



#### https://helda.helsinki.fi

#### Grammar profiling for empirical research and teaching

#### Lindström Tiedemann, Therese

2021-12-07

Lindström Tiedemann , T , Mohammed , Y A & Volodina , E 2021 , ' Grammar profiling for empirical research and teaching ' , GR4L2 - Building CEFR-graded resources for second and foreign language learning , Louvain-de-Neuve , Belgium , 07/12/2021 - 07/12/2021 .

http://hdl.handle.net/10138/347675

submittedVersion

Downloaded from Helda, University of Helsinki institutional repository.

This is an electronic reprint of the original article.

This reprint may differ from the original in pagination and typographic detail.

Please cite the original version.



L2Profiles

P17-0716:1

# Grammar profiling for empirical research and teaching

GR4L2 workshop, online Louvain-la-Neuve, Belgium (7 Dec 2021) Therese Lindström Tiedemann\*, Yousuf Ali Mohammed\*<sup>1</sup>, Elena Volodina<sup>1</sup>

\*=University of Helsinki, 1= University of Gothenburg







1

# "L2profiles"

Development of Lexical and Grammatical Competences in Immigrant Swedish



#### Project financed by

Riksbankens jubileumsfond (2018–2020 (2021)) P17-0716:1

https://rj.se/anslag/2017/development-of-lexical-and-grammatical-competences-in-immigrant-swedish/

#### Collaboration:

Swedish language, University of Gothenburg Dept of Finnish, Finno-ugrian and Scandinavian Studies, University of Helsinki

PI: Elena Volodina, Gothenburg

#### Homepage:

https://spraakbanken.gu.se/en/projects/l2profiles



SPRÅKBANKENTEXT

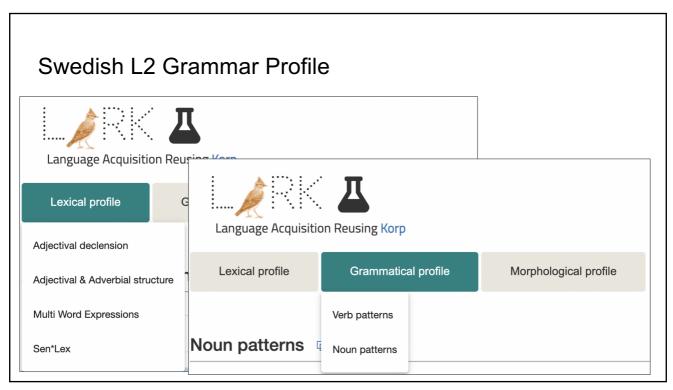


#### Swedish L2 Profiles

- Inspired by English Profile, Pearson GSE toolkit
- Our aim
  - o a descriptive open resource and tool
  - o for teachers, learners and researchers
  - a resource that can stimulate future research through infographics, statistics and easy access to empirical data from course books and learner essays
  - o easy access to reference corpora



2



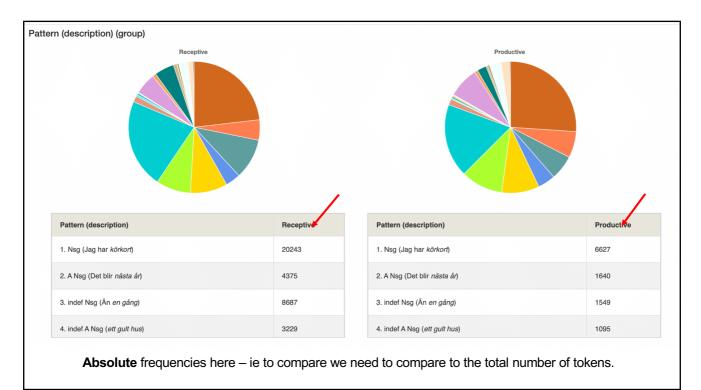
#### Grammatical profile: Norm-based patterns

- All patterns are based on Swedish L1 norms (as found in SAG, the Swedish Academy Grammar, Teleman et al 1999)
- Non-normlike usage will not usually be found.
- Possible future work: non-norm patterns

5

# Receptive and productive

- Learning a language
  - o learning to understand (RECEPTIVE SKILLS)
  - learning to produce (PRODUCTIVE SKILLS)
  - → Two corpora:
- L2 Course book corpus (*Coctaill*, Volodina et al 2014)
- L2 learner corpus (SweLL-pilot, Volodina et al 2016)
- Both linked to CEFR (COE, 2001)
  - → Compare the development in receptive and productive proficiency.



