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# An Analysis of German Auxiliary Flip

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# Overview

- 1) Micro Lesson of German Syntax
- 2) Description of Auxiliary Flip
- 3) Mysteries and Properties of Aux Flip
- 4) Time to Kick it up a Notch!
- 5) What Does the Literature Do to Solve Aux Flip?
- 6) My Attempt to Drag Aux Flip into Generative Grammar<sup>1</sup>
- 7) Unresolved issues / problems

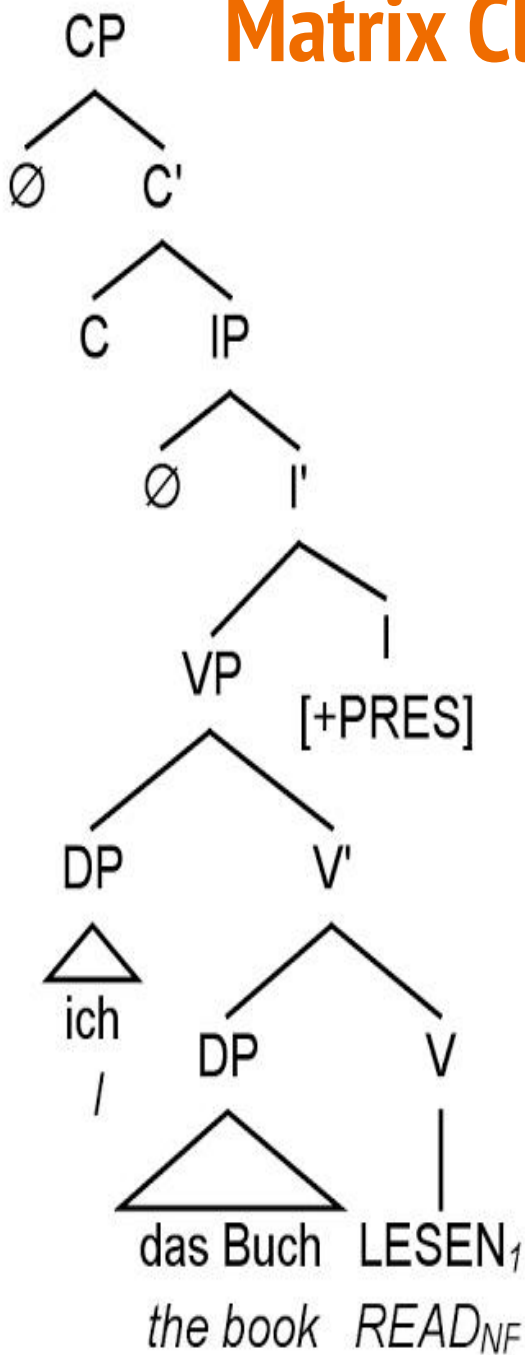
<sup>1</sup>Kicking and screaming.

# German is a V2 language.

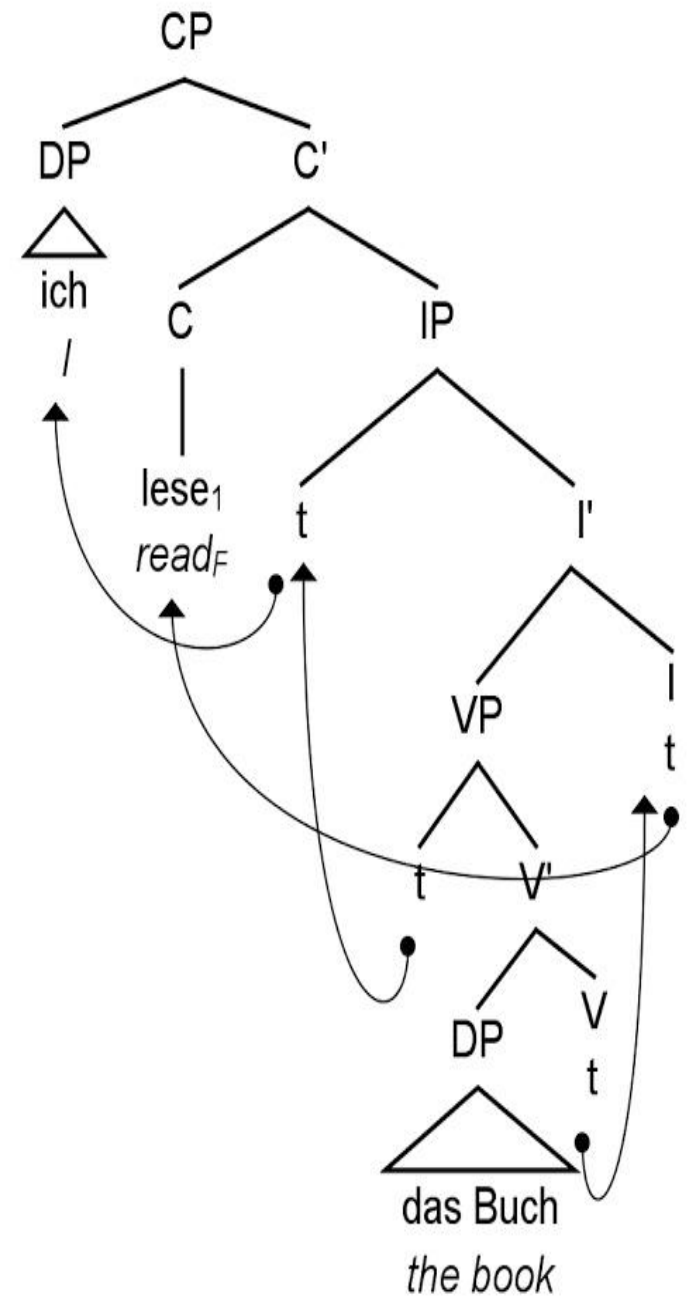
Ich <b>werde<sub>F</sub></b> morgen das Buch <b>lesen<sub>NF</sub></b> .	Das Buch <b>werde<sub>F</sub></b> ich morgen <b>lesen<sub>NF</sub></b> .
I <b>will<sub>F</sub></b> tomorrow the book <b>read<sub>NF</sub></b>	the book <b>will<sub>F</sub></b> I tomorrow <b>read<sub>NF</sub></b>
Morgen <b>werde<sub>F</sub></b> ich das Buch <b>lesen<sub>NF</sub></b> .	<b>Lesen<sub>NF</sub> werde<sub>F</sub></b> ich morgen das Buch.
tomorrow <b>will<sub>F</sub></b> I the book <b>read<sub>NF</sub></b>	<b>read<sub>NF</sub> will<sub>F</sub></b> I tomorrow the book
<i>"I will read the book tomorrow."</i>	

But in its deeper structure, German is actually SOV.

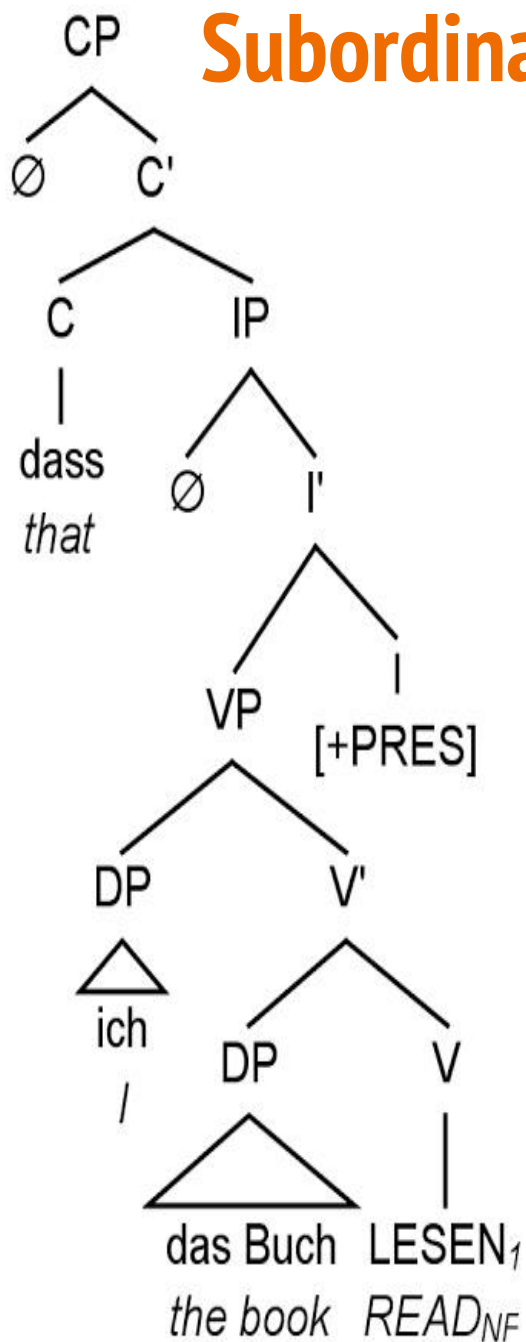
# Matrix Clause w/ One Verb



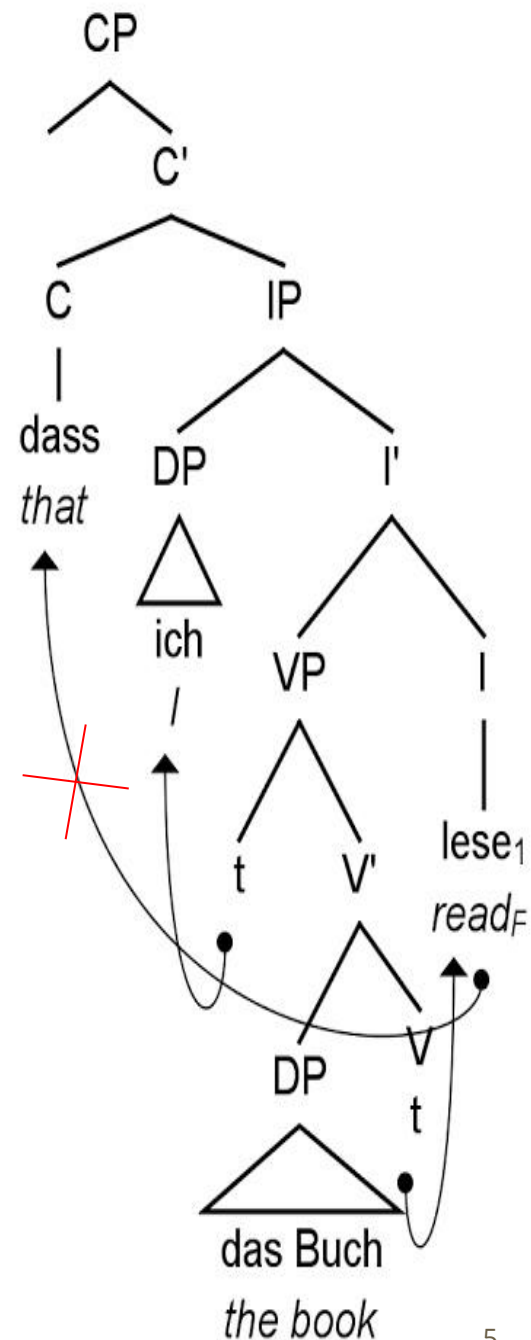
Ich **lese**<sub>1</sub> das Buch.  
 I **read**<sub>F</sub> the book  
 "I read the book."



