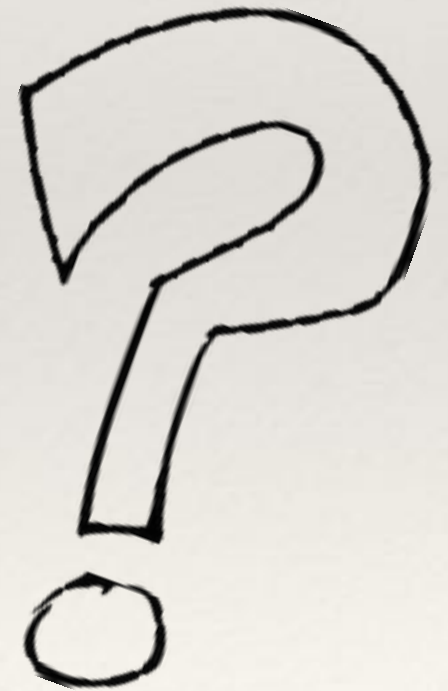
- Related to **Form-Function distinction**
  - e.g.,
    - Form errors - wordings wrong in any context of use.
    - Function errors = Correct form in wrong context of use
- Related to **Syntax-Discourse interface** work (Sorace and Filiaci, 2006)
  - Interested in the use by non-natives of syntactic forms in inappropriate discourse contexts.

# Examples of Context of Use

- Valid contexts of use for the **definite article** in **English** (sometimes “referential contexts”):
  - When referring to a *specific* entity or entities which the speaker assumes known to the hearer:
    - through general knowledge, e.g., the president.
    - through prior mention, e.g. the concept under consideration.
    - through shared perceptual availability, e.g., the projector.
  - When introducing a *generic* class of entities for discussion, e.g., “the Leopard is a member of the feline family”



2. Why am I interested in context of use?





## 2. Why explore context of use

- TREACLE project (Universidad Autonoma de Madrid, Universidad Politecnica de Valencia) (2009-2012)
  - Study of L2 English by Spanish natives
  - Written essays by Spanish university students
  - Around 1000 words per essay (700 essays)
  - CEFR Proficiency Levels A1-C2 (Oxford Placement Test)

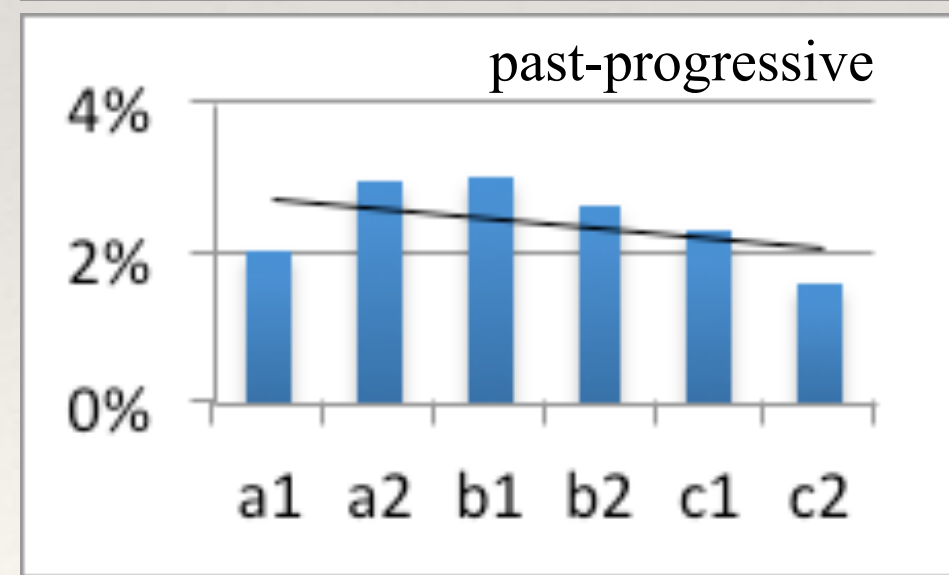
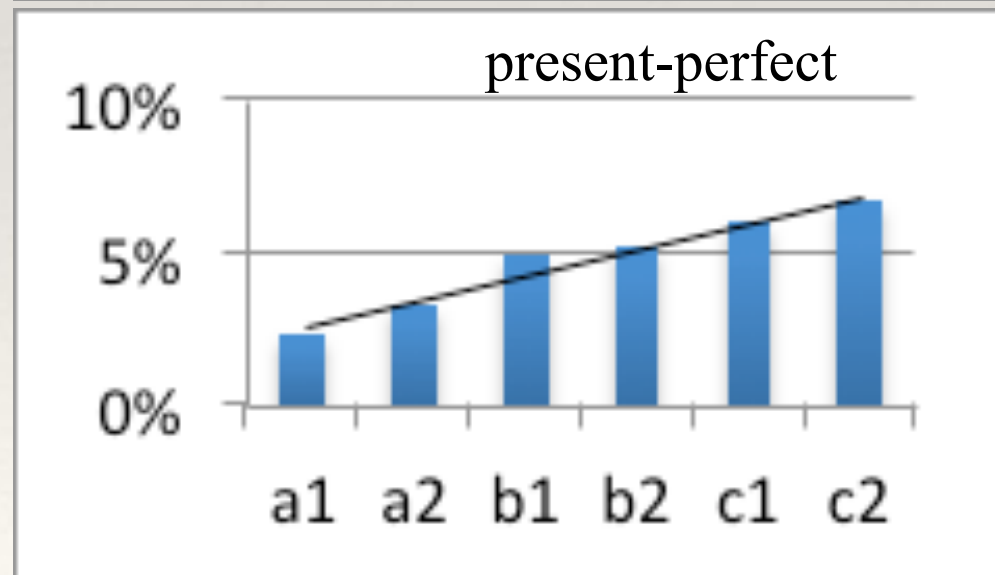
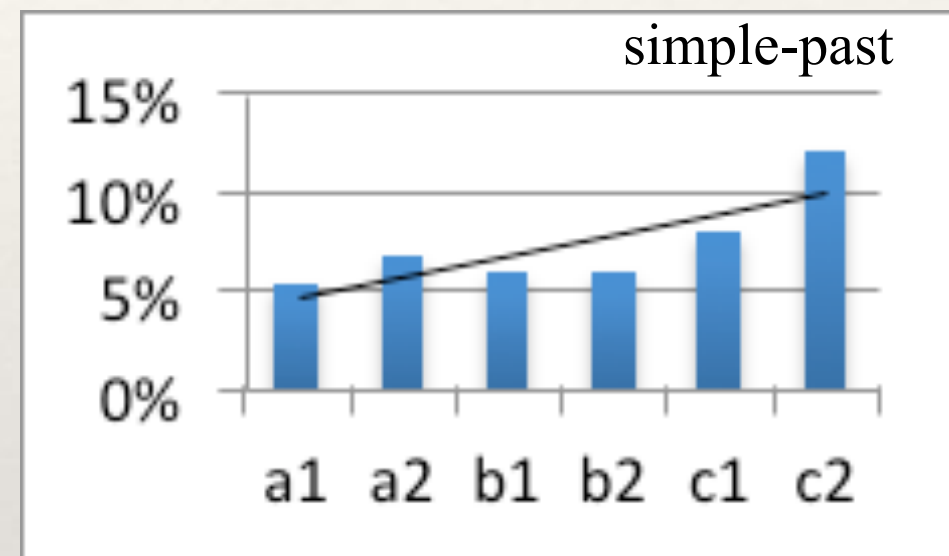
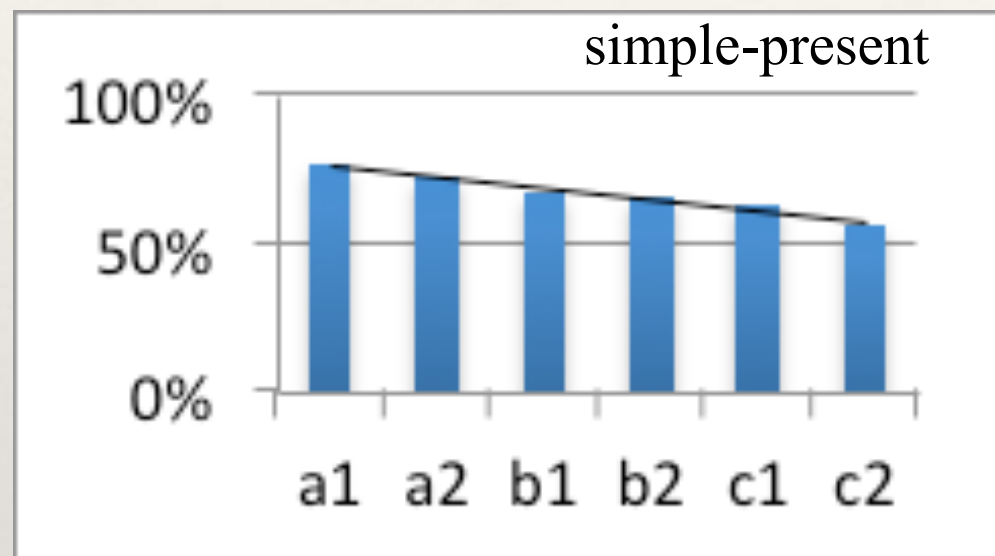
## 2. Why explore context of use

- We were trying to understand:
  - **Critical language concepts:** What do these students need to learn to gain in proficiency?
  - **Criterial features for CEFR levels:** When is it best to teach each feature?
- Using:
  - **Error studies:** manual classification of 16,000 errors in a 116,000 word subcorpus.
  - **Syntactic studies** (automatic parsing) of 700,000 words, featurised to add tags for tenses, voice, transitivity, theme, modality, quantification, etc.