# Usage-based perspective – input important

- Learning is partly implicit.
- Frequency affects learning (cf e.g. Bybee 2008)
  - → Important to see how **course books** and **learner essay** usage compares.
  - → Differences should be looked into more closely.
    - Due to the task?
    - Due to genre differences?
    - Due to over- / underuse e.g. because of transfer?
    - Due to lack of input?

# Noun patterns > Definiteness

Profiling for research hypotheses and teaching...
A case study

q

#### Noun patterns

#### Noun patterns (28+)

(based on Agebjörn (unpubl.) and *Svenska Akademiens Grammatik* (SAG, Swedish Academy Grammar))

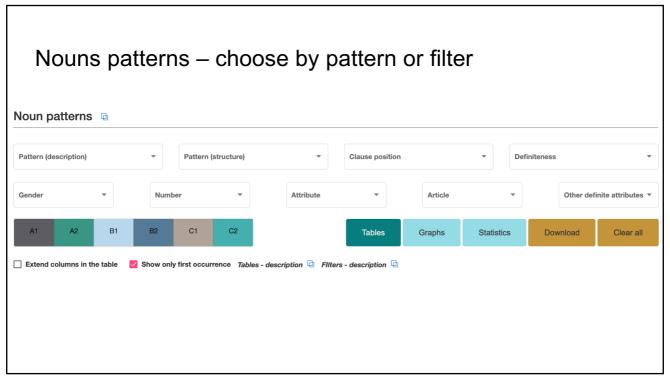
#### Indefinite noun phrases

- o with indefinite article or numeral (en lärare 'a teacher')
- o without indefinite article or numeral (Jag är lärare. 'I am a teacher')

#### Definite noun phrases

- o with definite suffix (-en / -et / -na: läraren, provet)
- o with definite article (den / det / de: **de** lärare som...)
- o with definite suffix & definite article (*Eleverna uppskattade den duktiga läraren.*)
- o with possessive attributes (*min lärare* 'my teacher')
- with demonstrative pronouns & definite suffix (*den här läraren*)
- o with demonstrative pronouns & no definite suffix (*denna lärare*)

|   |             | Sin      | gular                          |                         |   |                  | Plural |                         |                         |   |               |               |
|---|-------------|----------|--------------------------------|-------------------------|---|------------------|--------|-------------------------|-------------------------|---|---------------|---------------|
| All patterns divided according to                           |             | #        | Art./<br>pron./gen.            | Adj.<br>attr.           | N | Def.<br>suff.    | #      | Art./<br>pron./<br>gen. | Adj.<br>attr.           | N | Num.<br>suff. | Def.<br>suff. |
| <b>gender</b> : 28 x 2 = 56                                 | IN-<br>DEF. | 3        | en/ett                         |                         | Ν | -                | 5      | -                       |                         | Ν | pl            | -             |
| Some according to <b>position</b> –                         |             | 4        | en/ett                         | Α                       | Ν | -                | 6      | -                       | Α                       | Ν | pl            | -             |
| initial or any position → 56+                               |             | 1        | -                              |                         | N |                  | 5      | -                       |                         | N | •             | -             |
| All patterns tagged with:                                   | DEF.        | 7        | -                              | Α                       | N | -en/-            | 17     | -                       | А                       | N |               | -<br>-na      |
| <ul><li>pattern structure</li><li>clause position</li></ul> |             | 8        | den/det                        | Α                       | N | -en/-<br>et      | 18     | de                      | A                       | N | pl            | -na           |
| o definiteness  |             | 11       | den/det                        |                         | N | -                | 21     | de                      |                         | N |               | -             |
| <ul><li>gender</li><li>number</li></ul>                     |             | 9        | den/det<br>den här/<br>den där | Α                       | N | -<br>-en/-<br>et | 19     | de här/<br>de där       | A                       | N |               | -<br>-na      |
| <ul><li>attribute</li><li>article</li></ul>                 |             | 10       | den här/<br>den där            | Α                       | N | -en/-<br>et      | 20     | de här/<br>de där       | Α                       | N | pl            | -na           |
| <ul> <li>other definite attribute</li> </ul>                |             | 13       | denna                          |                         | Ν | -                | 23     | dessa                   |                         | N | F .           | -             |
| → filters   |             | 14       | denna                          | Α                       | N |                  | 24     | dessa                   | Α                       | N | _             | -             |
| · 111010  |             | 15       | min/Kalles                     |                         | N |                  | 25     | mina/Kalles             |                         | N |               | -             |
|   |             | 16<br>27 | min/Kalles                     | e.g.<br>förra,<br>andra | N | -en/-<br>et      | 26     | mina/Kalles             | e.g.<br>förra,<br>andra | N | pl<br>pl.     | -na           |