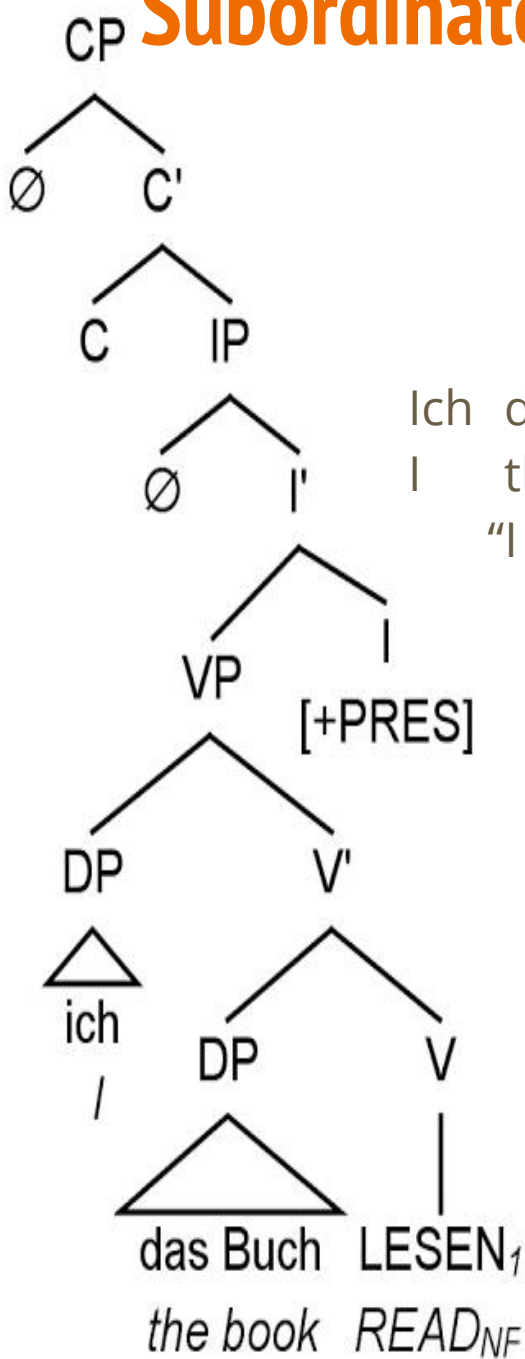
# Subordinate Clause w/ One Verb



... dass ich das Buch *lese*<sub>I</sub>.  
 ... that I the book *read*<sub>F</sub>  
 "... that I read the book."

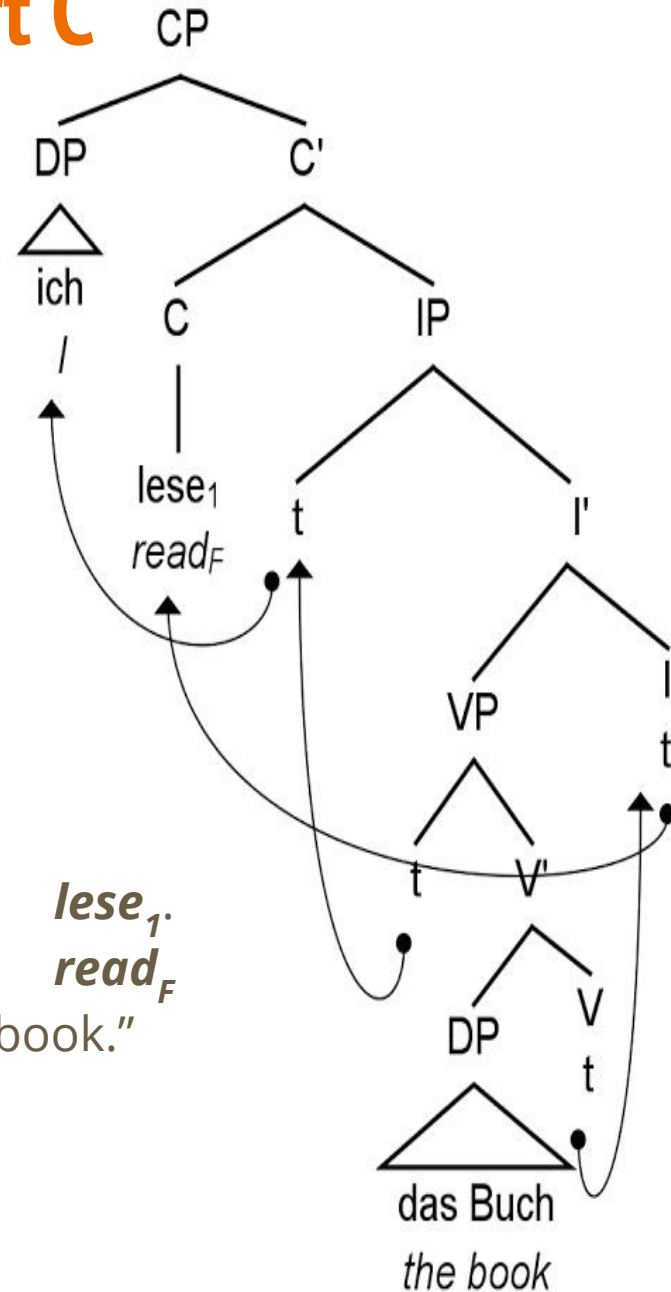


# Subordinate Clauses w/ a Covert C

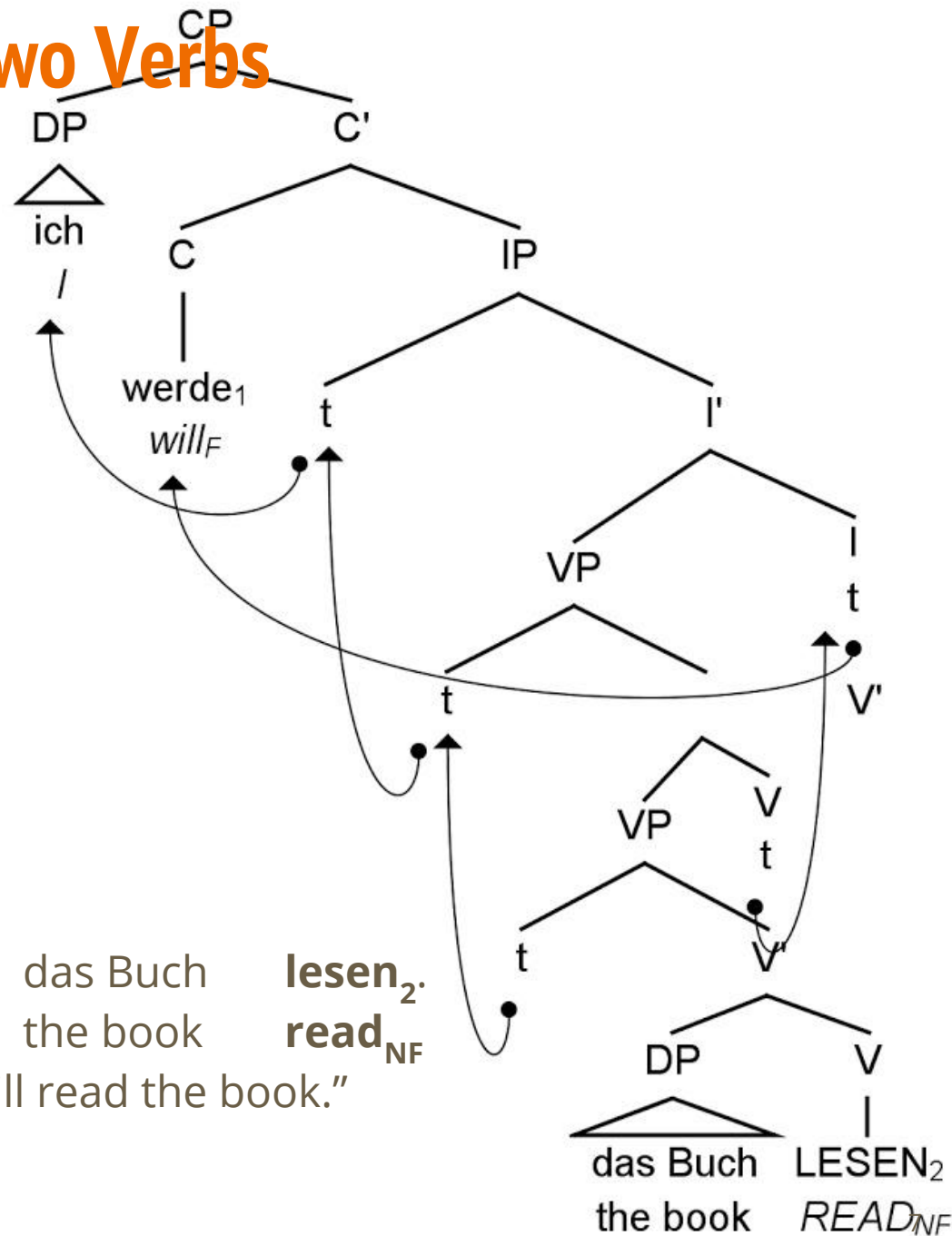
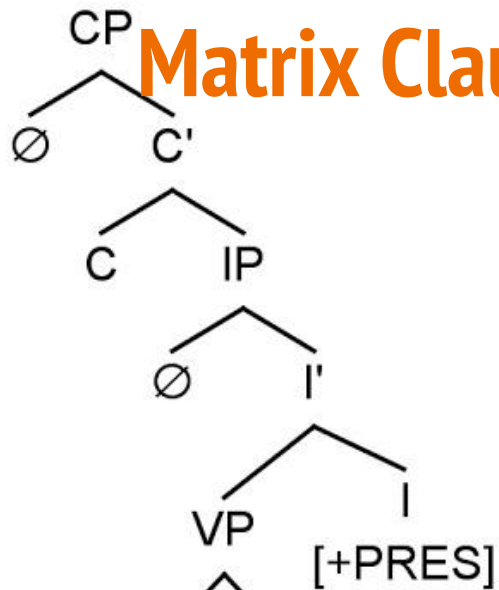


Ich denke, ich **lese**<sub>1</sub> das Buch.  
I think I **read**<sub>F</sub> the book  
"I think I'm reading the book."