## 2. Why explore context of use

### (i) Explaining shifting patterns of use

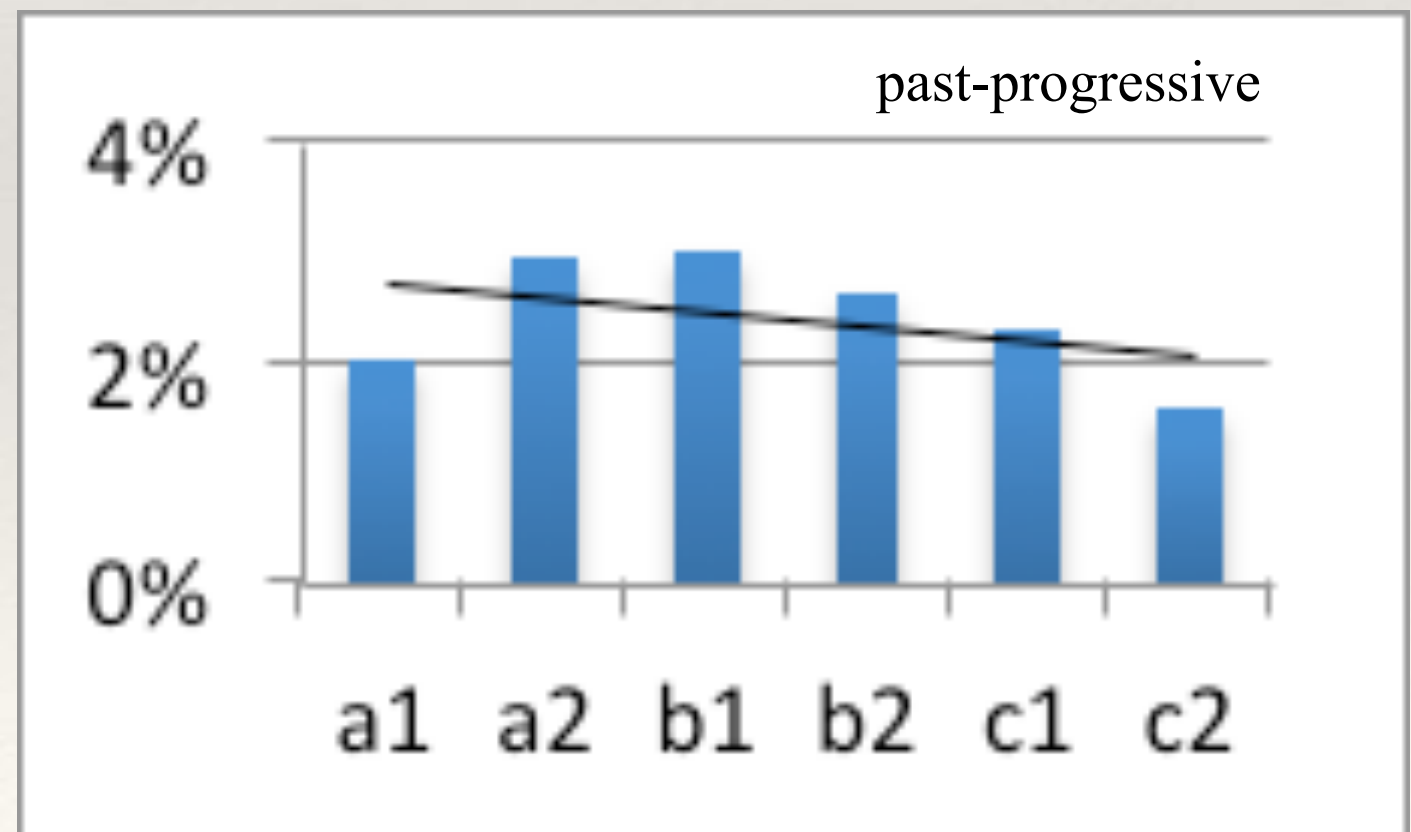
- I performed a study trying to order linguistic structures in order of acquisitional difficulty by observing their “acquisition profile”



## 2. Why explore context of use

### (i) Explaining shifting patterns of use

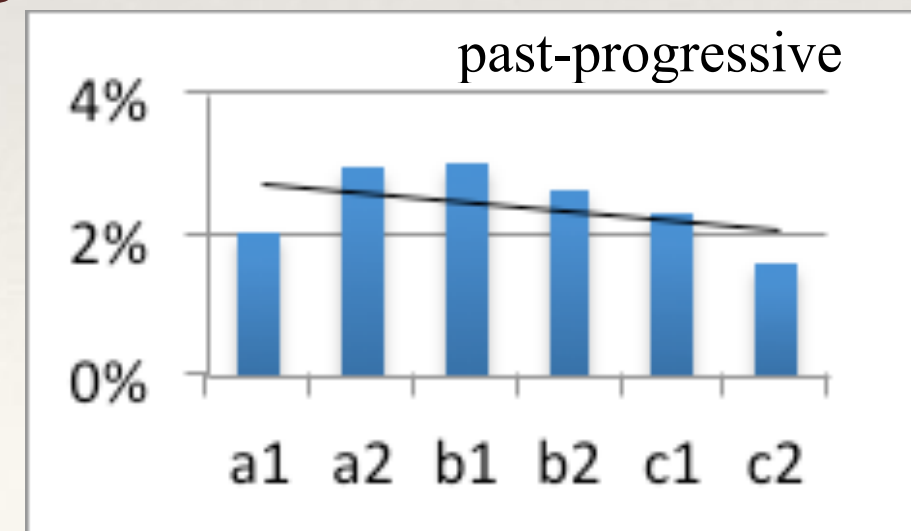
- However, to explain the observed patterns, it became apparent that two developmental processes were involved:
  - Learning HOW to produce the structure (syntactic competence)
  - Learning WHEN to produce the structure (functional competence)



## 2. Why explore context of use

### (i) Explaining shifting patterns of use

- However, to explain the observed patterns, it became apparent that two developmental processes were involved:
  - Learning HOW to produce the structure (often transferred with little difficulty)
  - Learning WHEN to produce the structure
    - **Contracting contexts of use:** learning not to use the structure in a context of use of the L1
    - **Expanding contexts of use:** learning to use the structure in a context not appropriate in the L1





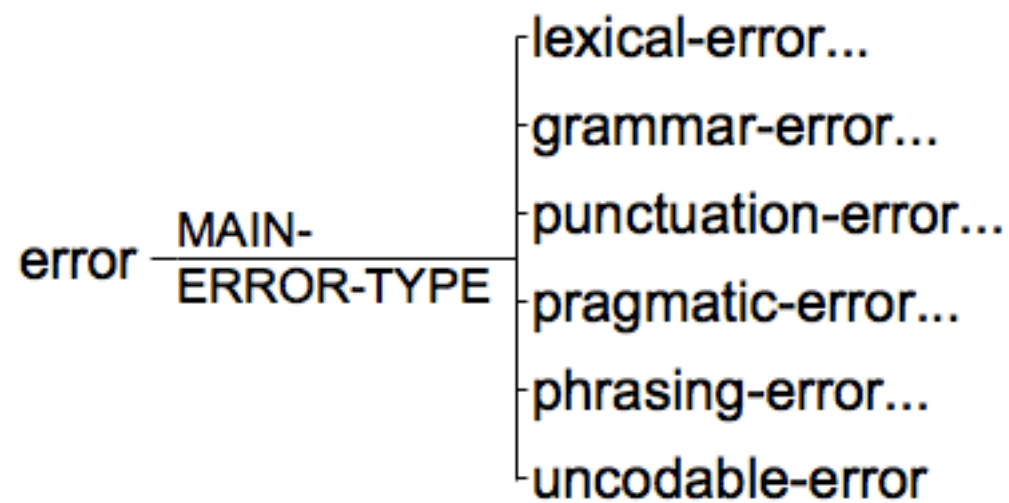
# Interlingual Contexts of use: Present Perfect

	Spanish	English	
Same day past with no implied effect on present	At 5pm: He desayunado esta mañana	At 5pm: (I ate breakfast this morning)	X
Past happening with effect on present	Me he roto el brazo y no puedo trabajar	I've broken my arm and I cannot work	Past happening with effect on present
Achievements in still open period	Este año ya hemos construido 20 casas	We have build 20 houses so far this year	Achievements in still open period
Life achievements	He vivido en cinco países distintos	I have lived in five different countries	Life achievements
X	(Es la primera vez que como sushi)	This is the first time that I've eaten sushi	Specifying first time