#### Definiteness in Swedish – a challenge for learners

- Swedish has different means of expressing definiteness:
  - o Definite suffix:

boken 'the book'

 Definite suffix and definite article (DOUBLE DEFINITENESS) – compulsory with preposed attributes:

den intressanta boken 'the interesting book'

- Demonstrative pronoun den här (DOUBLE DEFINITENESS) with definite suffix: den här boken 'this book'
- Possessive pronouns, genitives and demonstrative pronoun denna without definite suffix:

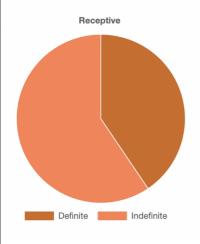
min bok 'my book'

Therese's book' Therese's book'

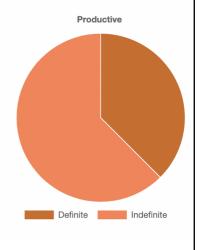
denna bok 'this book'

13

#### Definite or indefinite? – more indefinite NPs



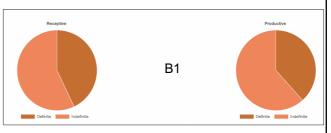
Based on our classification of whether the search should be definite or indefinite NPs, not on the form of the head word in the phrase.



### Development of definiteness

- Definite NPs are more common in the learner corpus on A1
- Definite NPs increase in the course books...
- ... but the proportion is quite stable from (A2) B1
- Similar in receptive and productive from A2

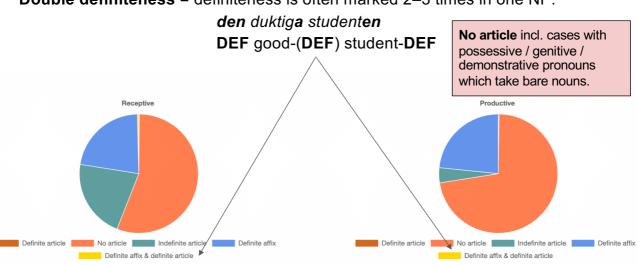




15

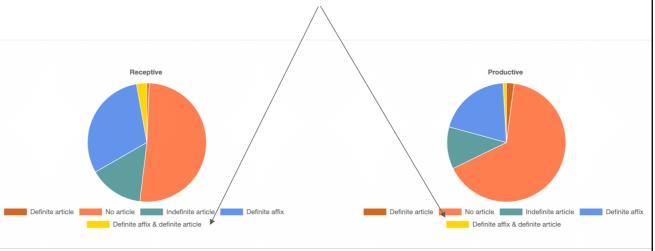
# A1 level – article usage: little double definiteness with article & suffix

**Double definiteness** = definiteness is often marked 2–3 times in one NP:



# B1 – article usage

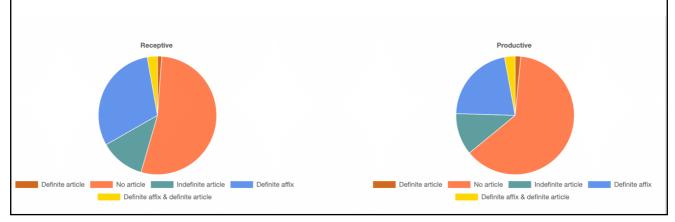
Double definiteness is becoming more common, especially in course books.