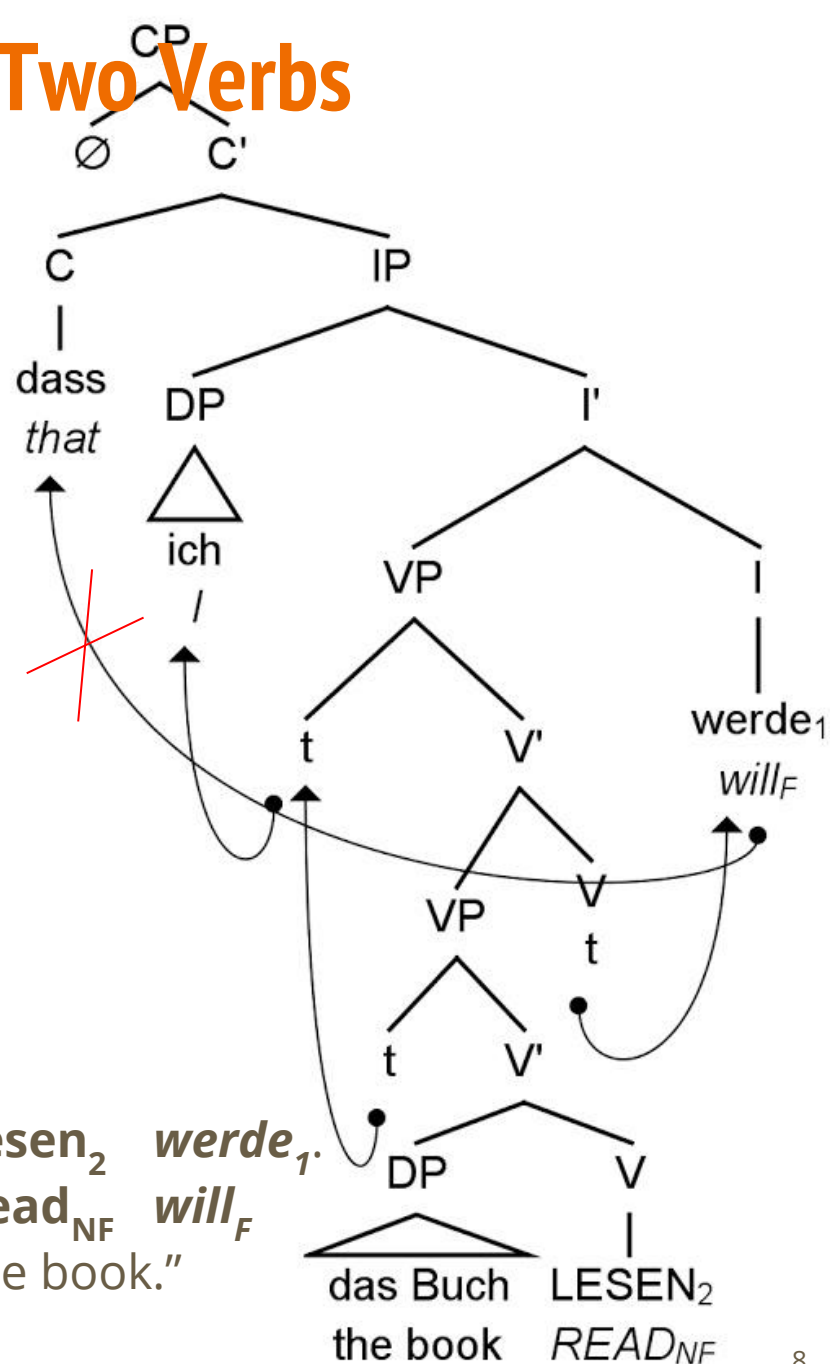
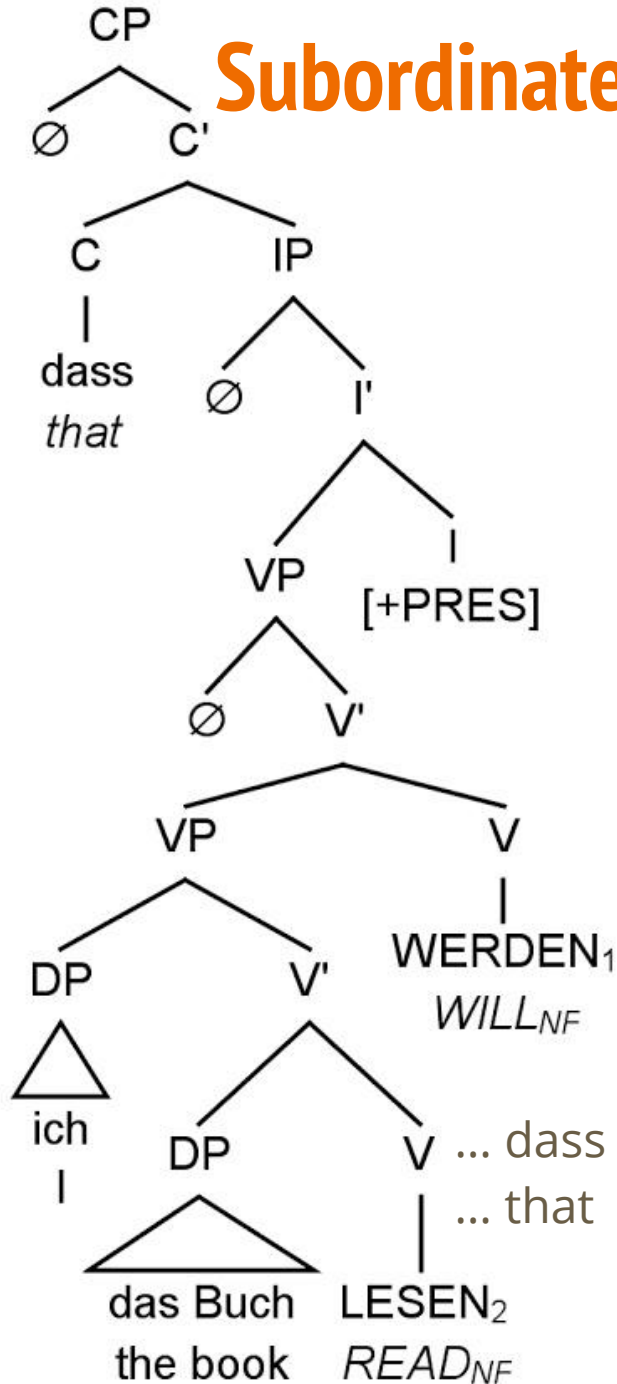
\*Ich denke, ich das Buch **lese**<sub>1</sub>.  
I think I the book **read**<sub>F</sub>  
"I think I'm reading the book."



# Matrix Clause w/ Two Verbs



# Subordinate Clause with Two Verbs

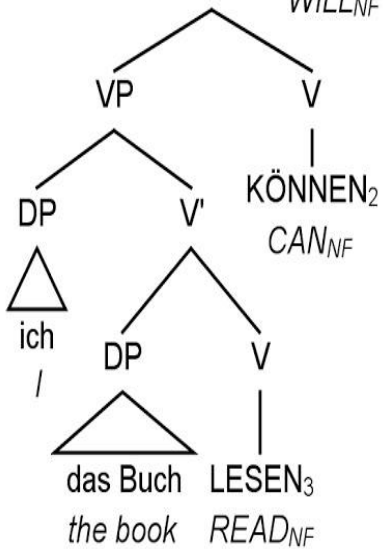
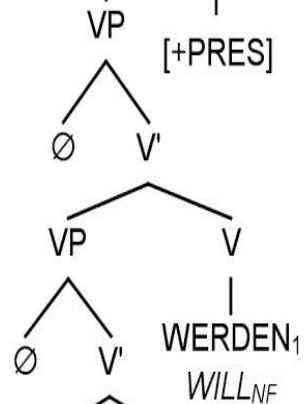
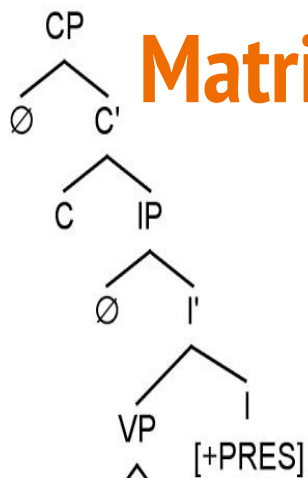


lesen<sub>2</sub> werde<sub>1</sub>  
read<sub>NF</sub> will<sub>F</sub>

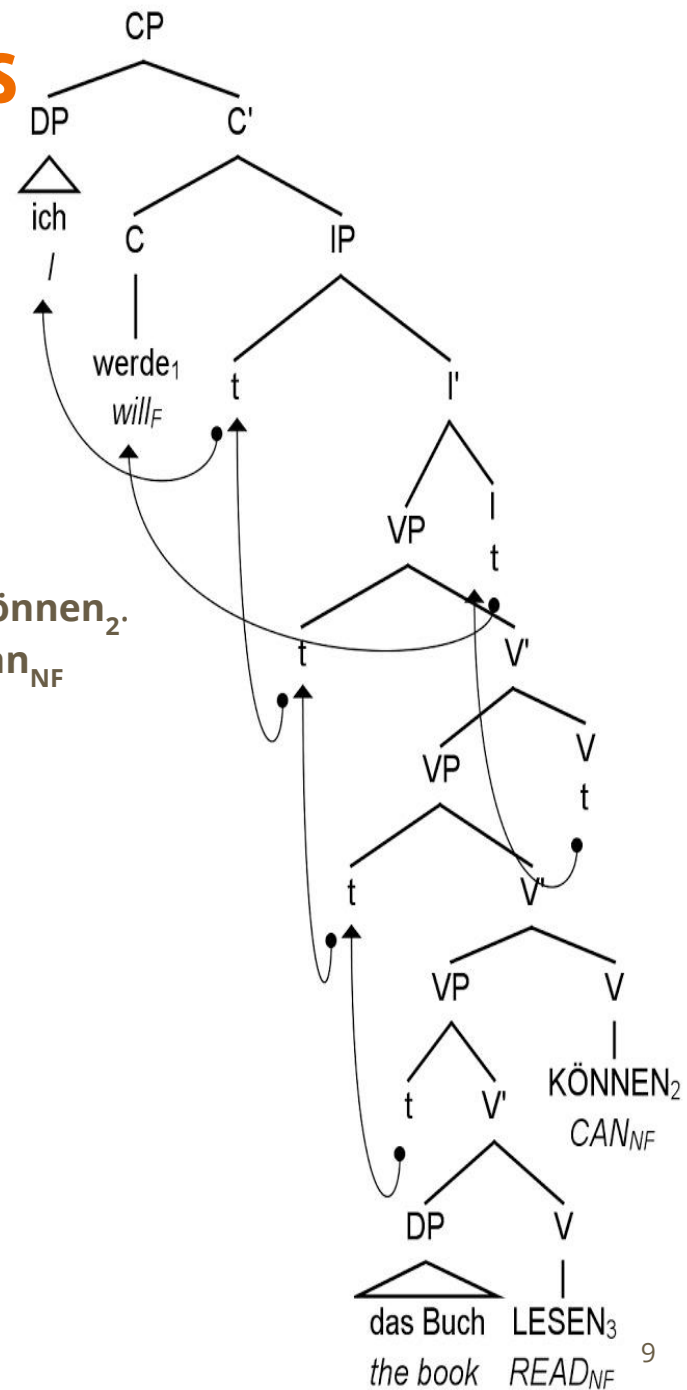
"... that I will read the book."



# Matrix Clause w/ Three Verbs



Ich **werde**<sub>1</sub> das Buch **lesen**<sub>3</sub> **können**<sub>2</sub>.  
 I **will**<sub>F</sub> the book **read**<sub>NF</sub> **can**<sub>NF</sub>  
 "I will be able to read the book."



CP Subordinate

CP

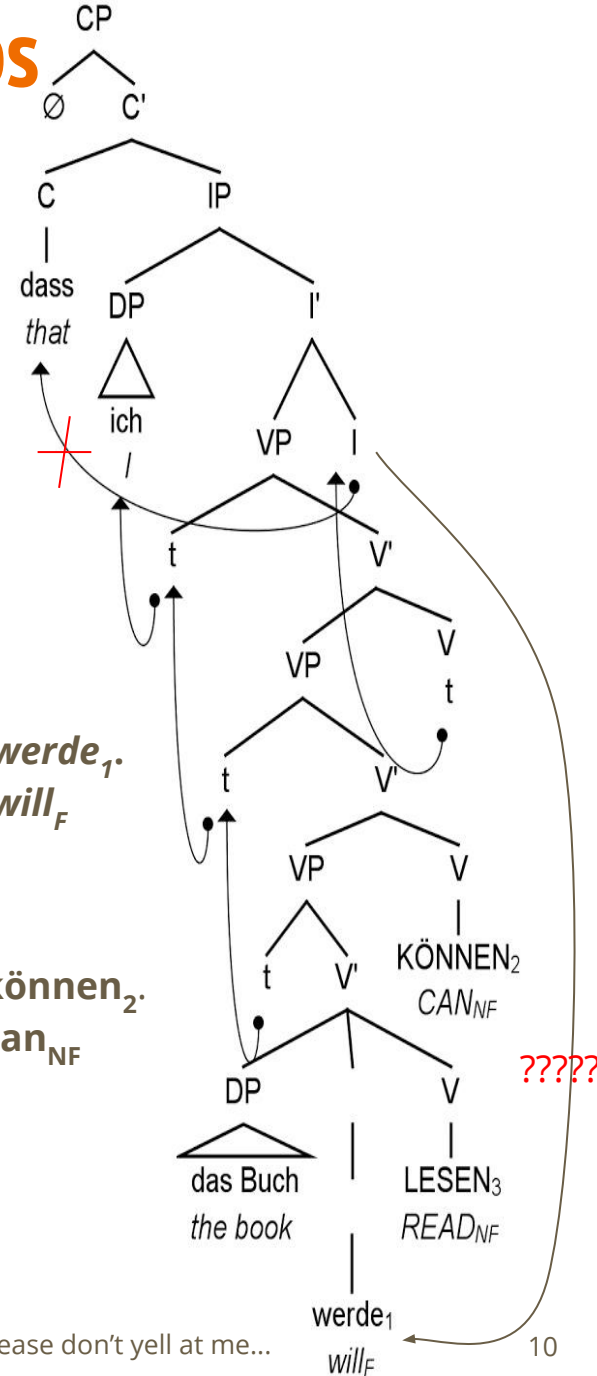
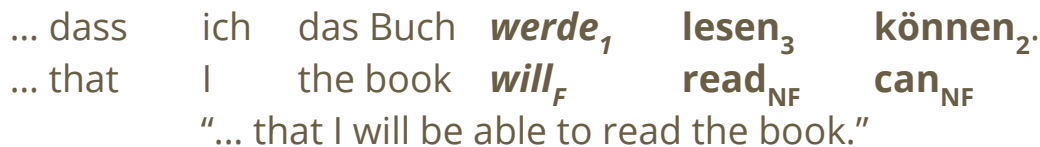
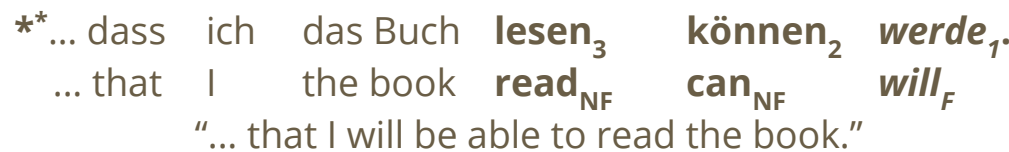
∅ C'

C IP

dass that

∅ I'

↑



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# Auxiliary Flip!