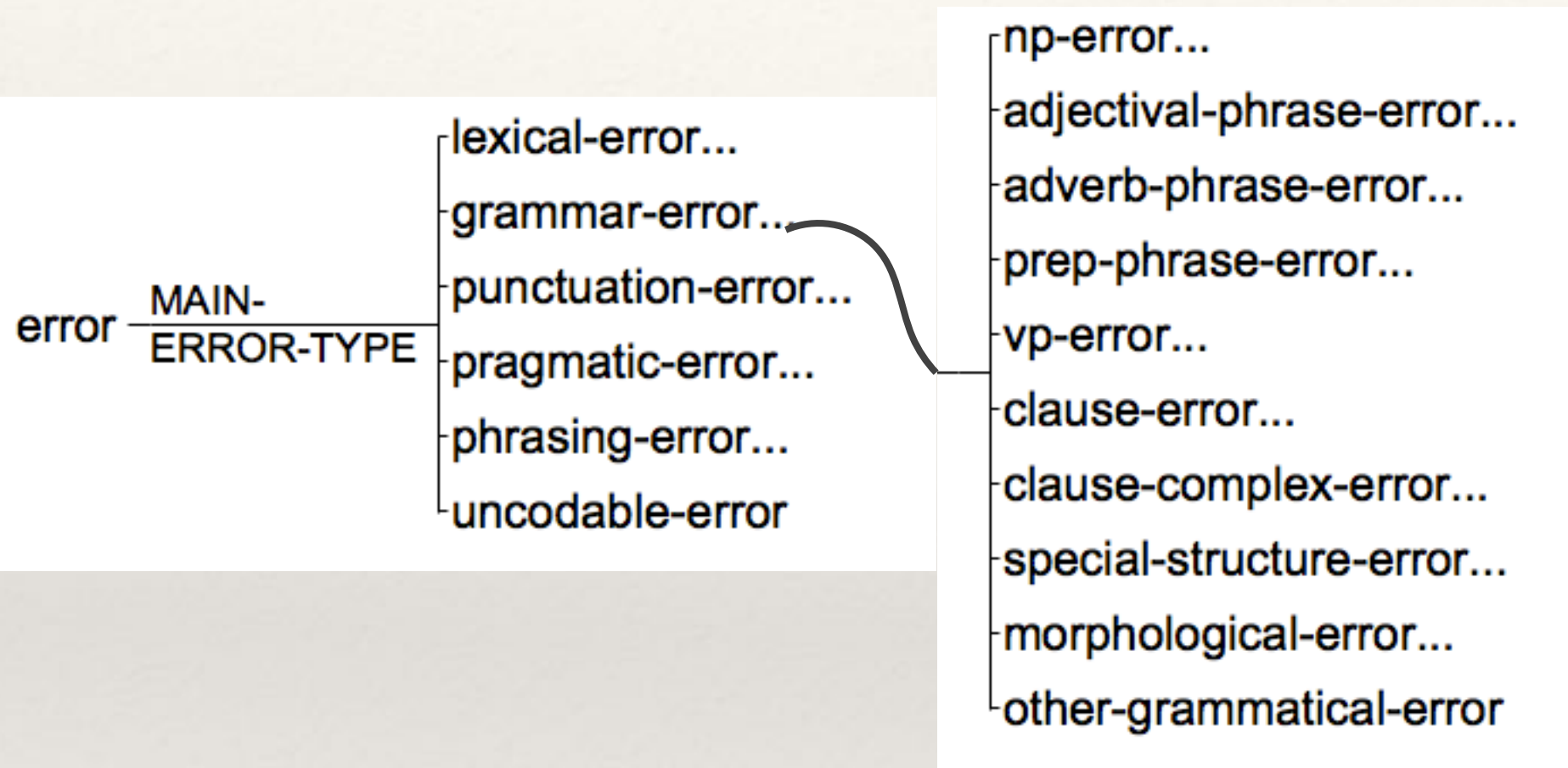
## 2. Why explore context of use

### (ii) Exploring errors more delicately

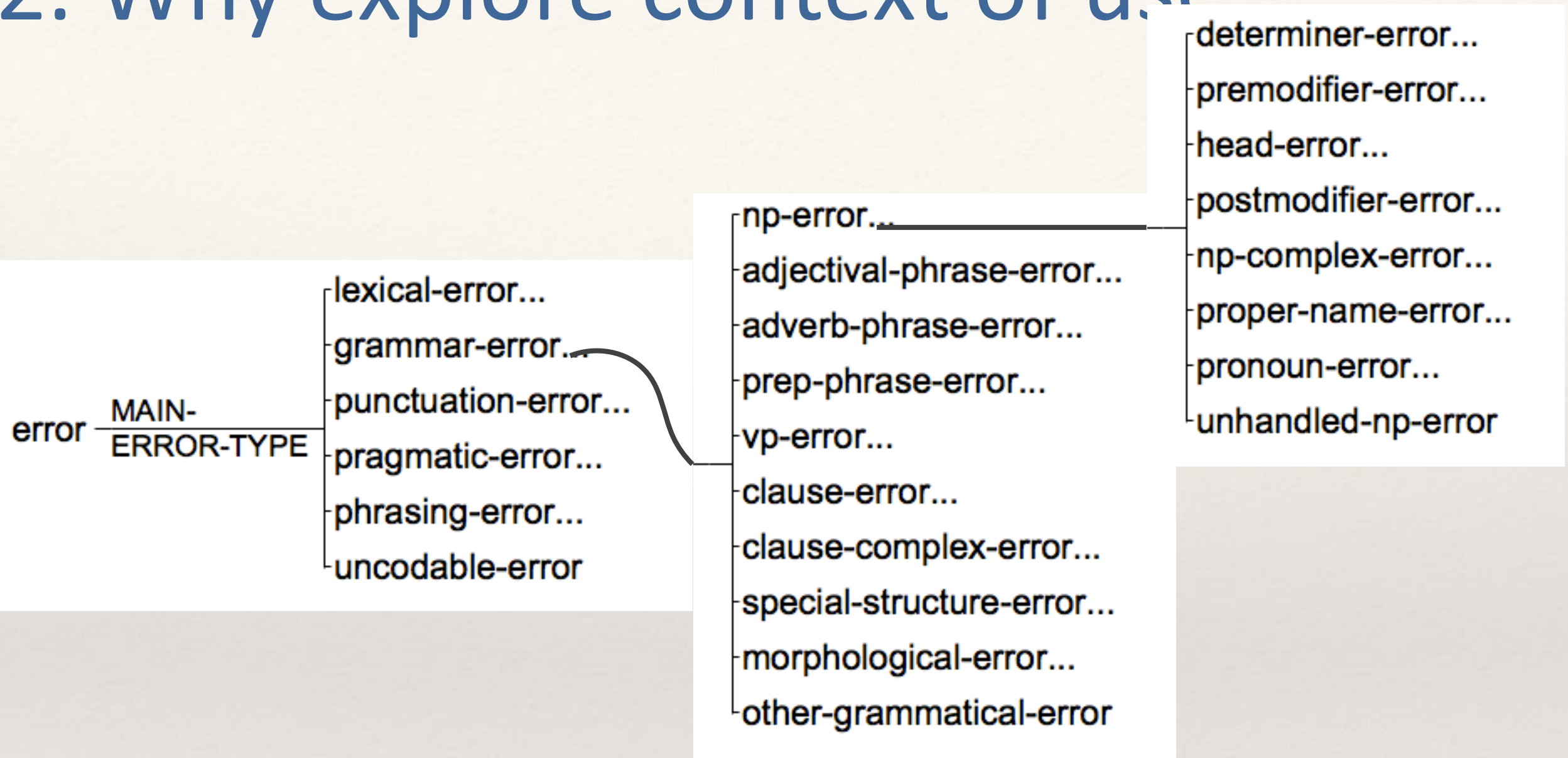
- **Treacle Error study:** very detailed error scheme with 132 distinct error tags.