17

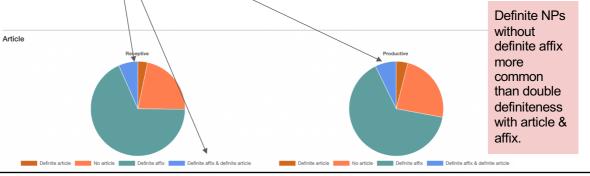
# B2 – article usage

Double definiteness in coursebooks and learner data. – still quite rare No article is still most common.



# Definite NPs only – articles at B2/C1/C2

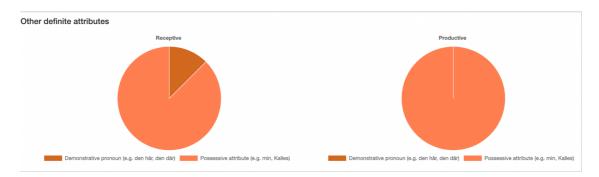
- Definiteness usually = definite affix
- **Double definiteness** only slightly more common than only definite article den / det / de.
- **No article forms** include possessive pronouns, genitives, some demonstrative *denna* which take bare nouns.



19

# Demonstratives, possessives, genitives with adjectival attributes Noun patterns Pattern (structure) Pattern (structure) Qender Number Attribute Article Preposed attribute Preposed attribute & relative clause Relative clause No definite attribute Relative clause No definite attribute Relative clause No attribute

## POSS / GEN / DEM.PRON. + ADJ. A1 – no demonstratives in learner data

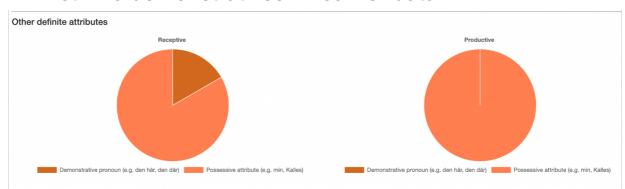


A1 – no demonstratives in learner data – not surprising

A1: "Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has." (COE 2001, p. 24)  $\rightarrow$  focus on personal  $\rightarrow$  possessive pronouns

21

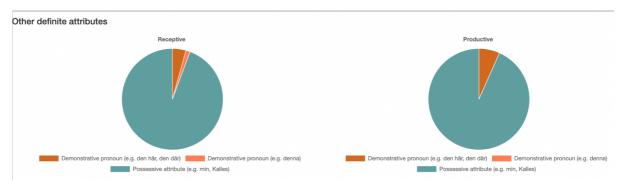
#### A2 – still no demonstratives in learner data



A2: "Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need." (COE, 2001, p. 24)

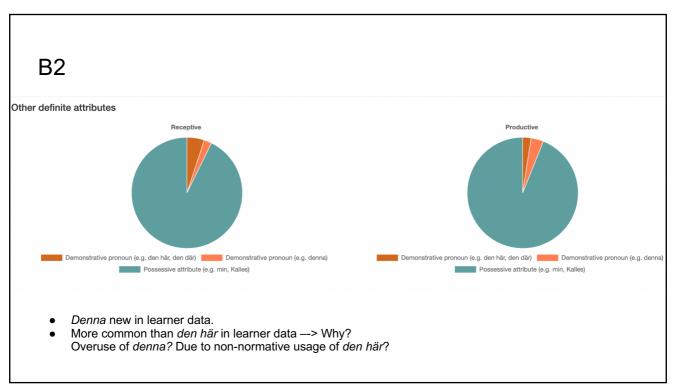


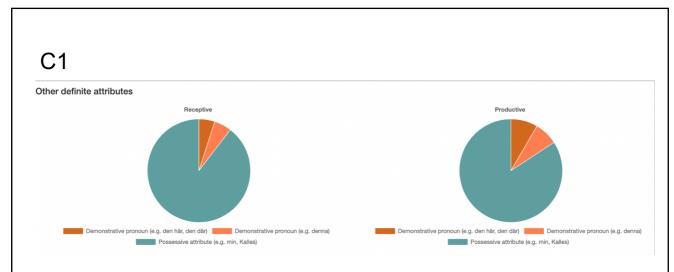
B1: "Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans." (COE, 2001, p. 24)



- Demonstrative pronoun den här, denna in course books.
- Demonstrative denna new at this level in course books.
- Some demonstrative pronoun den här in the learner data

23





- More demonstratives in receptive and productive.
- Denna & den här equal proportions in learner data (productive).
- Denna slightly more common than den här in course books.