Some important things to note:

- The finite verb comes between the action verb and its complement.
- Nothing can appear between the finite verb and the non-finite verbs.\*
- This configuration is fairly common in German, and it's universal across speakers.

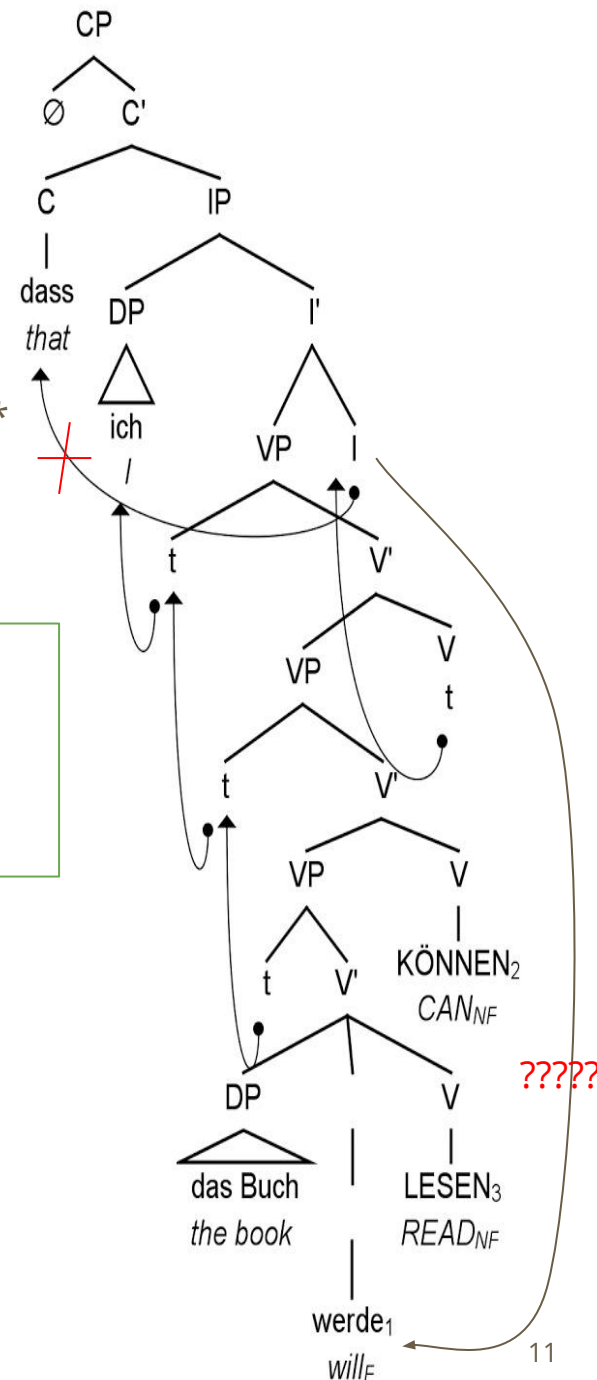
## Vocab word of the day:

## *Oberfeld*

- German for “upper field”

\*... dass ich das Buch **lesen**<sub>3</sub> **können**<sub>2</sub> **werde**<sub>1</sub>.  
 ... that I the book **read**<sub>NF</sub> **can**<sub>NF</sub> **will**<sub>F</sub>  
 "... that I will be able to read the book."

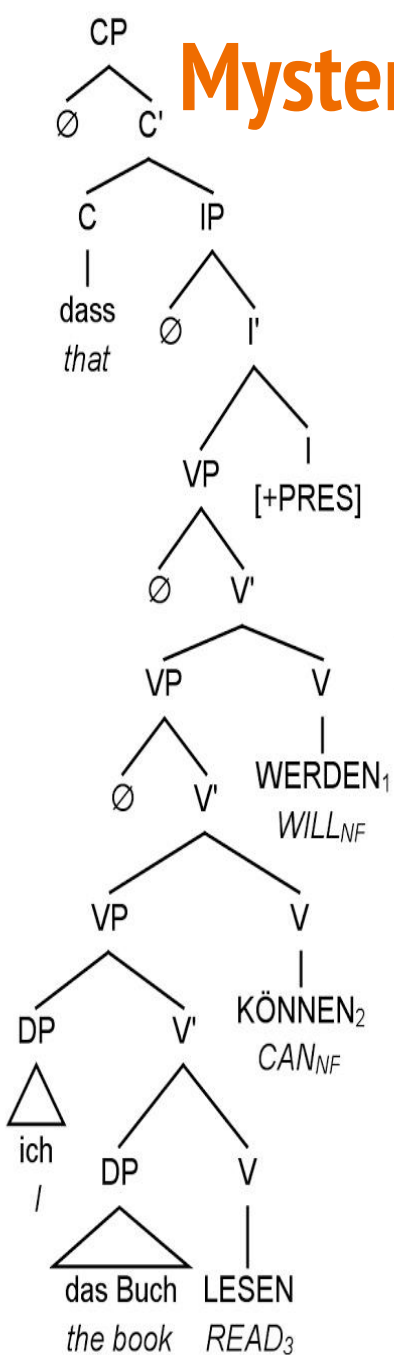
... dass ich das Buch **werde<sub>1</sub>** **lesen<sub>3</sub>** **können<sub>2</sub>**.  
 ... that I the book **will<sub>F</sub>** **read<sub>NF</sub>** **can<sub>NF</sub>**  
 "... that I will be able to read the book."



# Two Questions We Want to Be Answered:

- 1) Where does the finite verb move to in the clause?
- 2) Why does it move anyway?

# Mystery #1: Optional w/ werden “will”

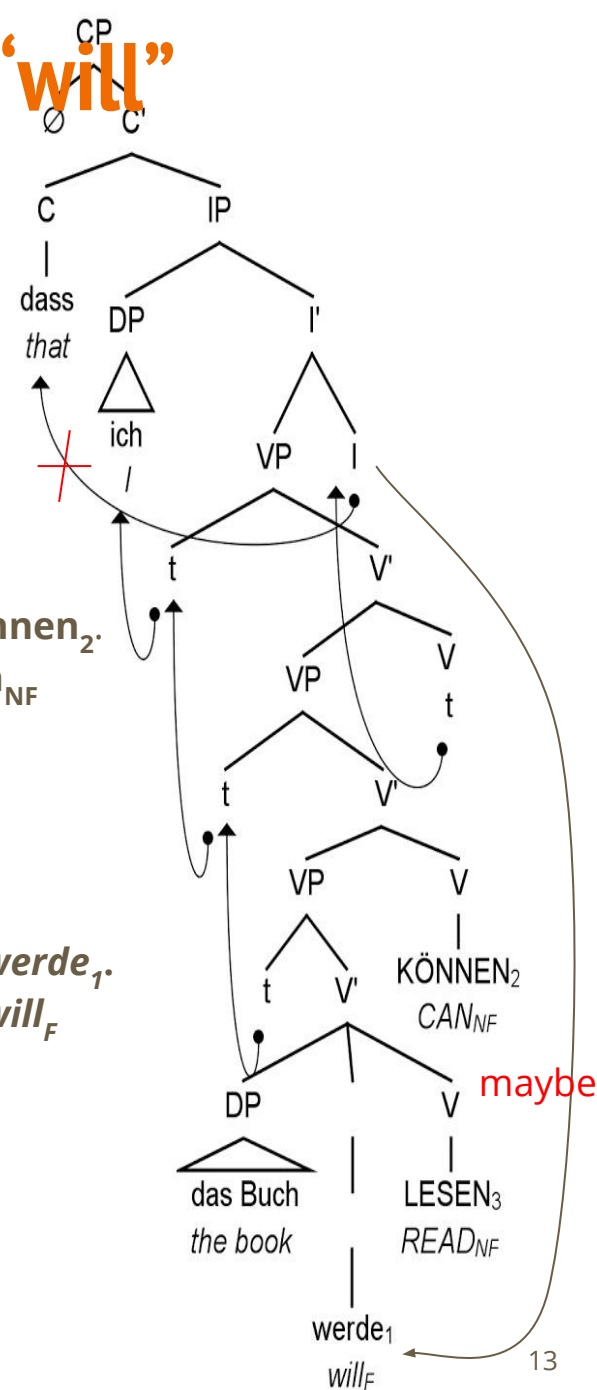


... dass  
 ... that

ich das Buch **werde**<sub>1</sub> **lesen**<sub>3</sub> **können**<sub>2</sub>.  
 I the book **will**<sub>F</sub> **read**<sub>NF</sub> **can**<sub>NF</sub>  
 "... that I will be able to read the book."

... dass  
 ... that

ich das Buch **lesen**<sub>3</sub> **können**<sub>2</sub> **werde**<sub>1</sub>.  
 I the book **read**<sub>NF</sub> **can**<sub>NF</sub> **will**<sub>F</sub>  
 "... that I will be able to read the book."



# Mystery #2: PP-Removal from *haben* “have”\*

\*... dass    ich    das Buch    **habe**<sub>1</sub>    lesen<sub>3</sub>    **gekonnt**<sub>2</sub>.  
... that    I    the book    **have**<sub>F</sub>    read<sub>NF</sub>    could<sub>PP</sub>  
“... that I had been able to read the book.”

## Subordinate Clause

... dass    ich    das Buch    **habe**<sub>1</sub>    lesen<sub>3</sub>    **können**<sub>2</sub>.  
... that    I    the book    **have**<sub>F</sub>    read<sub>NF</sub>    **can**<sub>NF</sub>  
“... that I had been able to read the book.”

? ... dass    ich    das Buch    **wird**<sub>1</sub>    **lesen**<sub>4</sub>    **gekonnt**<sub>3</sub>    **haben**<sub>2</sub>.  
... that    I    the book    **will**<sub>F</sub>    **read**<sub>NF</sub>    **could**<sub>PP</sub>    **have**<sub>NF</sub>.  
“... that I will have been able to read the book.”

## Matrix Clause

Ich    **habe**<sub>1</sub>    das Buch    lesen<sub>3</sub>    **können**<sub>2</sub>.  
I    **have**<sub>F</sub>    the book    read<sub>NF</sub>    **can**<sub>NF</sub>  
“I had been able to read the book.”

# Mystery #3

This movement allows quantified or emphatically stressed accusative NPs in sentences in which modal verbs appear in the perfect tense.\*

... dass ich *habe*<sub>1</sub> **keiner** lesen<sub>3</sub> können<sub>2</sub>  
... that I *have*<sub>F</sub> **nothing** read<sub>NF</sub> can<sub>NF</sub>  
“... that I had read *nothing*”

# Time to Kick it up a Notch!

- (1) Er **wird**<sub>1</sub> das Buch **haben**<sub>2</sub> **lesen**<sub>4</sub> **können**<sub>3</sub>.  
he **will**<sub>F</sub> the book **have**<sub>NF</sub> **read**<sub>NF</sub> **can**<sub>NF</sub>  
"He will have been able to read the book."

- (2) Ich glaube, dass er das Buch **wird**<sub>1</sub> **haben**<sub>2</sub> **lesen**<sub>4</sub> **können**<sub>3</sub>.  
I think that he the book **will**<sub>F</sub> **have**<sub>NF</sub> **read**<sub>NF</sub> **can**<sub>NF</sub>  
"I think that he will have been able to read the book."

- (3) Ich glaube, dass er das Buch **lesen**<sub>3</sub> **wird**<sub>1</sub> **können**<sub>2</sub>.  
I think that he the book **read**<sub>NF</sub> **will**<sub>F</sub> **can**<sub>NF</sub>  
"I think that he will be able to read the book."

Double Auxiliary Flip!!!

Intermediate Position!!!



# What are our options?

Ich glaube, dass er das Buch...  
I think that he the book...

"I think that he...

will be able to read

was able to read

will have been able to read

...the book."