## 2. Why explore context of use

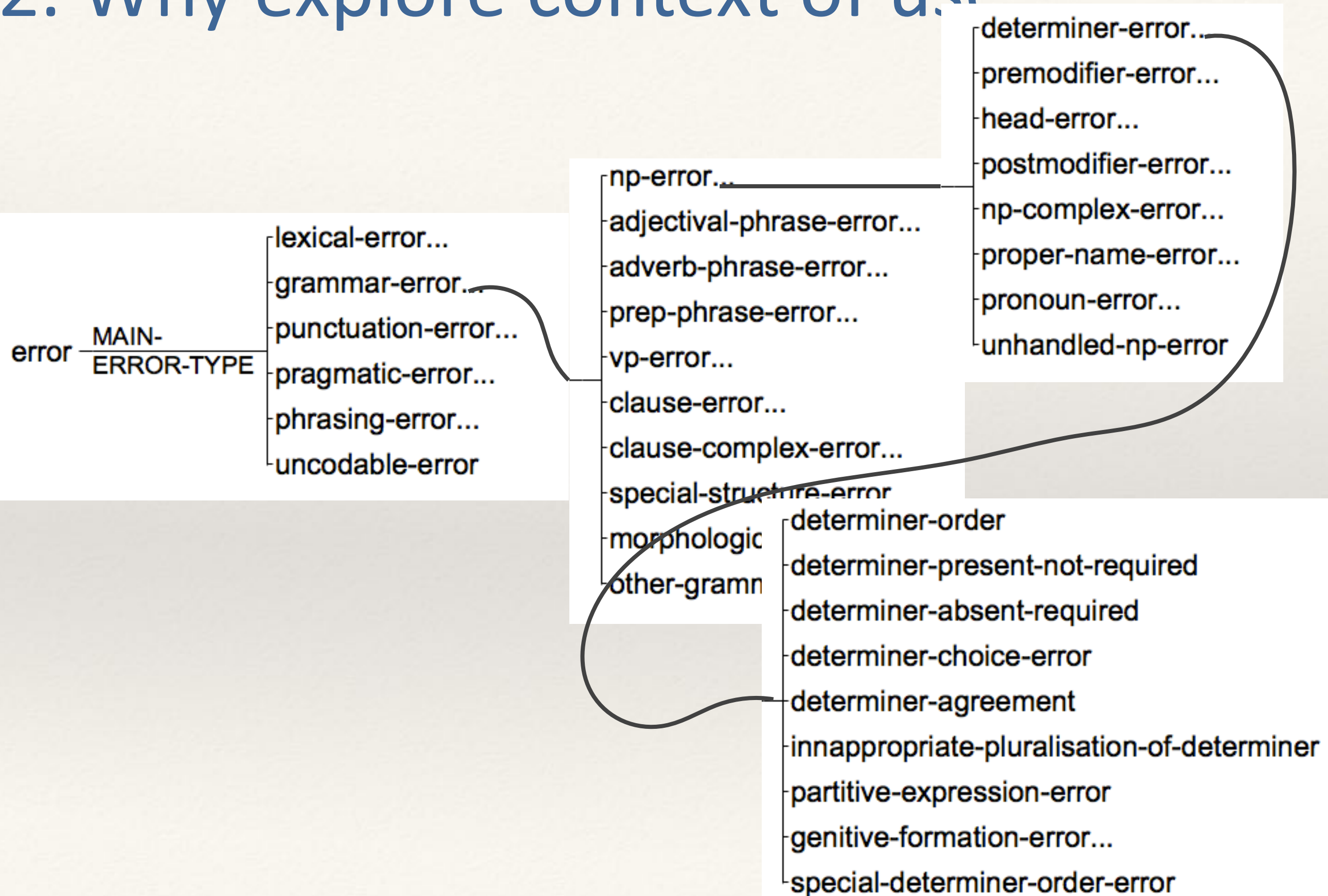


## 2. Why explore context of use





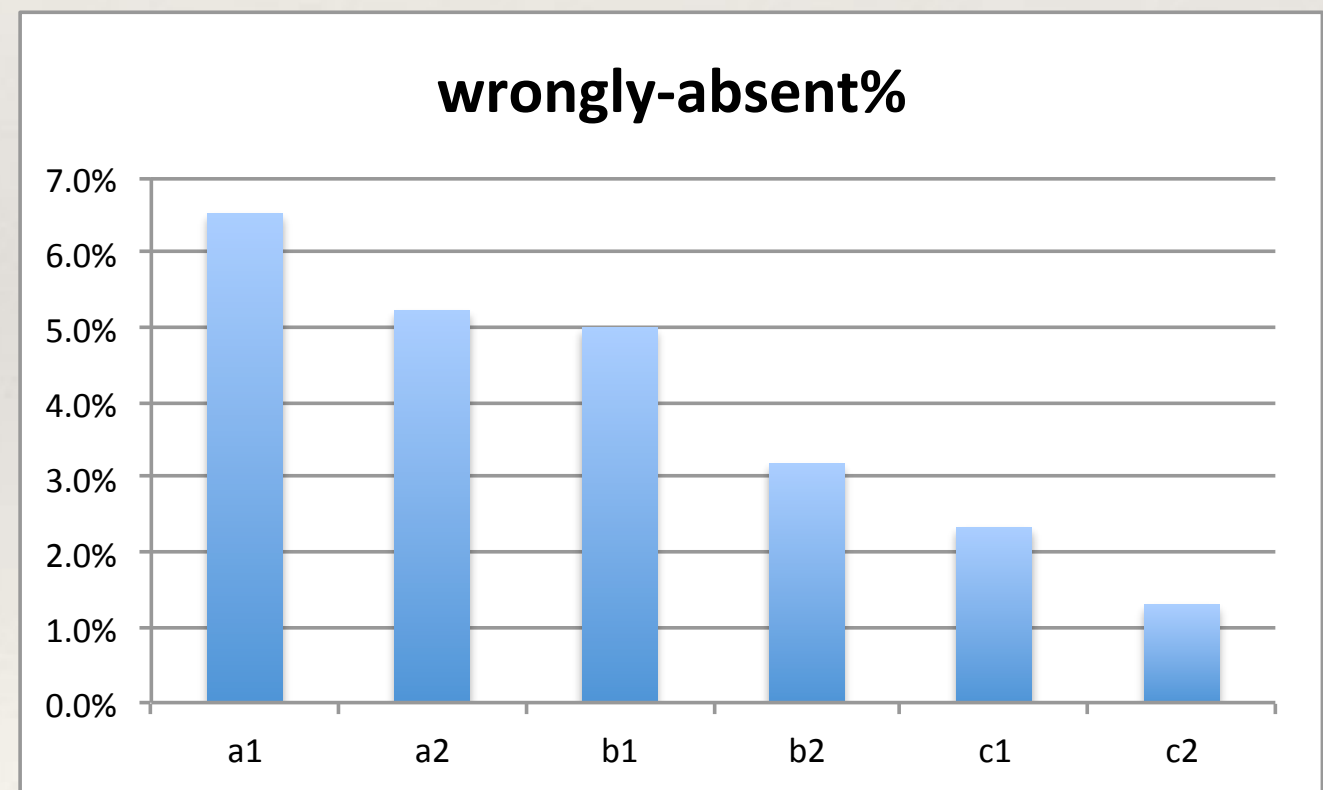
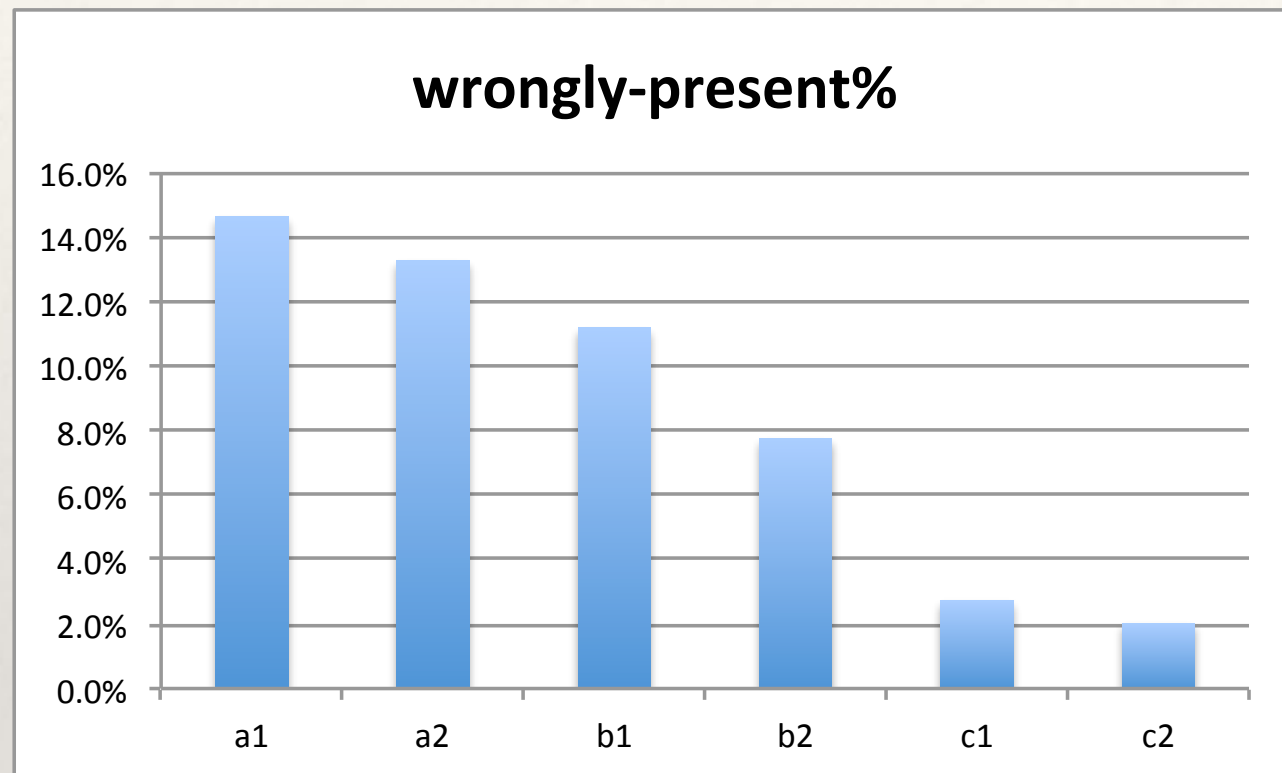
## 2. Why explore context of use





# Error Studies

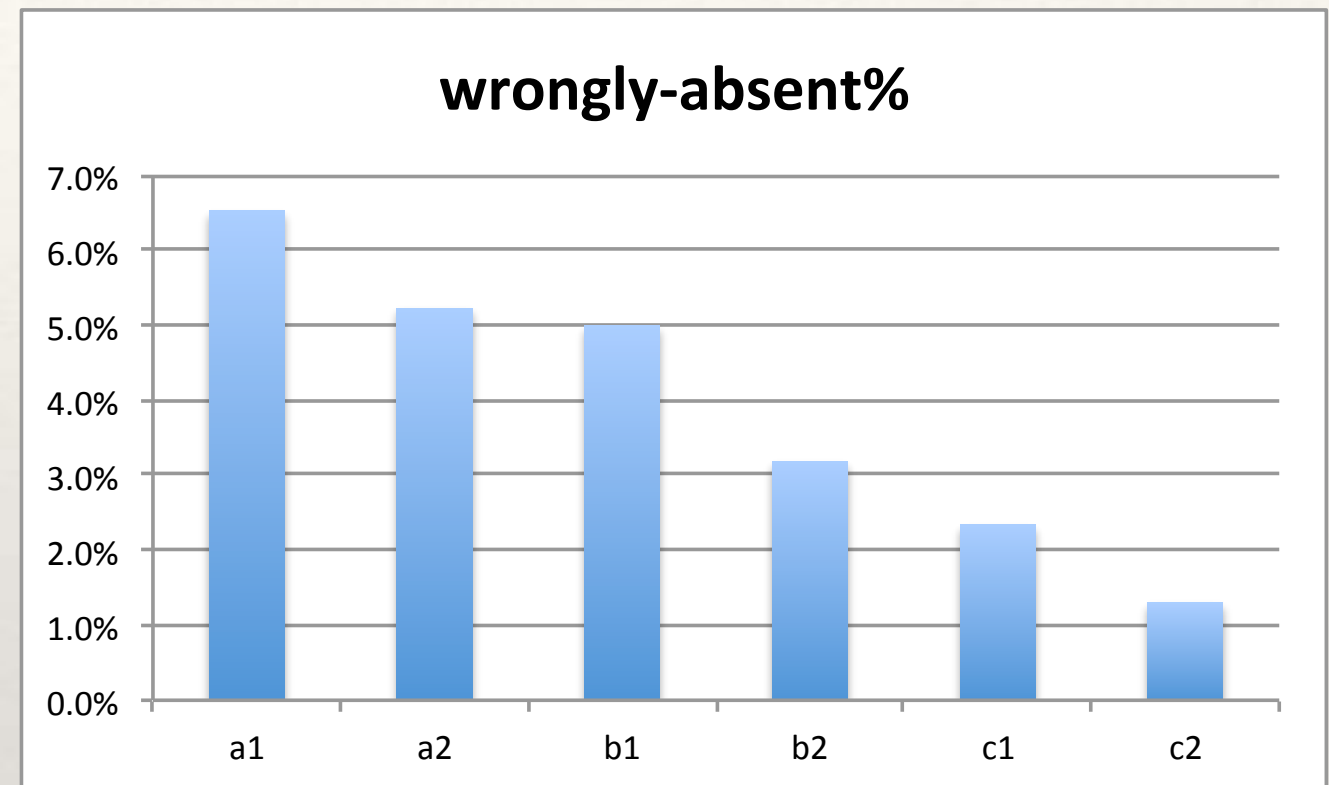
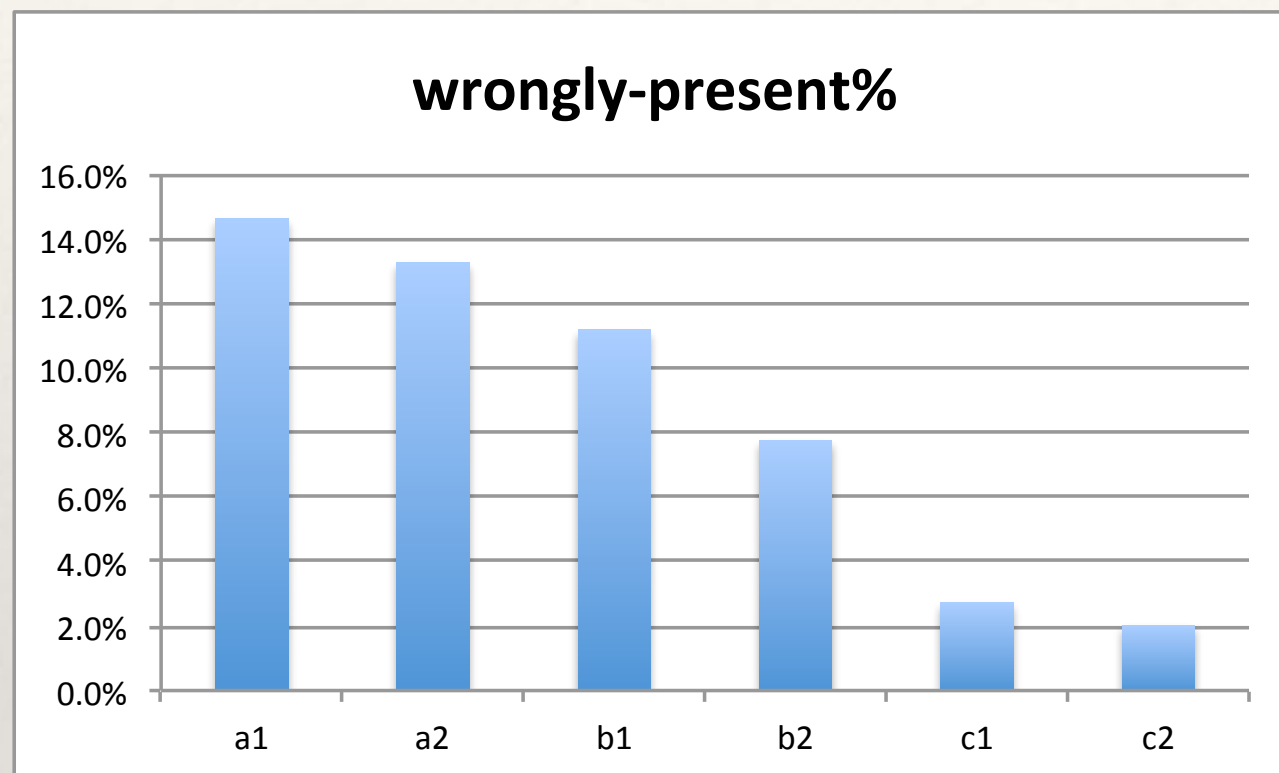
## 1. Errors related to “the” in Spanish learners of English