#### Previous research on definiteness

Nyqvist 2018:19 – grammaticality judgement test, double definiteness, immersion (16 years old) vs non-immersion students (15 years old)

#### Acquisition order:

- (1) **Double definiteness:** common singular > neuter singular > plural
- (2) **Definiteness with PRG attributes:** *den här* > genitive attribute with adj. > possessive attribute with adj. > *denna*

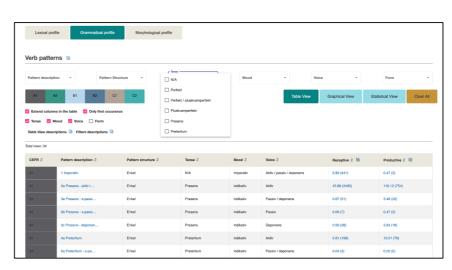
75 % accuracy

High frequency NPs - mastered better (p. 21)

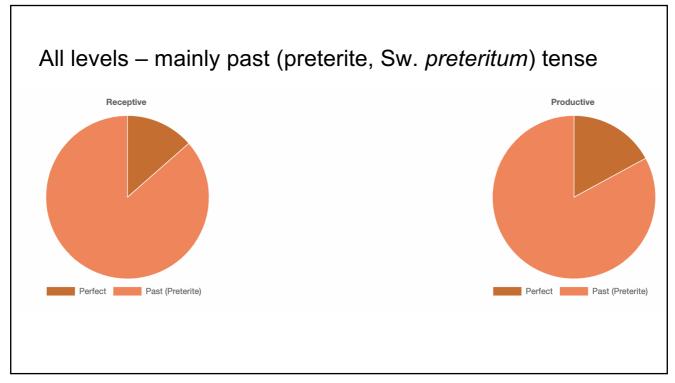
- Den här occurs with the definite suffix the most common way of marking definiteness.
- Denna is quite rare in input and occurs with the more unusual bare noun.

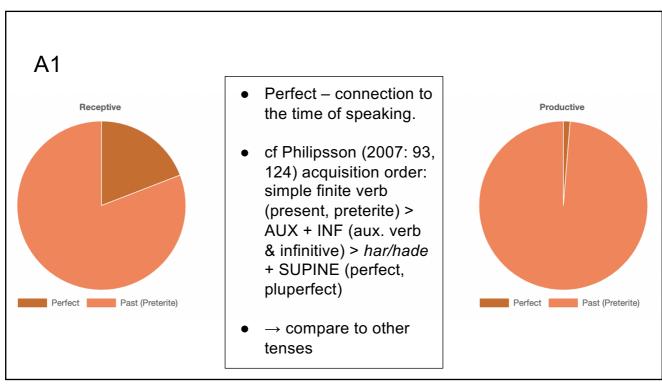
# Verb patterns

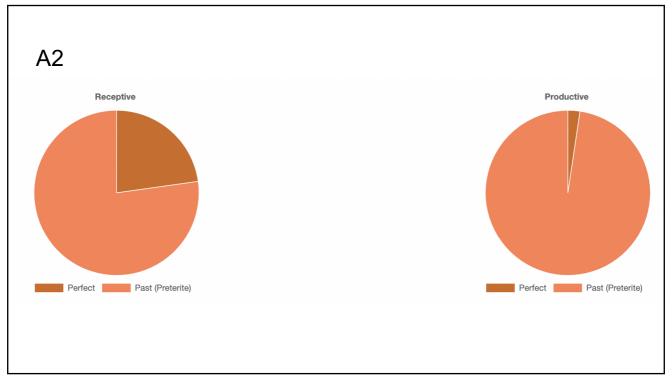
- Based primarily on SAG 1999
- Simple and periphrastic forms
- Compare:
  - tenses
  - o moods
  - o voices