*wird*<sub>1</sub> lesen<sub>3</sub> können<sub>2</sub>.  
*will*<sub>F</sub> read<sub>NF</sub> can<sub>NF</sub>

lesen<sub>3</sub> können<sub>2</sub> *wird*<sub>1</sub>. (!)  
read<sub>NF</sub> can<sub>NF</sub> *will*<sub>F</sub>

lesen<sub>3</sub> *wird*<sub>1</sub> können<sub>2</sub>. (!)  
read<sub>NF</sub> *will*<sub>F</sub> can<sub>NF</sub>

*habe*<sub>1</sub> lesen<sub>3</sub> können<sub>2</sub>.  
*have*<sub>F</sub> read<sub>NF</sub> can<sub>NF</sub>

\*lesen<sub>3</sub> können<sub>2</sub> *habe*<sub>1</sub>.  
read<sub>NF</sub> can<sub>NF</sub> *have*<sub>F</sub>

\**habe*<sub>1</sub> lesen<sub>3</sub> gekonnt<sub>2</sub>.  
*have*<sub>F</sub> read<sub>NF</sub> could<sub>PP</sub>

? lesen<sub>3</sub> gekonnt<sub>2</sub> *habe*<sub>1</sub>.  
read<sub>NF</sub> could<sub>PP</sub> *have*<sub>F</sub>

*wird*<sub>1</sub> lesen<sub>4</sub> können<sub>3</sub> haben<sub>2</sub>.  
*will*<sub>F</sub> read<sub>NF</sub> can<sub>NF</sub> have<sub>NF</sub>

*wird*<sub>1</sub> haben<sub>2</sub> lesen<sub>4</sub> können<sub>3</sub>. (!)  
*will*<sub>F</sub> have<sub>NF</sub> read<sub>NF</sub> can<sub>NF</sub>

lesen<sub>4</sub> gekonnt<sub>3</sub> haben<sub>2</sub> *wird*<sub>1</sub>.  
read<sub>NF</sub> could<sub>PP</sub> have<sub>NF</sub> *will*<sub>F</sub>

? *wird*<sub>1</sub> lesen<sub>4</sub> gekonnt<sub>3</sub> haben<sub>2</sub>. (!)  
*will*<sub>F</sub> read<sub>NF</sub> could<sub>PP</sub> have<sub>NF</sub>

# And then there's *Dutch*...

a) ... dat Jan het boek<sub>2</sub> **wil**<sub>1</sub> **lezen**<sub>2</sub>.  
 ... that John the book *wants*<sub>F</sub> read<sub>NF</sub>



"...that John wants to read the book."

b) ... dat Jan Marie<sub>1</sub> het boek<sub>2</sub> **laat**<sub>1</sub> **lezen**<sub>2</sub>.  
 ... that John Mary the book *lets*<sub>F</sub> read<sub>NF</sub>



"... that John lets Mary read the book."

c) ... dat Jan<sub>1</sub> Marie<sub>2</sub> het boek<sub>3</sub> **wil**<sub>1</sub> **laten**<sub>2</sub> **lezen**<sub>3</sub>.  
 ... that John<sub>1</sub> Mary<sub>2</sub> the book<sub>3</sub> *wants*<sub>F</sub> let<sub>NF</sub> read<sub>NF</sub>



"... that John wants to let Mary read the book."

# How Common are These Actually?

- Extreme cases of aux flip vary across speakers, but generally is universal across German and dialects.
- Strongly depends on the accompanying verb, and limited to select decreasing numbers of verbs.
- Slowly disappearing with *werden* “will”.
- Very natural to native speakers.

(Hinrichs, 2016)

Table 12.

Oberfeld placement of modals with double infinitives.

	DTA 1600-99		DTA 1700-99		DTA 1800-99		TüPP-D/Z		TüBa-D/Z	
<u>VVIN</u> <u>F</u> <u>VMIN</u> <u>F</u> <u>VMFIN</u>	0.01	1	0.04	7	0.01	1	0.08	17	3.18	5
<u>VMFIN</u> <u>VVIN</u> <u>F</u> <u>VMIN</u> <u>F</u>	0.21	63	0.69	209	0.51	151	0.07	14	0.00	0
<u>VVIN</u> <u>F</u> <u>VVIN</u> <u>F</u> <u>VMFIN</u>	3.16	967	6.53	1,939	5.39	1,402	25.78	5,270	0.67	1
<u>VMFIN</u> <u>VVIN</u> <u>F</u> <u>VVIN</u> <u>F</u>	2.56	770	2.55	762	1.14	348	0.03	7	3.18	5

# Past Work with Aux Flip

Head-driven Phrase Structure Grammar:

- (Hinrichs and Nakazawa, 1994a) states that a *verbal complex* is combined before then being combined with the arguments of the involved verbs. The complex can be analyzed as a single constituent.
- (Bouma and van Noord, 1996) describes this verbal complex as having to be a flat structure, with linear ordering properties and constraints.
- (Meuers, 2001) re-analyzes this structure as unique to this phenomenon and not the same as a normal German *verbal complex*. Aux verbs are removed from the government chain and analyzed as a comp, similar to D and NPs.

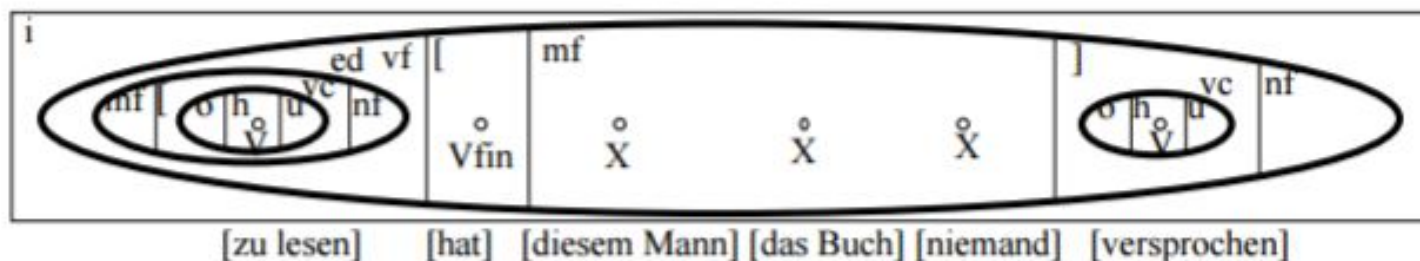
## Past Work with Aux Flip (cont.)

Generative Grammar:

- (Haider 1990) states that topicalized V-projections are base-generated in Spec-CP when fronted, and this principle could be extended in other sentential positions.

“Topological Dependency Grammar”:

- (Gerdes and Kahane, 2001)



# A Generative Approach

Following ideas presented in (Meurers, 2001), let's assume VPs in German consist of an outer C layer (similar to introducing D with NPs).

Why?      *German aux flip is weird.*

- A limited class of verbs can be flipped: only aux verbs\*
- Only finite and bare infinitival verbs that take a bare infinitival complement can flip.\*
- Verbal complements of *haben* "have" must occur in bare infinitival form, not as usual past participles.
- The position of the flip is to the left, not the usual right that would be presumed.

# Rethink *Oberfeld* Verbs as Functional Elements

(Abney, 1987) lists five properties that characterize functional elements:

1. Represent a restricted lexical class of elements
  - Only *haben*, *werden*, and rare certain modals
2. Never can be stressed
3. Only can select a single complement type
  - Always infinitival VP
4. Complement cannot be topicalized
5. Lack “descriptive content”; instead “regulate or contribute to the interpretation of their complement”

▪▪ *Oberfeld* verbs are now functional elements!

# Here We Go!

VP is now the complement of a special verbal CP.

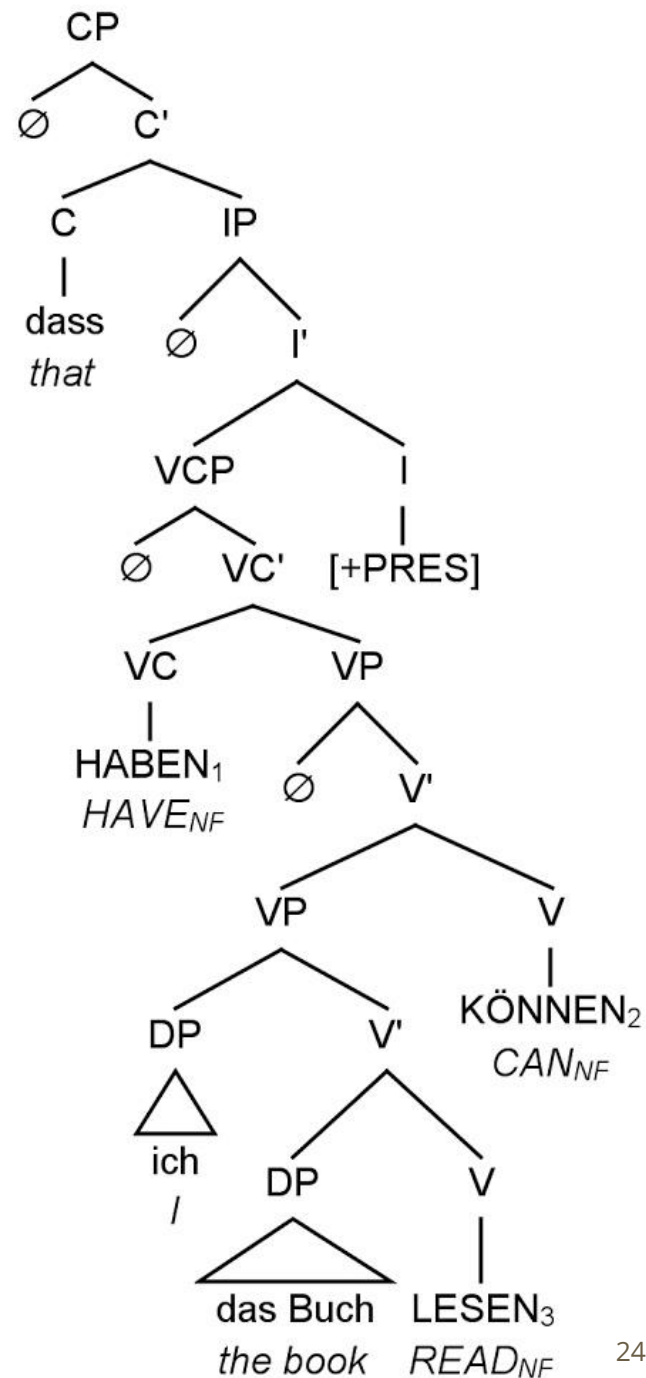
- This parallels NP and DP, and IP and CP.

Because *haben* “have” is generated in VC, it does not pass PP-features (or it is generated here lacking such features in the first place).

I drops its features onto VC. If VC is empty, the next highest verbal element moves to I.