Source: Treacle Error Corpus (116,000 words, 23,360 common groups)  
(Y axis: Percent of all grammatical errors)

# Error Studies

## 1. Errors related to “the” in Spanish learners of English



- These results show that it is important to teach the use of the article.
- But they don't show where the criterial level for the feature is.
- It also doesn't tell us exactly what the problem is.
  - Are there distinct sub-cases which have distinct acquisition profiles that together blend to show these combined acquisitional profiles?

# Error Studies

- The use of the article by Spanish learners of English breaks down into several component uses:
  - **Referring to specific entities** (“the president” / “el presidente”)
  - **Referring to generic entities:**
    - Count: singular      - “the cat” / “el gato”
    - Count: plural        - “Cats” / “los gatos”
    - Noncount:            - “Love” / “el amor”

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Potential  
interlanguage  
problem



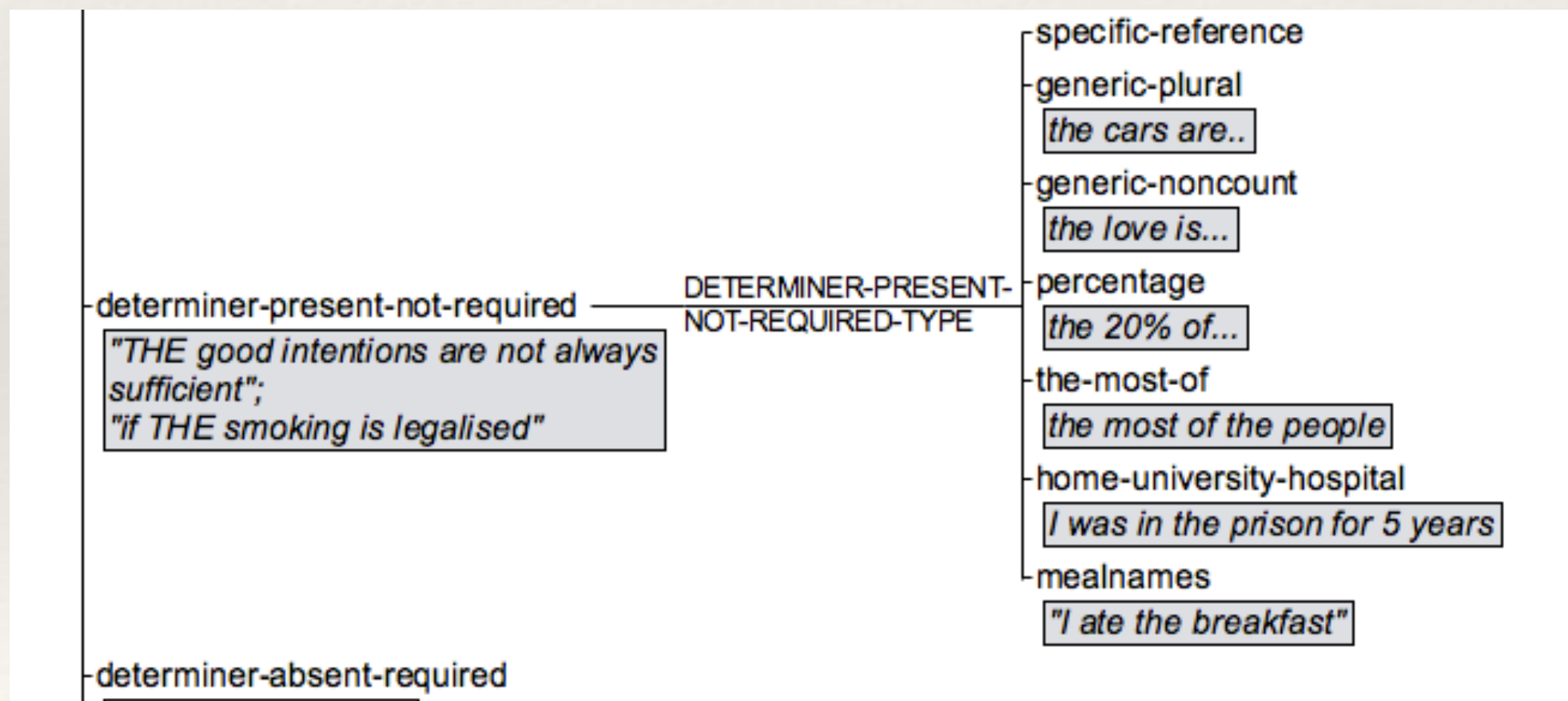
# Error Studies

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    - Noncount: - “*Love*” / “*el amor*”
  - **Percentages:** - “*10 percent*” / “*el 10 por ciento*”
  - **Places:** - “*go to university*” / “*ir a la universidad*”
  - **Meals:** - “*after breakfast*” / “*después del desayuno*”



# Error Studies

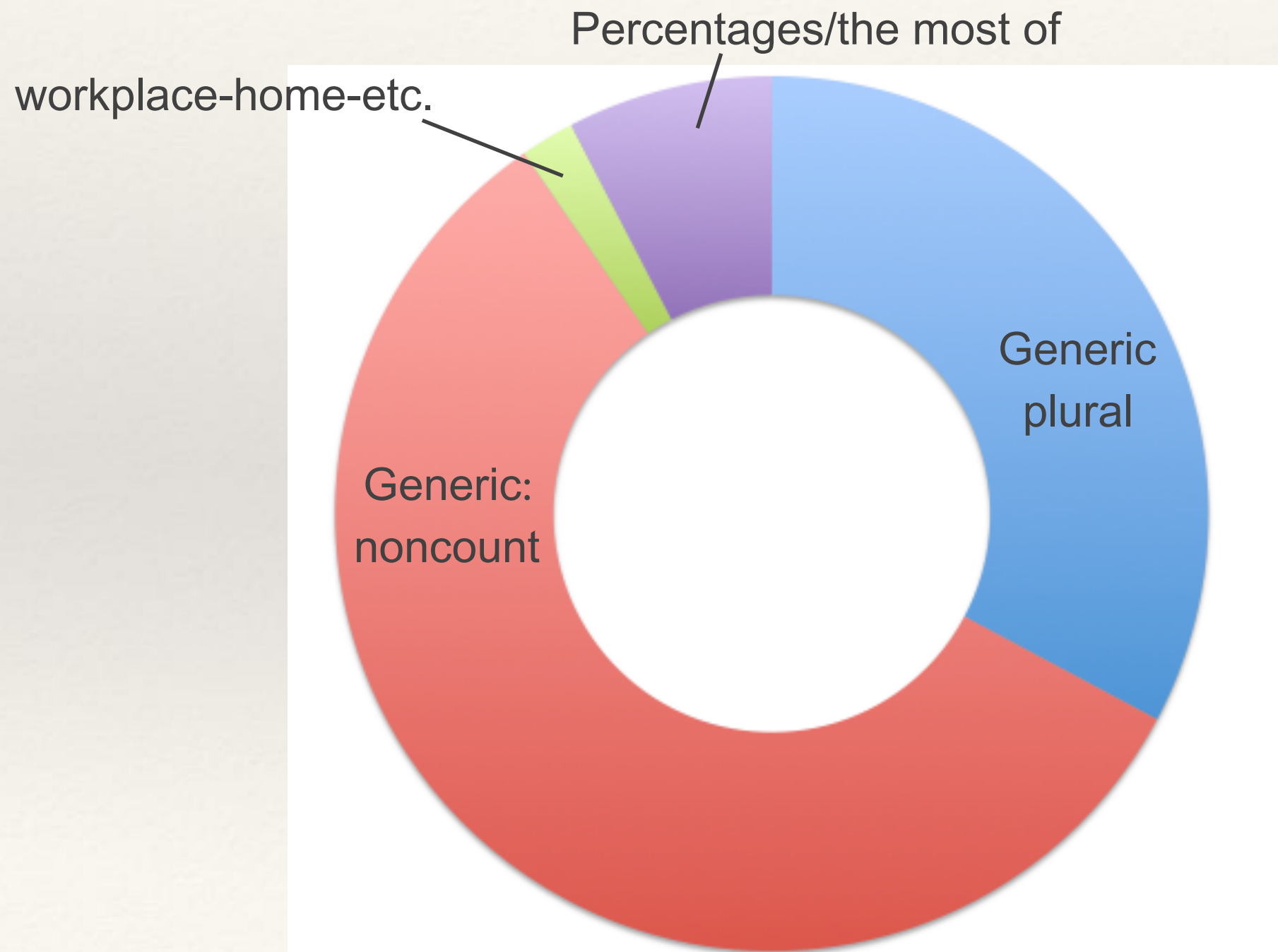
- So, to understand the learner's problems, we need to view the error instances within their context of use.
- This required extending the manual coding of these errors with more delicate "context of use" features.