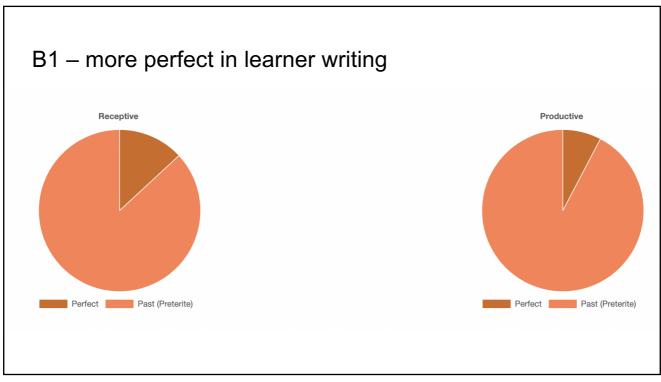


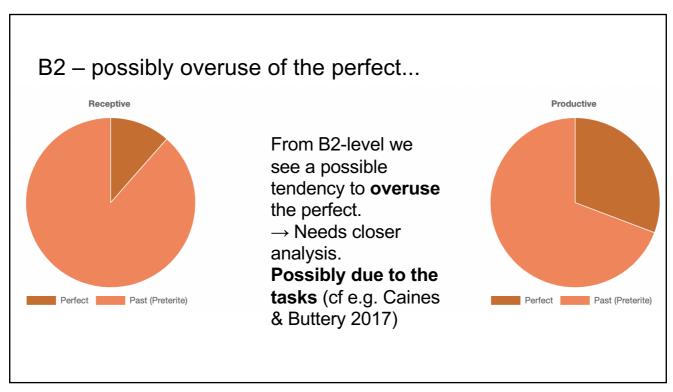
27

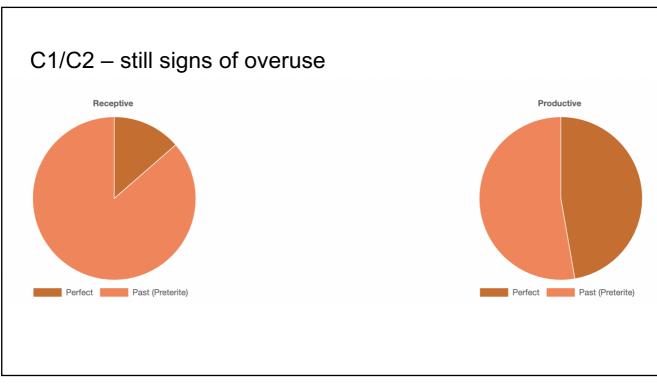












# Comparison with reference corpora

# Comparison with L1 reference corpora easily done

- All of our patterns can easily be searched also in reference corpora available in Korp, Språkbanken Text, Gothenburg.
- One by one → cannot yet get an overview picture
- Let's look at one pattern:

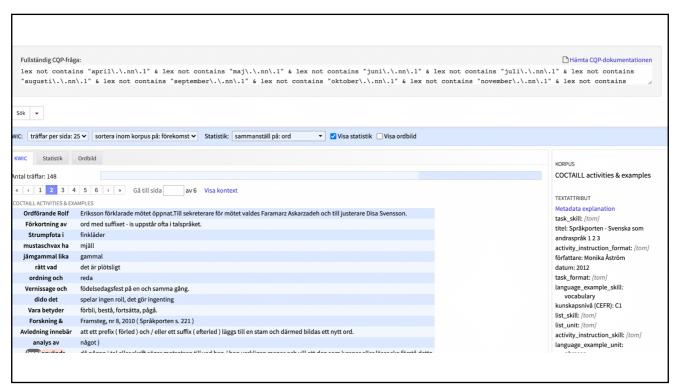
The most common and in the most common gender (common gender, c. ¾ of all nouns, Teleman et al 1999: part 2, 59) – pattern 1b