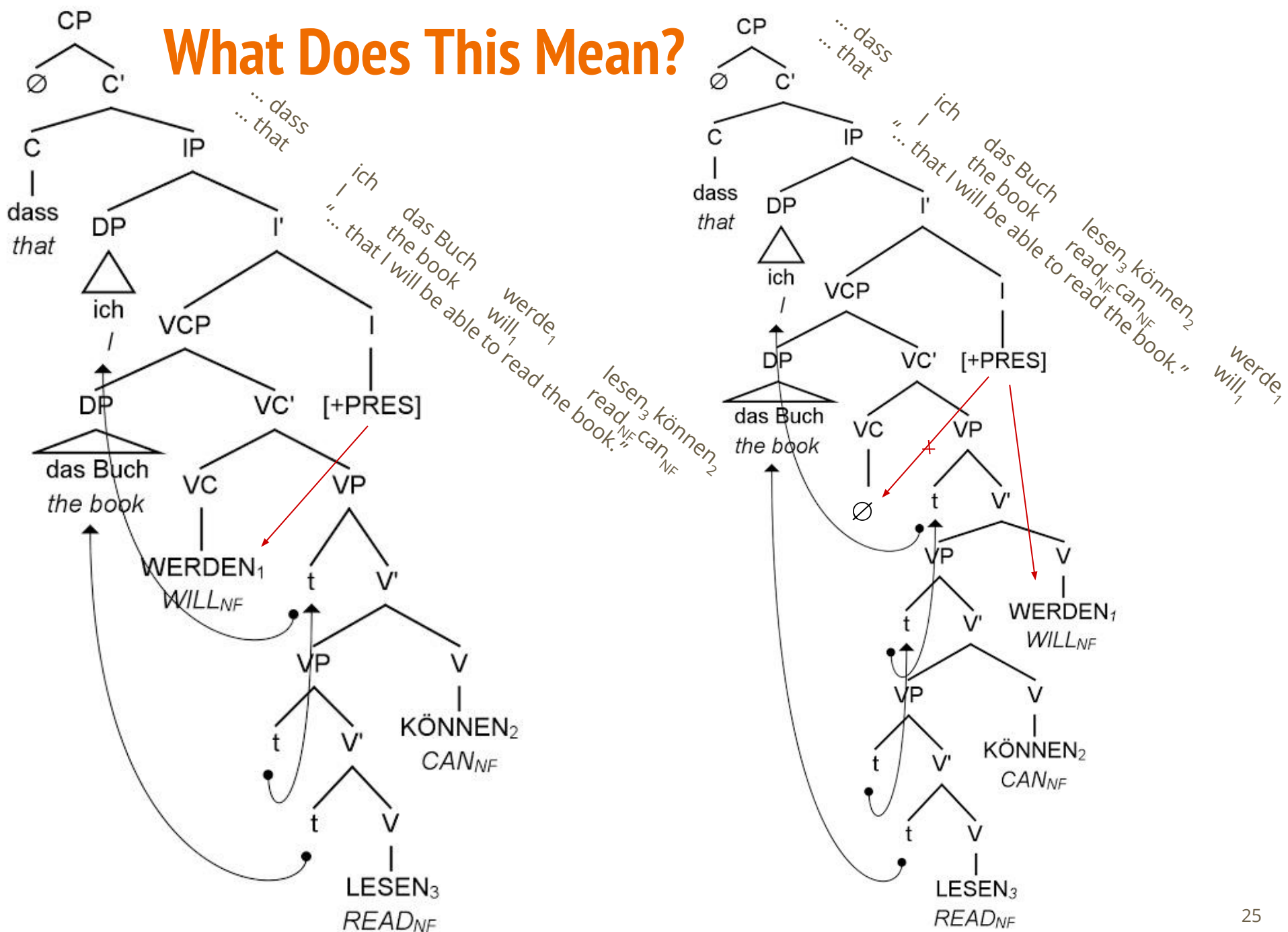
The verb affected then tries to move to C.

C is filled by *dass* “that,” so movement does not occur.

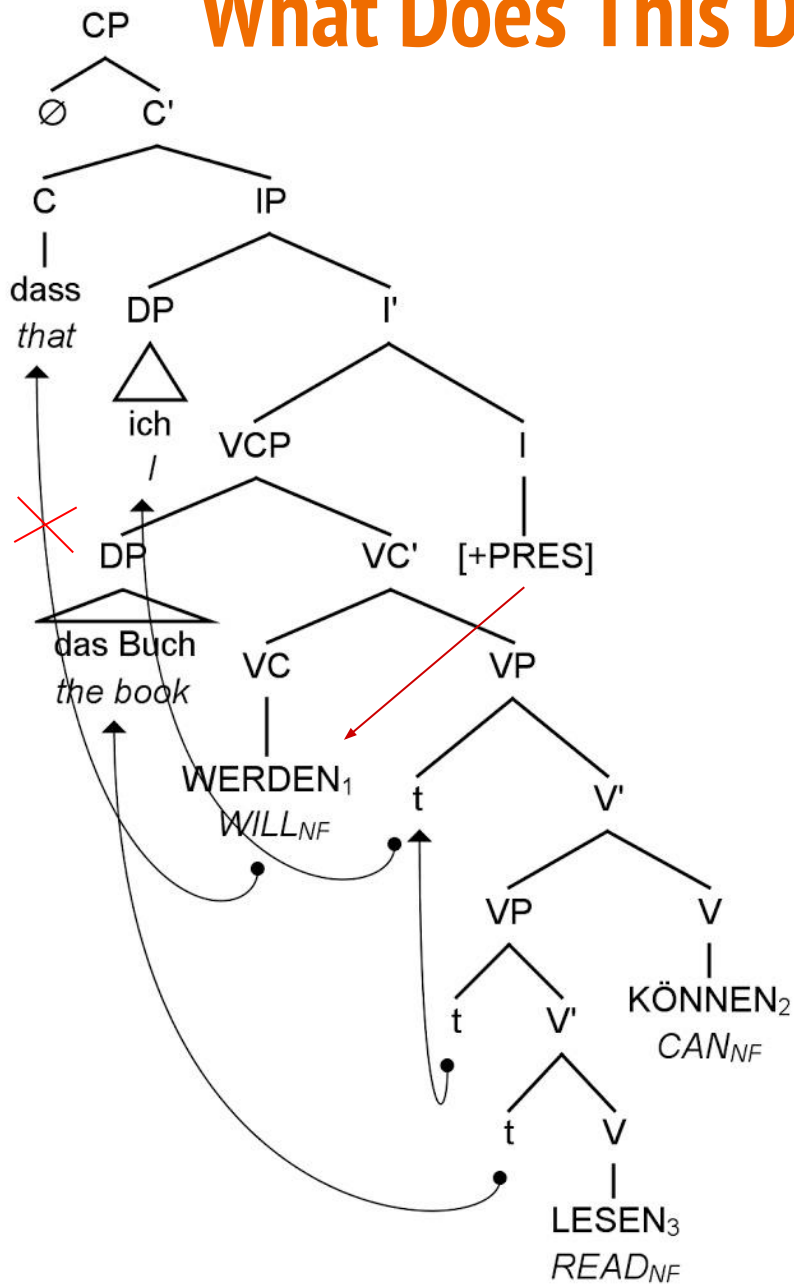




# What Does This Mean?



# What Does This Do?



*wird*<sub>1</sub>  
*will*<sub>F</sub>

lesen<sub>3</sub>  
read<sub>NF</sub>

können<sub>2</sub>.  
can<sub>NF</sub>

lesen<sub>3</sub>  
read<sub>NF</sub>

können<sub>2</sub>  
can<sub>NF</sub>

*wird*<sub>1</sub>. (!)  
*will*<sub>F</sub>

lesen<sub>3</sub>  
read<sub>NF</sub>

*wird*<sub>1</sub>  
*will*<sub>F</sub>

können<sub>2</sub>. (!)  
can<sub>NF</sub>

*habe*<sub>1</sub>  
*have*<sub>F</sub>

lesen<sub>3</sub>  
read<sub>NF</sub>

können<sub>2</sub>.  
can<sub>NF</sub>

\*lesen<sub>3</sub>  
read<sub>NF</sub>

können<sub>2</sub>  
can<sub>NF</sub>

*habe*<sub>1</sub>.  
*have*<sub>F</sub>

\**habe*<sub>1</sub>  
*have*<sub>F</sub>

lesen<sub>3</sub>  
read<sub>NF</sub>

gekonnt<sub>2</sub>.  
could<sub>PP</sub>

? lesen<sub>3</sub>  
read<sub>NF</sub>

gekonnt<sub>2</sub>  
could<sub>PP</sub>

*habe*<sub>1</sub>  
*have*<sub>F</sub>

*wird*<sub>1</sub>  
*will*<sub>F</sub>

lesen<sub>4</sub>  
read<sub>NF</sub>

können<sub>3</sub>  
can<sub>NF</sub>

haben<sub>2</sub>.  
have<sub>NF</sub>

*wird*<sub>1</sub>  
*will*<sub>F</sub>

haben<sub>2</sub>  
have<sub>NF</sub>

lesen<sub>4</sub>  
read<sub>NF</sub>

können<sub>3</sub>. (!)  
can<sub>NF</sub>

lesen<sub>4</sub>  
read<sub>NF</sub>

gekonnt<sub>3</sub>  
could<sub>PP</sub>

haben<sub>2</sub>  
have<sub>NF</sub>

*wird*<sub>1</sub>.  
*will*<sub>F</sub>

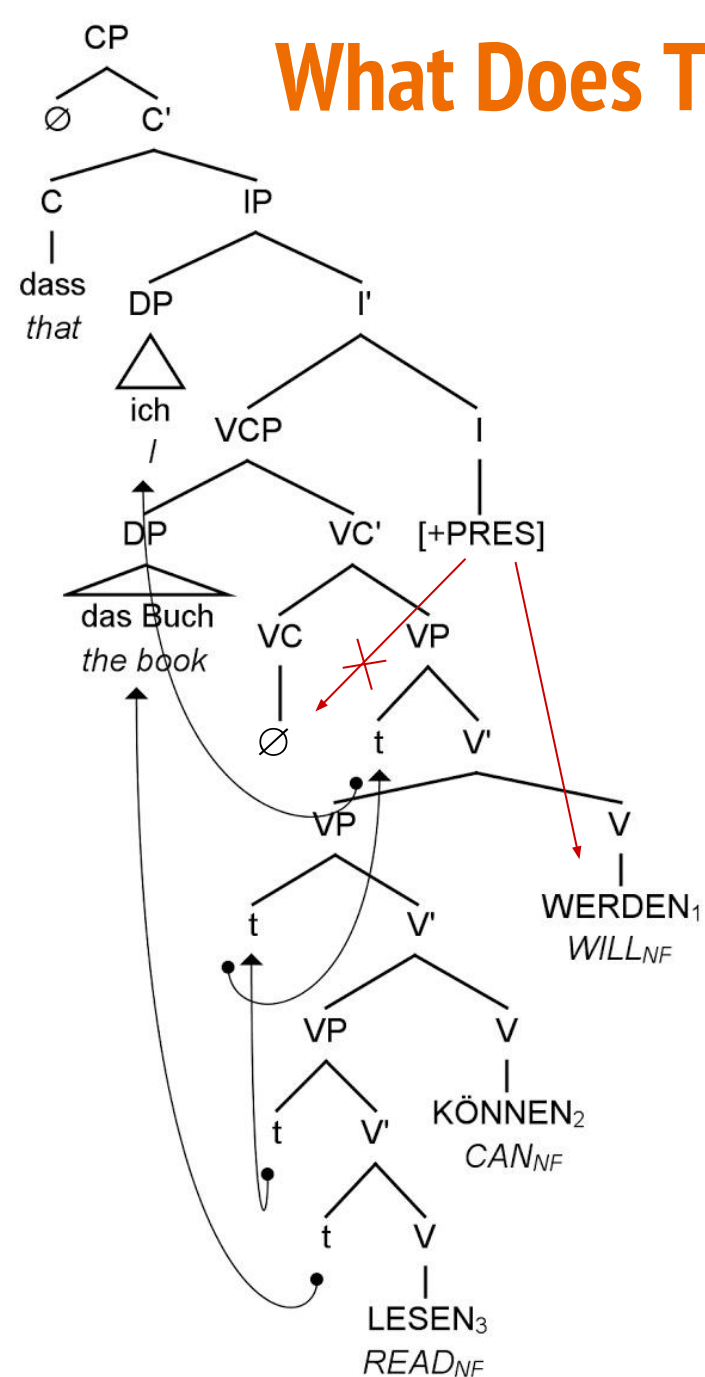
? *wird*<sub>1</sub>  
*will*<sub>F</sub>

lesen<sub>4</sub>  
read<sub>NF</sub>

gekonnt<sub>3</sub>  
could<sub>PP</sub>

haben<sub>2</sub>. (!)  
have<sub>NF</sub>

# What Does This Do?



*wird*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>3</sub>      *können*<sub>2</sub>      *wird*<sub>1</sub>. (!)  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *will*<sub>F</sub>

*lesen*<sub>3</sub>      *wird*<sub>1</sub>      *können*<sub>2</sub>. (!)  
*read*<sub>NF</sub>      *will*<sub>F</sub>      *can*<sub>NF</sub>

*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

\**lesen*<sub>3</sub>      *können*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>F</sub>

\**habe*<sub>1</sub>      *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>