- Requires even more coding effort (but worth it!)

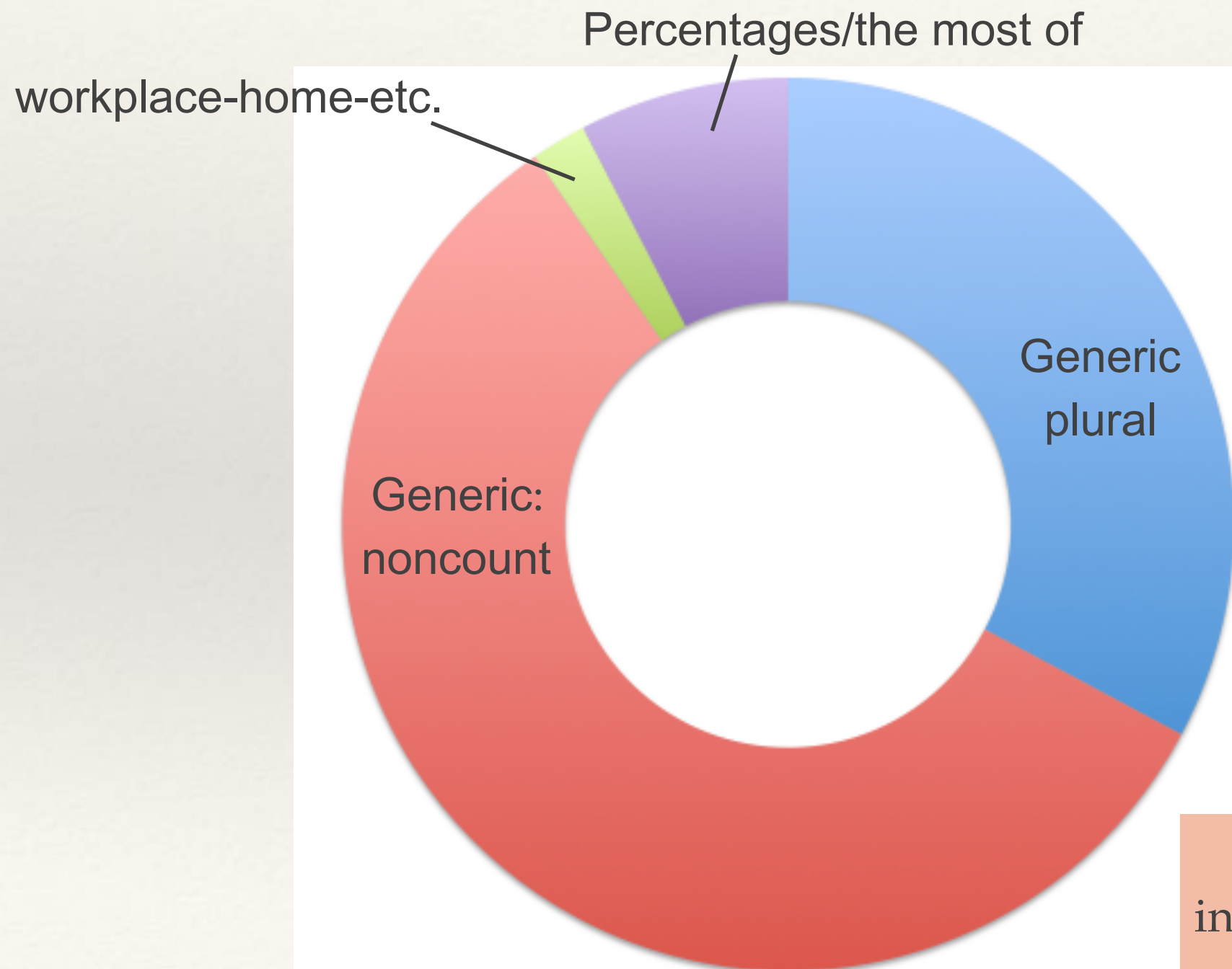
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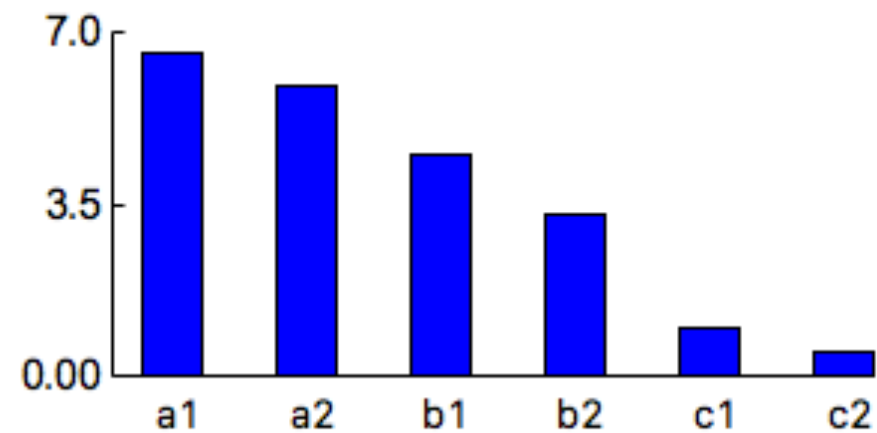
Teaching material already introduced to deal with exactly these problem cases.

# Error Studies

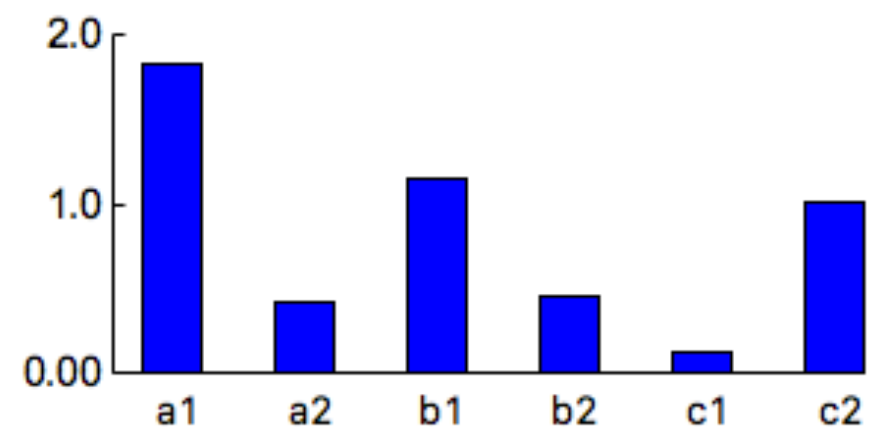
## 2. Which referential contexts are problematic at which proficiency levels (early results)

(per 1000 words)