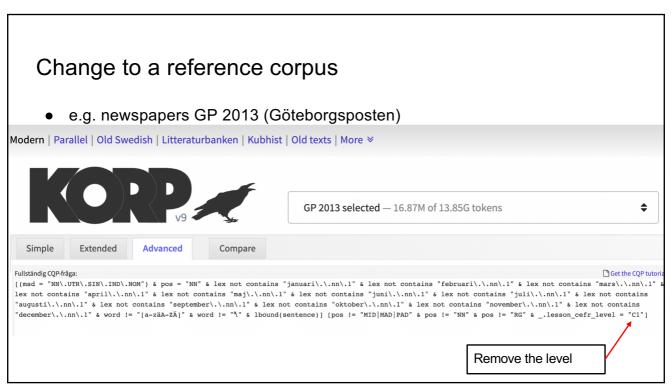
35

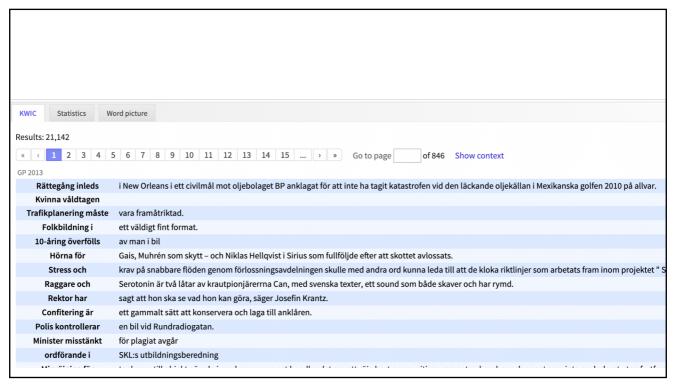
# Frequency – link to search → reference corpora

Click on the frequency → Hits in Korp → can change the corpus to an L1 reference corpus









## How can we compare these?

- Currently relative frequency in Swedish L2 Grammatical Profile is occurrences / 100 sentences ← verb phrases first
- Future research: Which is the best measure?
  - o Different measures give different indications for over- / underuse.
  - Nouns relative in comparison to the total number of nouns.

# Preliminary comparison (newspaper & coursebook)

|                                   | GP 2013<br>(newspaper) | A1 rec.       | A2 rec.        | B1 rec.        | B2 rec.                     | C1 rec.        |
|-----------------------------------|------------------------|---------------|----------------|----------------|-----------------------------|----------------|
| 1b Nsg<br>(per 1 mil. tok.)       | 1253.1 (21142)         | 2045.8        | 1706.0         | 889.5          | 845.9                       | 837.9          |
| 1b Nsg<br>(per 100 sent.)         | 1.69                   | 1.0<br>(76)   | 1.04<br>(145)  | 0.74<br>(137)  | 0.8 <mark>3</mark><br>(139) | 0.89<br>(148)  |
| 3b Indef Nsg (per<br>1 mil. tok.) | 8091.2 (136 515)       | 17820.1       | 12259.4        | 11719.8        | 9499.6                      | 7614.6         |
| 3b Indef Nsg (per<br>100 sent.)   | 10.91                  | 8.73<br>(662) | 7.44<br>(1042) | 9.74<br>(1805) | 9.38<br>(1561)              | 8.07<br>(1345) |
| 7c Nsg-DEF (per 1 mil. tok.)      | 4375.9 (73830)         | 4414.7        | 3882.5         | 3389.3         | 3164.5                      | 2151.3         |
| 7c Nsg-DEF (per<br>100 sent.)     | 5.9                    | 2.16<br>(164) | 2.36<br>(330)  | 2.82<br>(522)  | 3.12<br>(520)               | 2.28<br>(380)  |

Possible underuse of all patterns in coursebooks. Due to genre?

→ more problematic to learn the definite form?