? *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>F</sub>

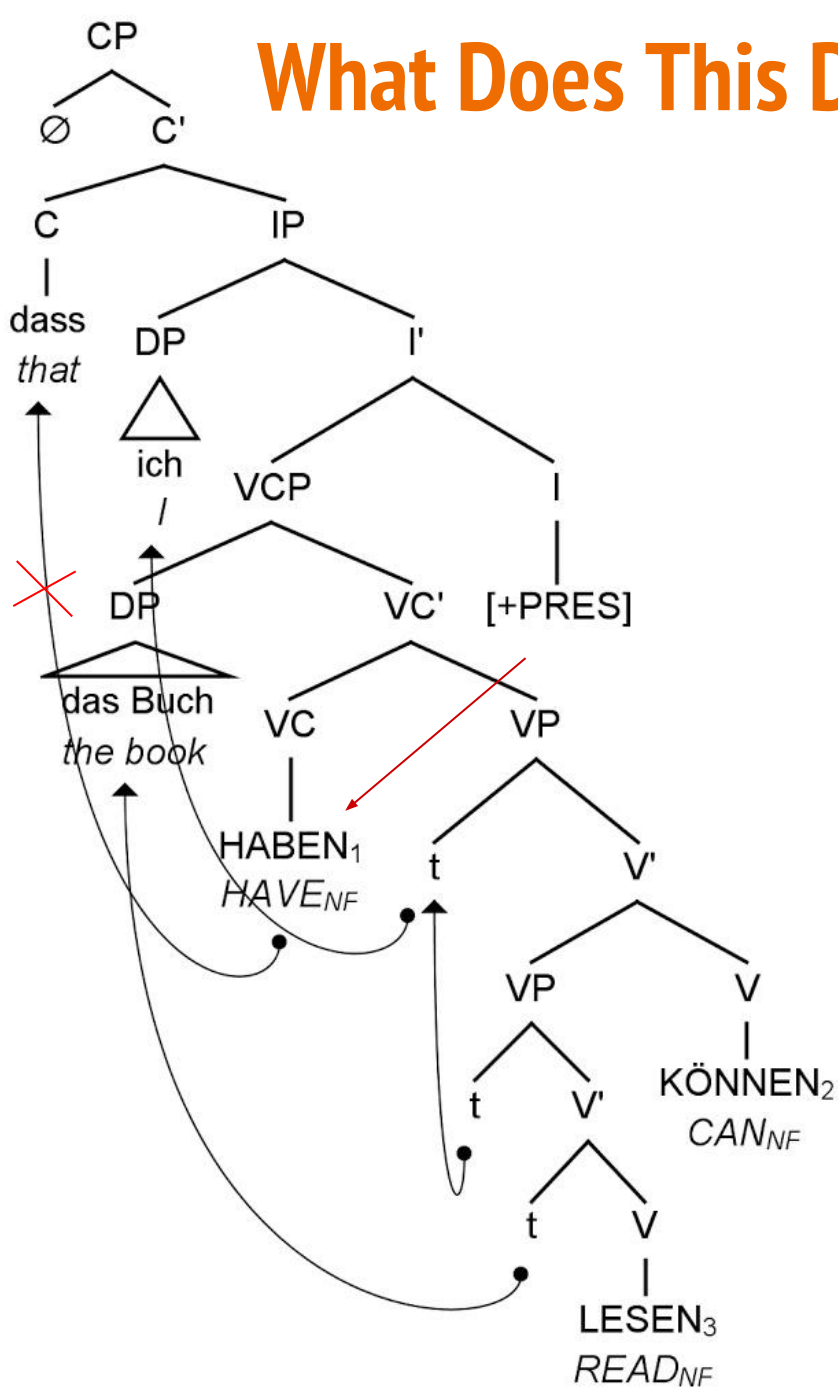
*wird*<sub>1</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>      *haben*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>NF</sub>

*wird*<sub>1</sub>      *haben*<sub>2</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>. (!)  
*will*<sub>F</sub>      *have*<sub>NF</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>      *wird*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>      *will*<sub>F</sub>

? *wird*<sub>1</sub>      *lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>. (!)  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>

# What Does This Do?



*wird<sub>1</sub>*    *lesen<sub>3</sub>*    *können<sub>2</sub>*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

*lesen<sub>3</sub>*    *können<sub>2</sub>*    *wird<sub>1</sub>. (!)*  
*read<sub>NF</sub>*    *can<sub>NF</sub>*    *will<sub>F</sub>*

*lesen<sub>3</sub>*    *wird<sub>1</sub>*    *können<sub>2</sub>. (!)*  
*read<sub>NF</sub>*    *will<sub>F</sub>*    *can<sub>NF</sub>*

*habe<sub>1</sub>*    *lesen<sub>3</sub>*    *können<sub>2</sub>*  
*have<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

\**lesen<sub>3</sub>*    *können<sub>2</sub>*    *habe<sub>1</sub>*  
*read<sub>NF</sub>*    *can<sub>NF</sub>*    *have<sub>F</sub>*

\**habe<sub>1</sub>*    *lesen<sub>3</sub>*    *gekonnt<sub>2</sub>*  
*have<sub>F</sub>*    *read<sub>NF</sub>*    *could<sub>PP</sub>*

? *lesen<sub>3</sub>*    *gekonnt<sub>2</sub>*    *habe<sub>1</sub>*  
*read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>F</sub>*

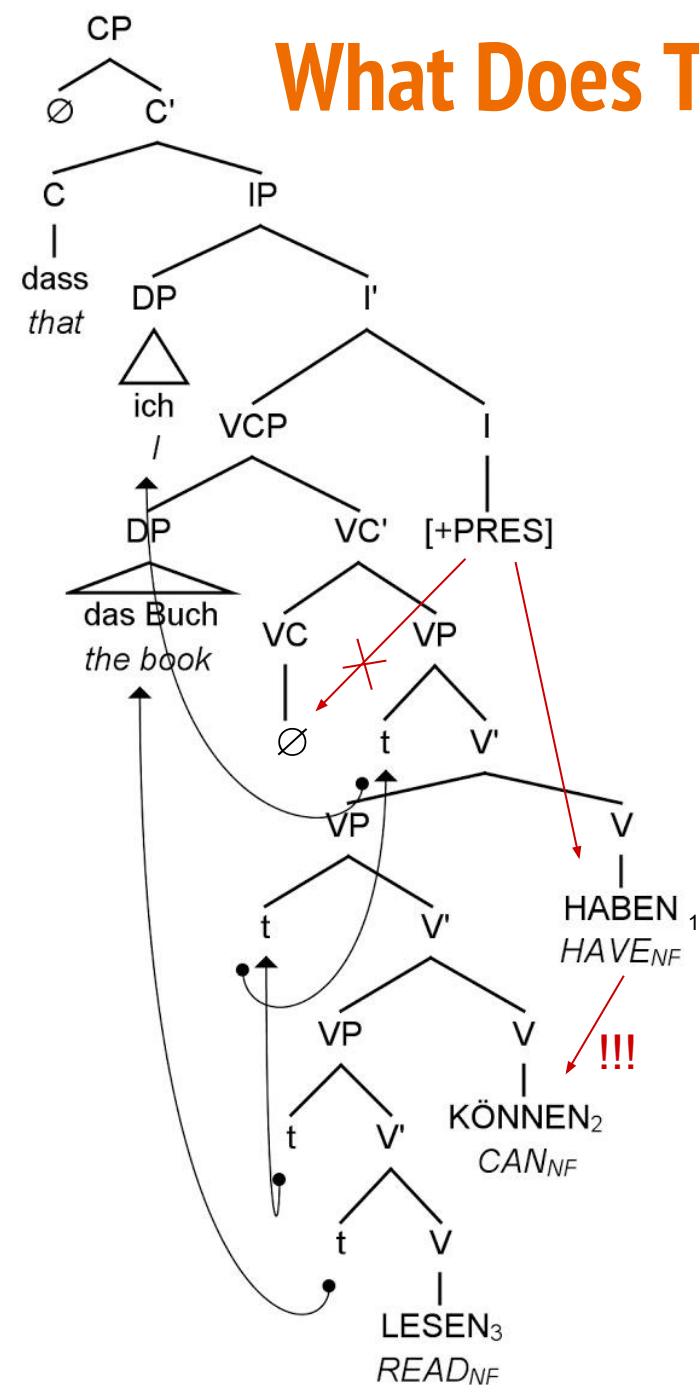
*wird<sub>1</sub>*    *lesen<sub>4</sub>*    *können<sub>3</sub>*    *haben<sub>2</sub>*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*    *have<sub>NF</sub>*

*wird<sub>1</sub>*    *haben<sub>2</sub>*    *lesen<sub>4</sub>*    *können<sub>3</sub>. (!)*  
*will<sub>F</sub>*    *have<sub>NF</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

*lesen<sub>4</sub>*    *gekonnt<sub>3</sub>*    *haben<sub>2</sub>*    *wird<sub>1</sub>*  
*read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>NF</sub>*    *will<sub>F</sub>*

? *wird<sub>1</sub>*    *lesen<sub>4</sub>*    *gekonnt<sub>3</sub>*    *haben<sub>2</sub>. (!)*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>NF</sub>*

# What Does This Do?



*wird*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>3</sub>      *können*<sub>2</sub>      *wird*<sub>1</sub>. (!)  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *will*<sub>F</sub>

*lesen*<sub>3</sub>      *wird*<sub>1</sub>      *können*<sub>2</sub>. (!)  
*read*<sub>NF</sub>      *will*<sub>F</sub>      *can*<sub>NF</sub>

*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*\*lesen*<sub>3</sub>      *können*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>F</sub>

*\*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>

? *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>F</sub>

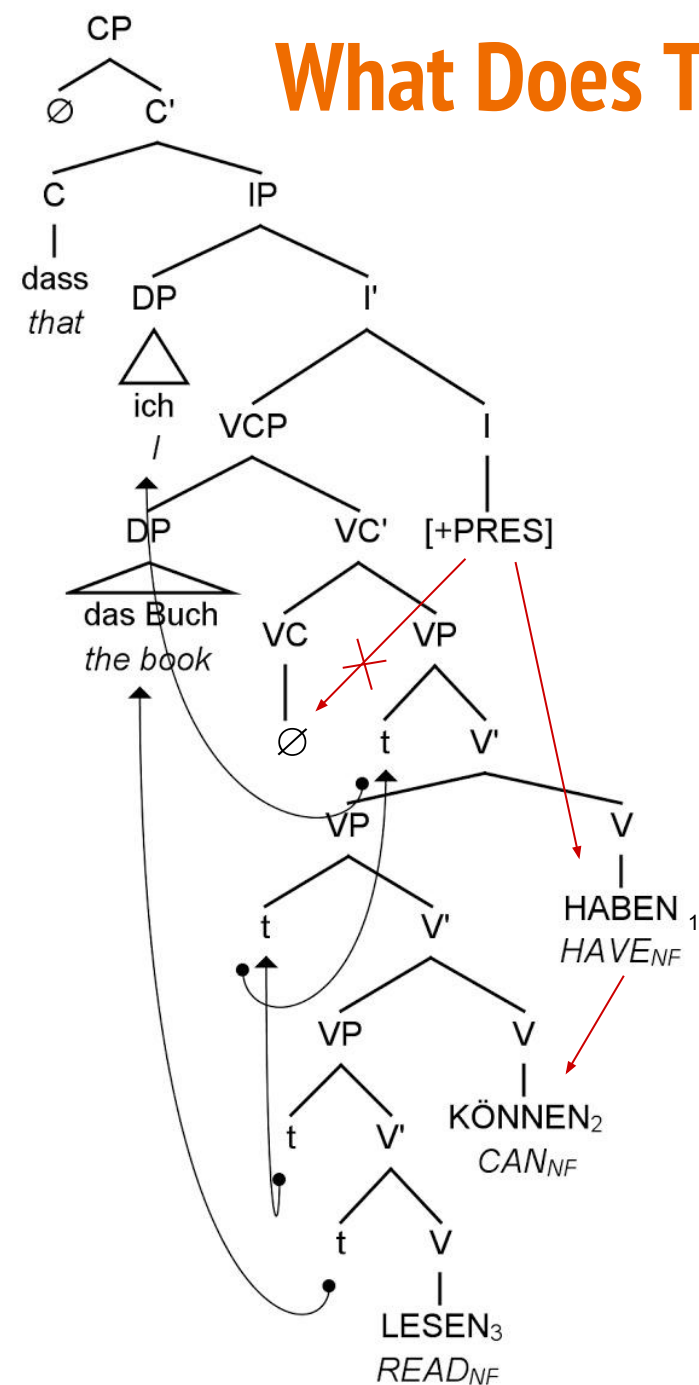
*wird*<sub>1</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>      *haben*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>NF</sub>

*wird*<sub>1</sub>      *haben*<sub>2</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>. (!)  
*will*<sub>F</sub>      *have*<sub>NF</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>      *wird*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>      *will*<sub>F</sub>