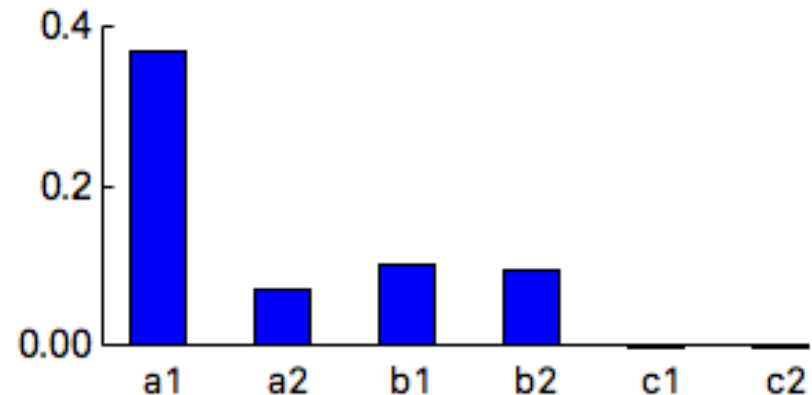
generic:noncount



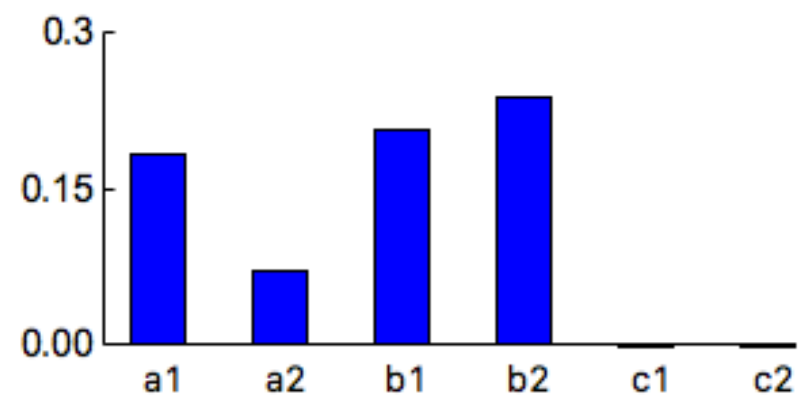
generic:plural



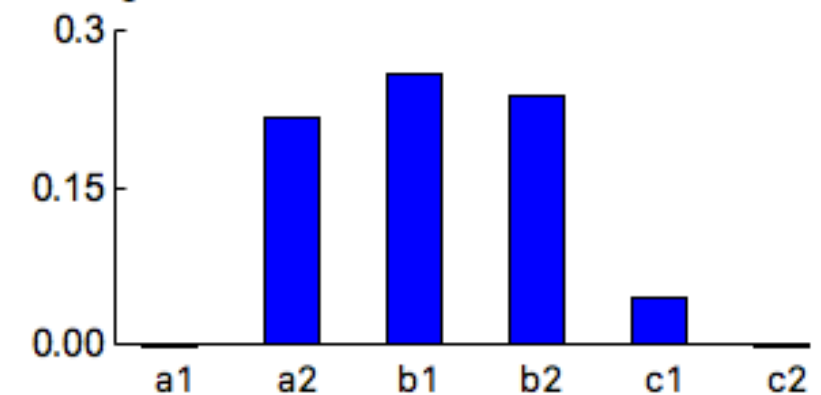
home-prison-hospital



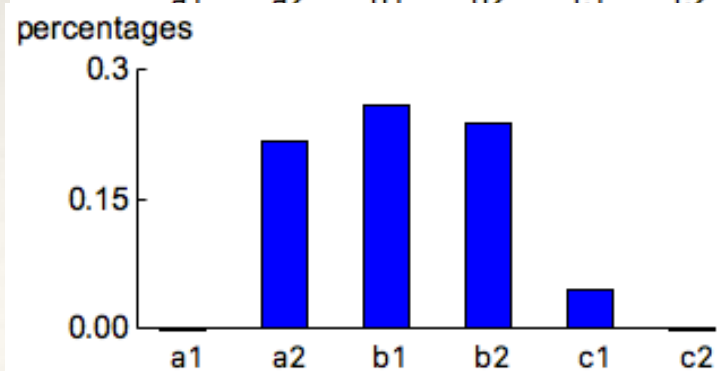
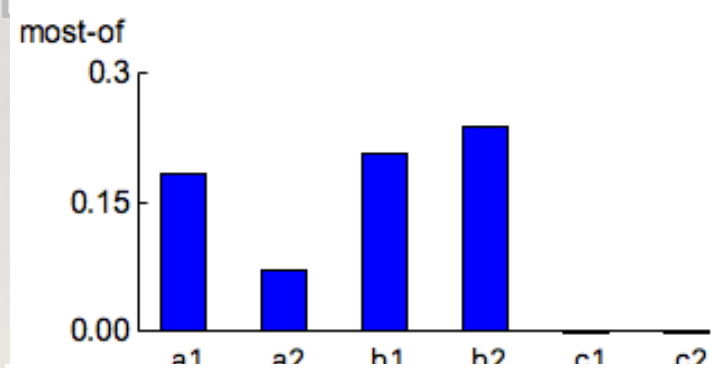
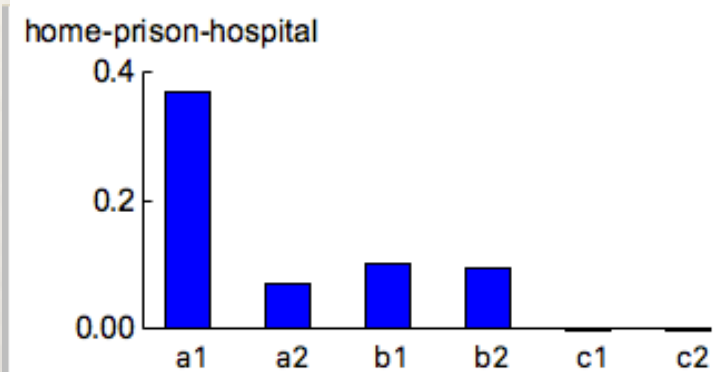
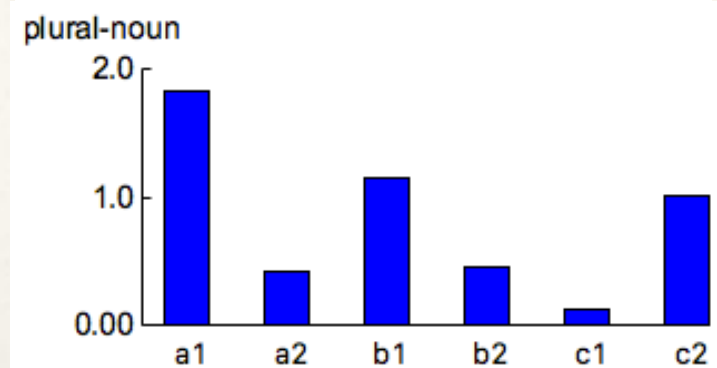
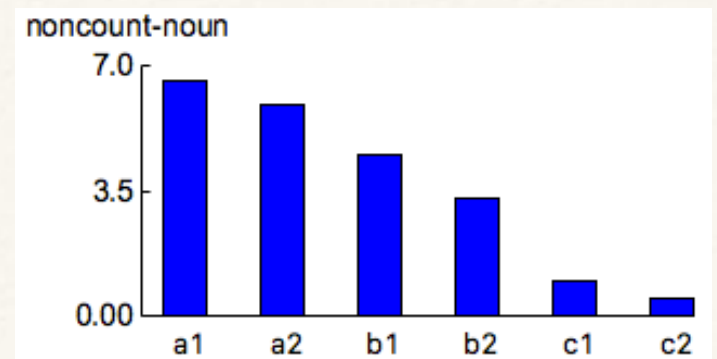
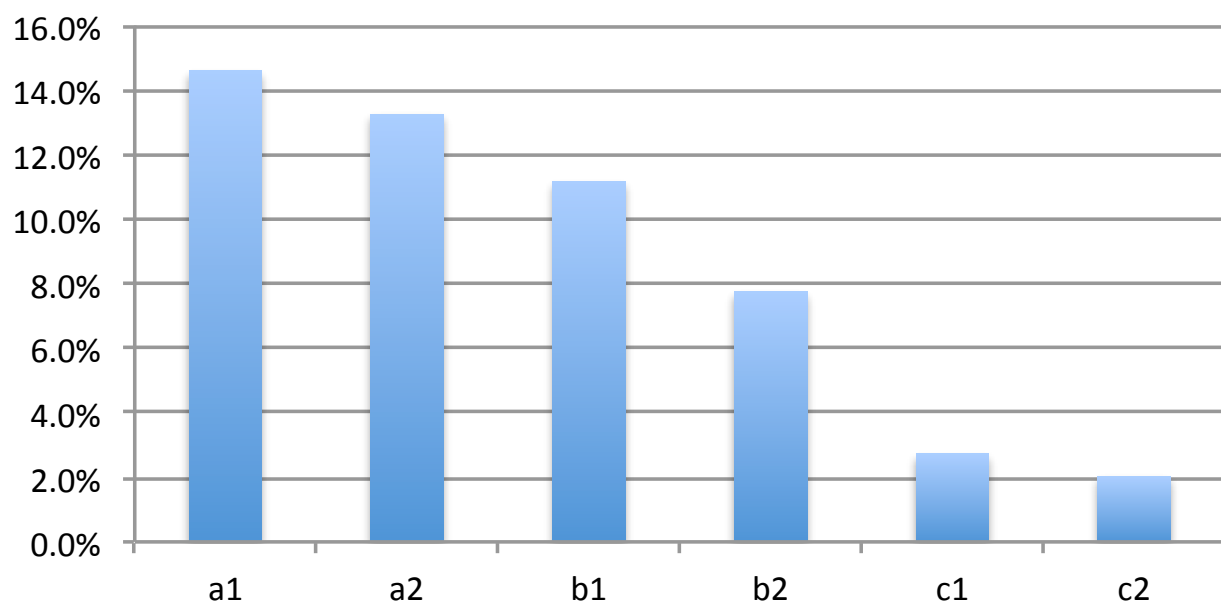
most-of



percentages



**wrongly-present%**

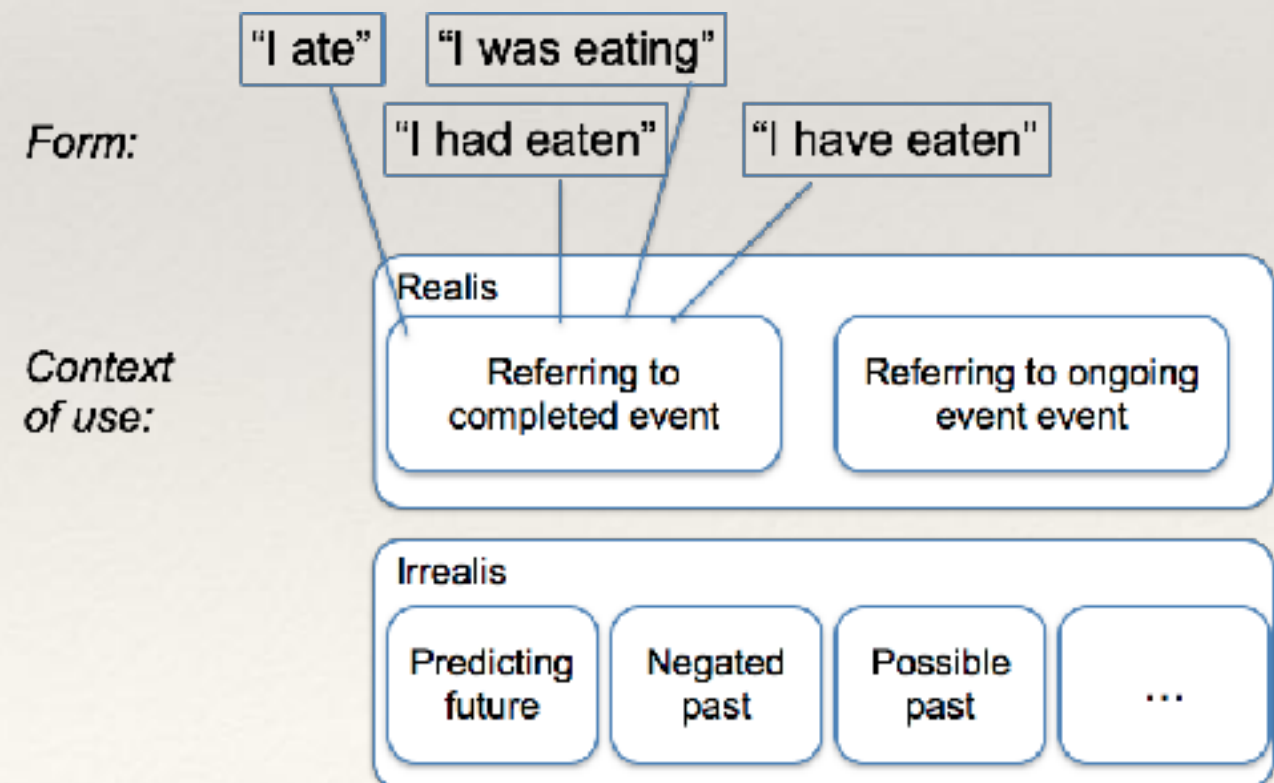




# Error Studies

- This form vs function error distinction affects other areas of our error coding.
- Currently extending the error taxonomy in delicacy to capture exactly which contexts of use are most problematic:
  - **tense-aspects**
  - **prepositions**
  - **Subject drop** and **Subject doubling**
  - **NP quantification**