41

# Preliminary comparison (newspaper & learner essays)

|                                   | GP 2013<br>(newspaper) | A1 prod.     | A2 prod.      | B1 prod.       | B2 prod.           | C1 prod.           |  |
|-----------------------------------|------------------------|--------------|---------------|----------------|--------------------|--------------------|--|
| 1b Nsg<br>(per 1 mil. tok.)       | 1253.1 (21142)         | 1740.1       | 1355.1        | 1086.4         | 1619.8             | 1806.0             |  |
| 1b Nsg<br>(per 100 sent.)         | 1.69                   | 1.42<br>(9)  | 1.41<br>(37)  | 1.57<br>(27)   | <b>2.75</b> (74)   | <b>3.26</b> (94)   |  |
| 3b Indef Nsg (per<br>1 mil. tok.) | 8091.2 (136 515)       | 5800.5       | 6519.2        | 7162.1         | 6523.1             | 6897.5             |  |
| 3b Indef Nsg (per<br>100 sent.)   | 10.91                  | 4.74<br>(30) | 6.80<br>(178) | 10.35<br>(178) | <b>11.07</b> (298) | <b>12.44</b> (359) |  |
| 7c Nsg-DEF (per 1 mil. tok.)      | 4375.9 (73830)         | 2706.9       | 2014.4        | 1609.5         | 1072.6             | 1940.5             |  |
| 7c Nsg-DEF (per<br>100 sent.)     | 5.9                    | 2.21<br>(14) | 2.10<br>(55)  | 2.33<br>(40)   | 1.82<br>(49)       | 3.50<br>(101)      |  |

Possible **underuse** of all patterns, except 1b & 3b from B2 (per 100 sentences). 1b, 3b possible signs of **overuse** from B2. → needs further study.

#### Future research

- Introduction of more definite NPs with indefinite head nouns
  - → overuse of indefinite head nouns?
- Development of non-normative patterns per level
  - → patterns in the non-normative usage
- Overuse due to topics, tasks, genres?
- Could more norm-like usage be stimulated by increased usage in e.g. coursebooks?

43

#### Swedish L2 profile – providing possibilities... Teaching Research Learning Assessment Open access to empirical data (learner data Underway: behind access license) L2 Swedish development • Open access to reference corpora, possible prepositions, to search in exactly the same way. passives, etc Word / • Further analysis needed. morpheme families ICALL exercises based on the material Morphological should be explored. complexity

#### References

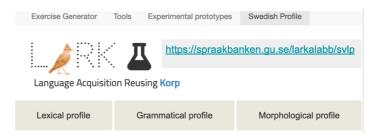
- Bybee, J. 2008. Usage-based grammar and second language acquisition. In: P. Robinson & N.C. Ellis (red.), Handbook of Cognitive Linguistics and Second Language Acquisition (pp. 216–236). New York: Routledge..
- Caines, A., & P. Buttery. 2017. The effect of task and topic on opportunity of use in learner corpora. *Learner corpus research: New perspectives and applications*, 5-27.
- Council of Europe (COE). 2001. Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Press Syndicate of the University of Cambridge.
- Nyqvist, E-L. 2018. Mastering complex Swedish NPs: A comparison of non-immersion pupils and immersion L1 Finnish pupils. Journal of the European Second Language Association, 2 (1), 14–23.
- Philipsson, A. 2007. Interrogative Clauses and Verb Morphology in L2 Swedish. Theoretical Implications of Grammatical Development and Effects of Different Elicitation Techniques. PhD thesis. Stockholm University.
- Teleman, U., Hellberg, S., & Andersson, E. (1999). Svenska akademiens grammatik (SAG). Svenska akademien.
- Volodina, E., Pilán, I., Rødven Eide, S., Heidarsson, H. 2014. You get what you annotate: a pedagogically annotated corpus of coursebooks for Swedish as a second language. I: Fourth workshop on NLP for Computer Assisted Language Learning (NLP4CALL), ACL anthology, Linköping University Press.
- Volodina, E., Pilán, I., Enström, I., Llozhi, L., Lundkvist, P., Sundberg, G., & Sandell, M. 2016. SweLL on the rise: Swedish Learner Language corpus for European Reference Level studies. Proceedings of LREC 2016, Slovenia

45



# Swedish L2 Profile

L2Profiles



https://spraakbanken.gu.se/larkalabb/svlp

GR4L2, (7 Dec 2021)

Therese Lindström Tiedemann\*, Yousuf Ali Mohammed\*¹, Elena Volodina¹∎

UNIVERSITY OF GOTHENBURG