### 3. Our studies exploring context of use



# Studies exploring context of use

*Article Errors*  
(Dotti/O'Donnell 2014)

*Quantification*  
(O'Donnell 2015)

*Prepositions*  
(Gonzalez 2016-)

*Tense-Aspect*  
(Flores 2017)

*Subject-drop/doubling*  
(daTrinidad, Molino, Murcia  
2017)

# Quantification study (O'Donnell 2015)

- Automatic parsing:
  - 190,000 words L1 English (41,600 common NPs)
  - 700,000 words of Learner English (142,000 common NPs)
- Exploring the use of quantifiers: *much, many, some, little, lots of, all*, etc. in various syntactic slots.
- Contexts of Use:
  - 'much' rarely used in positive statements:
    - ✗ *I have **much** money.*
    - ✓ ***Much** attention has been given to...*
  - But ok in:
    - Questions: ✓ *Do you have **much** money?*
    - Negated contexts: ✓ *He doesn't have **much** money*
    - Intensified instances: ✓ *He has **so much** money.*

# Quantification study

- **Substudy:** how does the distribution of ‘much’ vary in these distinct contexts of use?
- Method: automatic identification of contexts:
  - Identification of **interrogative scope**.
  - identification of **intensified/comparative** cases (so/too/as)
  - Identification of **negation scoping**:
    - *I don't have much time.*
    - *He doesn't think I have much money.* (negation in projecting clause)
    - *He never/rarely has much money.* (adverbial negation)
    - *No one has much money* (subject negation)



# Quantification study

- **Substudy:** how does the distribution of ‘much’ vary in these distinct contexts of use?
- Result: comparison of usage of ‘much’ over different contexts of use:

	Learner	Native
positive-statement: not intensified	41	19
positive-statement: so much etc.	47	9
Negated context	22	9
Question	4	0

Source: Learner corpus: Wricle/UPV Learner Corpora (700,000 words, 141,000 common groups)  
Native corpus: BAWE sociology selection (189,000 words, 41,600 common groups)

# Quantification study

- **Substudy:** how does the distribution of ‘much’ vary in these distinct contexts of use?
- Result: comparison of usage of ‘much’ over different contexts of use:

	Learner	Native
positive-statement: not intensified	36%	51%
positive-statement: so much etc.	41%	24%
Negated context	19%	24%
Question	4%	0%

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# Preposition study (Gonzalez 2017)

- Exploring learner's choice of preposition as part of PrepPhrase.
- Which source language prepositions produce the most errors in English production.
- Thus, back-translation of all prepositions to the most likely Spanish original preposition.

L1	Interlang.	L2
<i>en</i>	<i>on</i>	<i>on</i>
	<i>in</i>	
	<i>of</i>	

# Preposition study (Gonzalez 2017)

Goal is to:

- Provide semantic context of each preposition (destination, origin, part-whole, location (2d or 3d), proximity, etc.)
- Derive which of the semantic contexts produce the most errors in the L2 (critical contexts of use)
- Produce teaching materials to address these misunderstandings.

	L1	Interlang.
2dim. surface	<i>en</i>	<i>on</i>
		<i>in</i>
		<i>of</i>
	L1	Interlang.
3dim. container	<i>en</i>	<i>on</i>
		<i>in</i>
		<i>of</i>



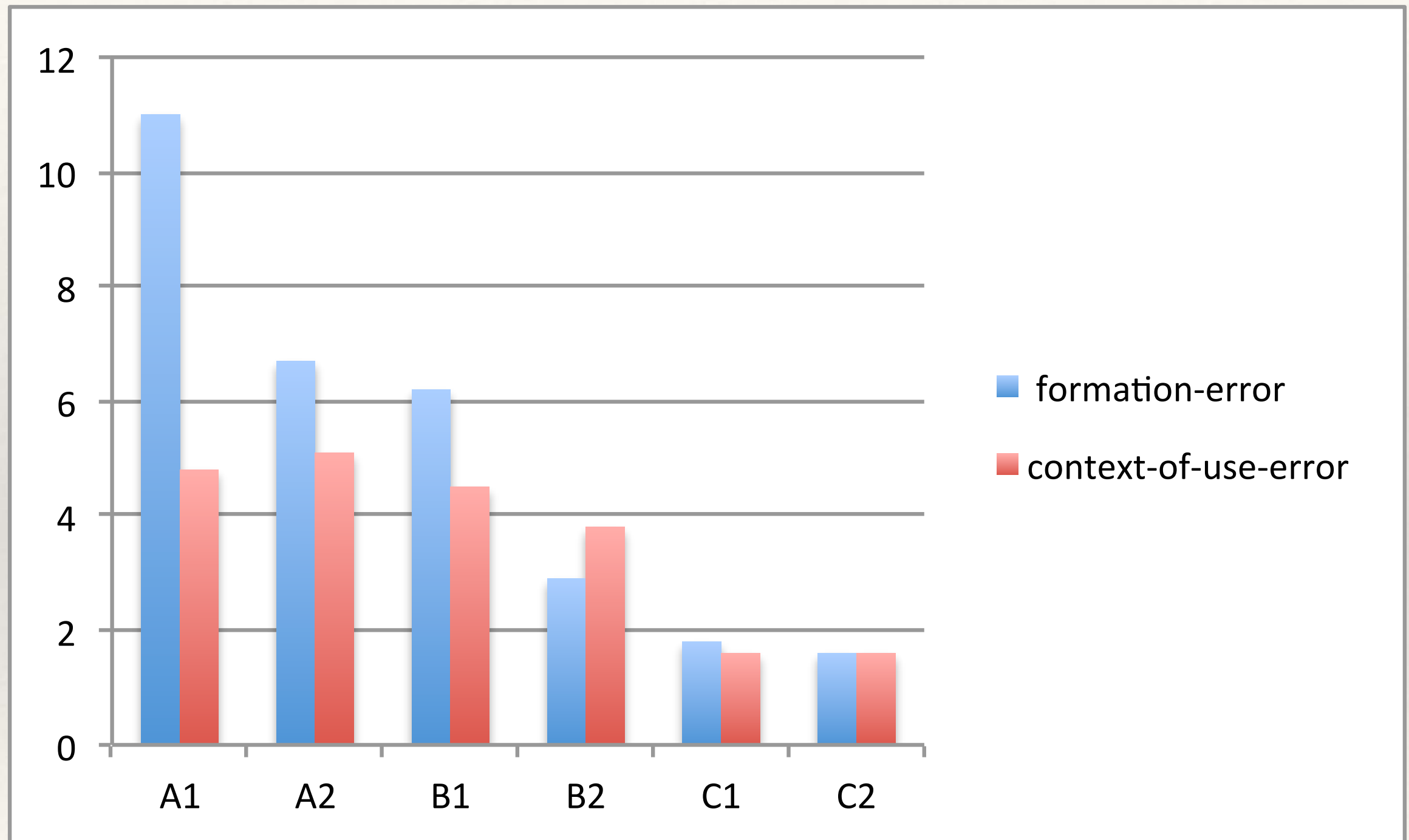
# Tense-Aspect (Flores 2017)

Goal is to:

- Explore degree to which verb phrase errors involving tense-aspect are formal vs. functional (well-constructed verb-phrase not appropriate for the intended temporal context).
  - Form error: *We have get used to it.*
  - Function errors: *They start to change the law.*
- Current results: more form errors, but function errors close:

Form errors:	547
Function errors:	438

# Tense-Aspect (Flores 2017)



Errors per 1000 words over rising proficiency levels

# Tense-Aspect (Flores 2017)

**Future work:** explore which contexts of use of each tense-aspect are most critical:

- Manual coding of context of use feature for each clause
- Identification of those contexts of use / tense choice which produce the most errors.
- Prepare teaching material to help learners understand appropriate context for each form.
- Less need to teach those contexts for which the students do not exhibit problems.

	Spanish	English	
Same day past with no implied effect on present	At 5pm: He desayunado esta mañana	At 5pm: (I ate breakfast this morning)	X
Past happening with effect on present	Me he roto el brazo y no puedo trabajar	I've broken my arm and I cannot work	Past happening with effect on present
Achievements in still open period	Este año ya hemos construido 20 casas	We have build 20 houses so far this year	Achievements in still open period
Life achievements	He vivido en cinco países distintos	I have lived in five different countries	Life achievements
X	(Es la primera vez que como sushi)	This is the first time that I've eaten sushi	Specifying first time

# Conclusions

- Not so much proposing anything new,
- More arguing for increased awareness of the contexts of use which lead to language errors and over/under use.
- Coding the context of use within error annotation allows the analyst to identify which of these contexts are most critical for the language learner.
- Coding the context of use along with automatically recognised linguistic features allows us to identify contexts of use which the learner may be unaware of for that structure.

# Conclusions

**Cost:** lot more coding effort.

**Benefit:** more insightful understanding of the process of language acquisition.