? *wird*<sub>1</sub>      *lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>. (!)  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>

# What Does This Do?



*wird*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>3</sub>      *können*<sub>2</sub>      *wird*<sub>1</sub>. (!)  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *will*<sub>F</sub>

*lesen*<sub>3</sub>      *wird*<sub>1</sub>      *können*<sub>2</sub>. (!)  
*read*<sub>NF</sub>      *will*<sub>F</sub>      *can*<sub>NF</sub>

*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

\**lesen*<sub>3</sub>      *können*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>F</sub>

\**habe*<sub>1</sub>      *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>

? *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>      *habe*<sub>1</sub>  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>F</sub>

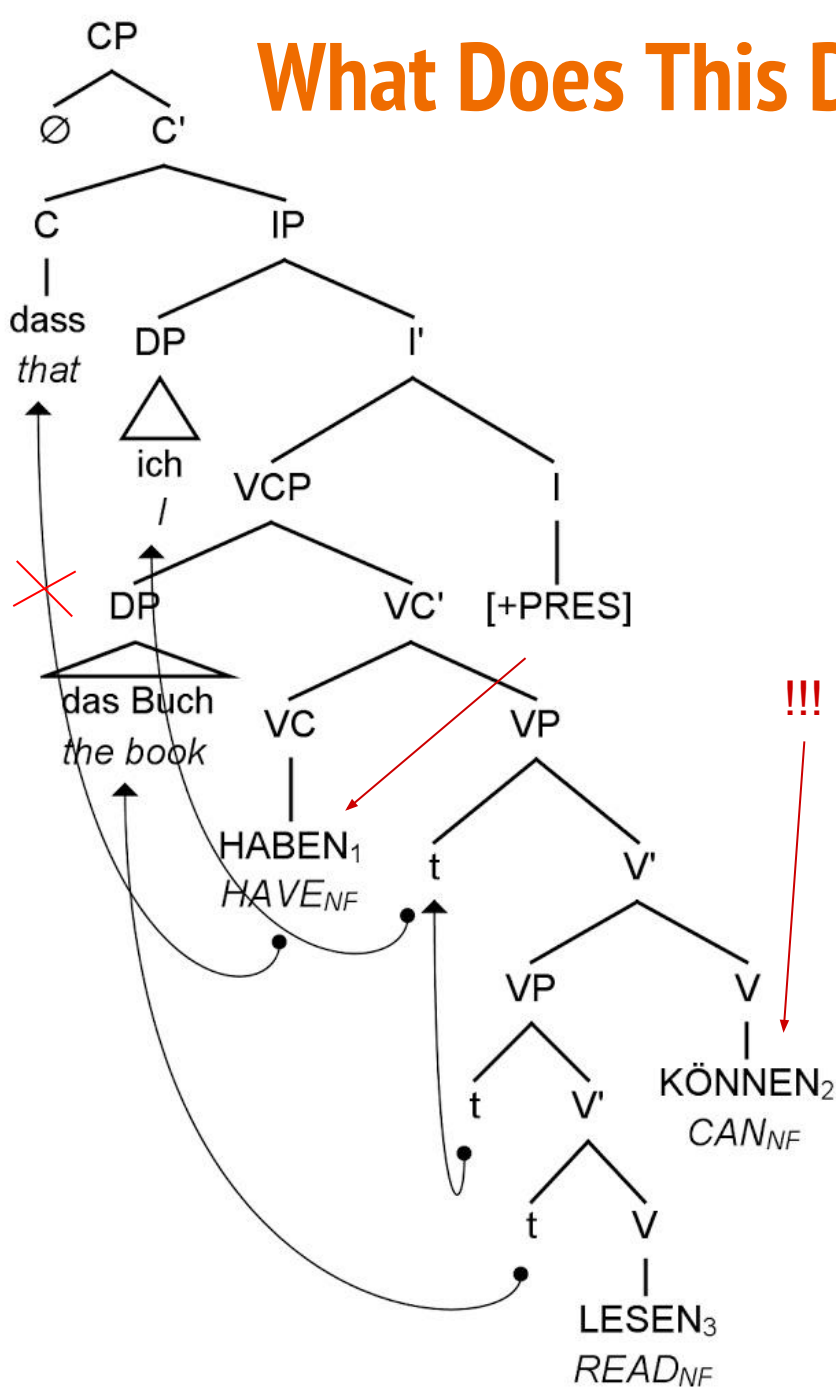
*wird*<sub>1</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>      *haben*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>NF</sub>

*wird*<sub>1</sub>      *haben*<sub>2</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>. (!)  
*will*<sub>F</sub>      *have*<sub>NF</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>      *wird*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>      *will*<sub>F</sub>

? *wird*<sub>1</sub>      *lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>. (!)  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>

# What Does This Do?



*wird<sub>1</sub>*    *lesen<sub>3</sub>*    *können<sub>2</sub>*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

*lesen<sub>3</sub>*    *können<sub>2</sub>*    *wird<sub>1</sub>. (!)*  
*read<sub>NF</sub>*    *can<sub>NF</sub>*    *will<sub>F</sub>*

*lesen<sub>3</sub>*    *wird<sub>1</sub>*    *können<sub>2</sub>. (!)*  
*read<sub>NF</sub>*    *will<sub>F</sub>*    *can<sub>NF</sub>*

*habe<sub>1</sub>*    *lesen<sub>3</sub>*    *können<sub>2</sub>*  
*have<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

*\*lesen<sub>3</sub>*    *können<sub>2</sub>*    *habe<sub>1</sub>.*  
*read<sub>NF</sub>*    *can<sub>NF</sub>*    *have<sub>F</sub>*

*\*habe<sub>1</sub>*    *lesen<sub>3</sub>*    *gekonnt<sub>2</sub>.*  
*have<sub>F</sub>*    *read<sub>NF</sub>*    *could<sub>PP</sub>*

*?lesen<sub>3</sub>*    *gekonnt<sub>2</sub>*    *habe<sub>1</sub>*  
*read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>F</sub>*

*wird<sub>1</sub>*    *lesen<sub>4</sub>*    *können<sub>3</sub>*    *haben<sub>2</sub>.*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*    *have<sub>NF</sub>*

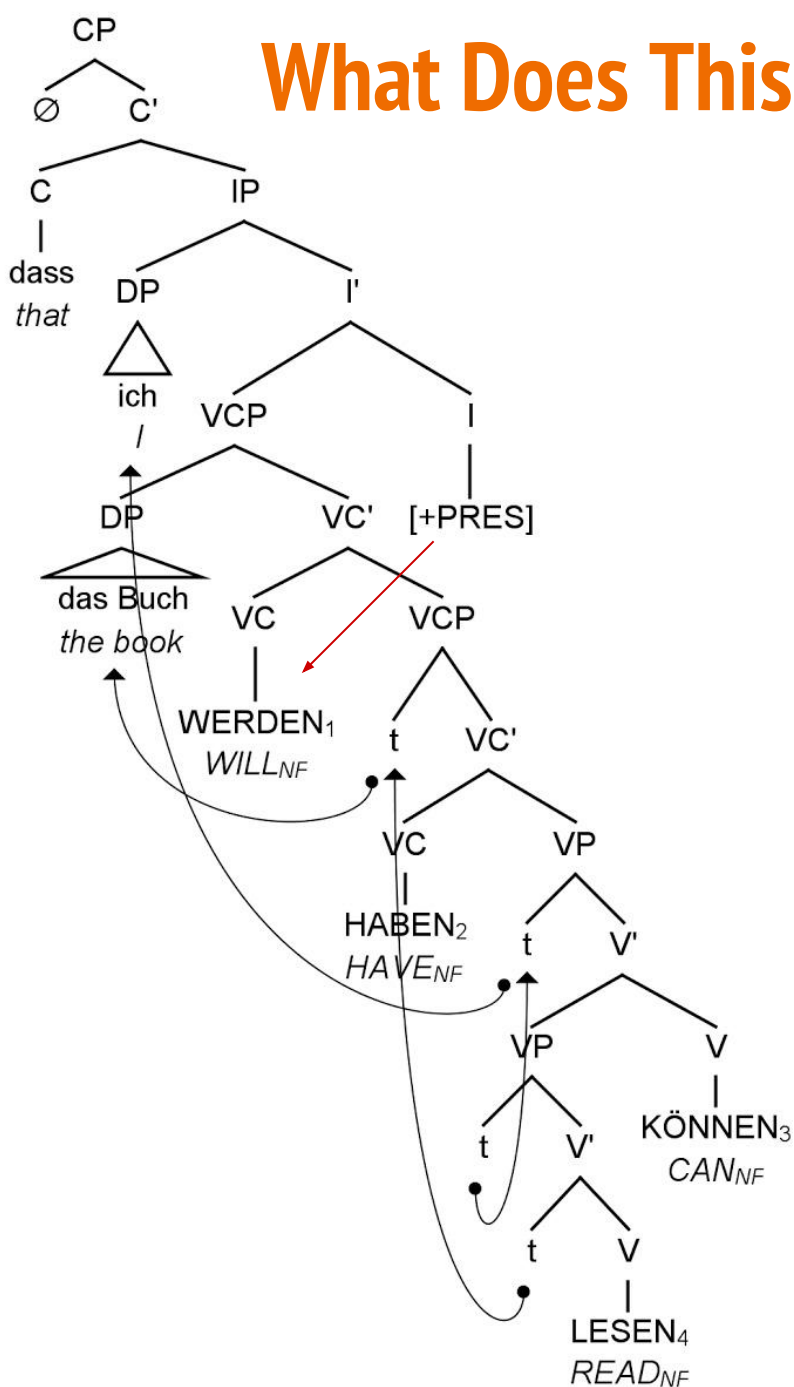
*wird<sub>1</sub>*    *haben<sub>2</sub>*    *lesen<sub>4</sub>*    *können<sub>3</sub>. (!)*  
*will<sub>F</sub>*    *have<sub>NF</sub>*    *read<sub>NF</sub>*    *can<sub>NF</sub>*

*lesen<sub>4</sub>*    *gekonnt<sub>3</sub>*    *haben<sub>2</sub>*    *wird<sub>1</sub>.*  
*read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>NF</sub>*    *will<sub>F</sub>*

*?wird<sub>1</sub>*    *lesen<sub>4</sub>*    *gekonnt<sub>3</sub>*    *haben<sub>2</sub>. (!)*  
*will<sub>F</sub>*    *read<sub>NF</sub>*    *could<sub>PP</sub>*    *have<sub>NF</sub>*



# What Does This Do?



*wird<sub>1</sub>*      *lesen<sub>3</sub>*      *können<sub>2</sub>*  
*will<sub>F</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*

*lesen<sub>3</sub>*      *können<sub>2</sub>*      *wird<sub>1</sub>. (!)*  
*read<sub>NF</sub>*      *can<sub>NF</sub>*      *will<sub>F</sub>*

*lesen<sub>3</sub>*      *wird<sub>1</sub>*      *können<sub>2</sub>. (!)*  
*read<sub>NF</sub>*      *will<sub>F</sub>*      *can<sub>NF</sub>*

*habe<sub>1</sub>*      *lesen<sub>3</sub>*      *können<sub>2</sub>*  
*have<sub>F</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*

*\*lesen<sub>3</sub>*      *können<sub>2</sub>*      *habe<sub>1</sub>*  
*read<sub>NF</sub>*      *can<sub>NF</sub>*      *have<sub>F</sub>*

*\*habe<sub>1</sub>*      *lesen<sub>3</sub>*      *gekonnt<sub>2</sub>*  
*have<sub>F</sub>*      *read<sub>NF</sub>*      *could<sub>PP</sub>*

*? lesen<sub>3</sub>*      *gekonnt<sub>2</sub>*      *habe<sub>1</sub>*  
*read<sub>NF</sub>*      *could<sub>PP</sub>*      *have<sub>F</sub>*

*wird<sub>1</sub>*      *lesen<sub>4</sub>*      *können<sub>3</sub>*      *haben<sub>2</sub>*  
*will<sub>F</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*      *have<sub>NF</sub>*

*wird<sub>1</sub>*      *haben<sub>2</sub>*      *lesen<sub>4</sub>*      *können<sub>3</sub>. (!)*  
*will<sub>F</sub>*      *have<sub>NF</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*

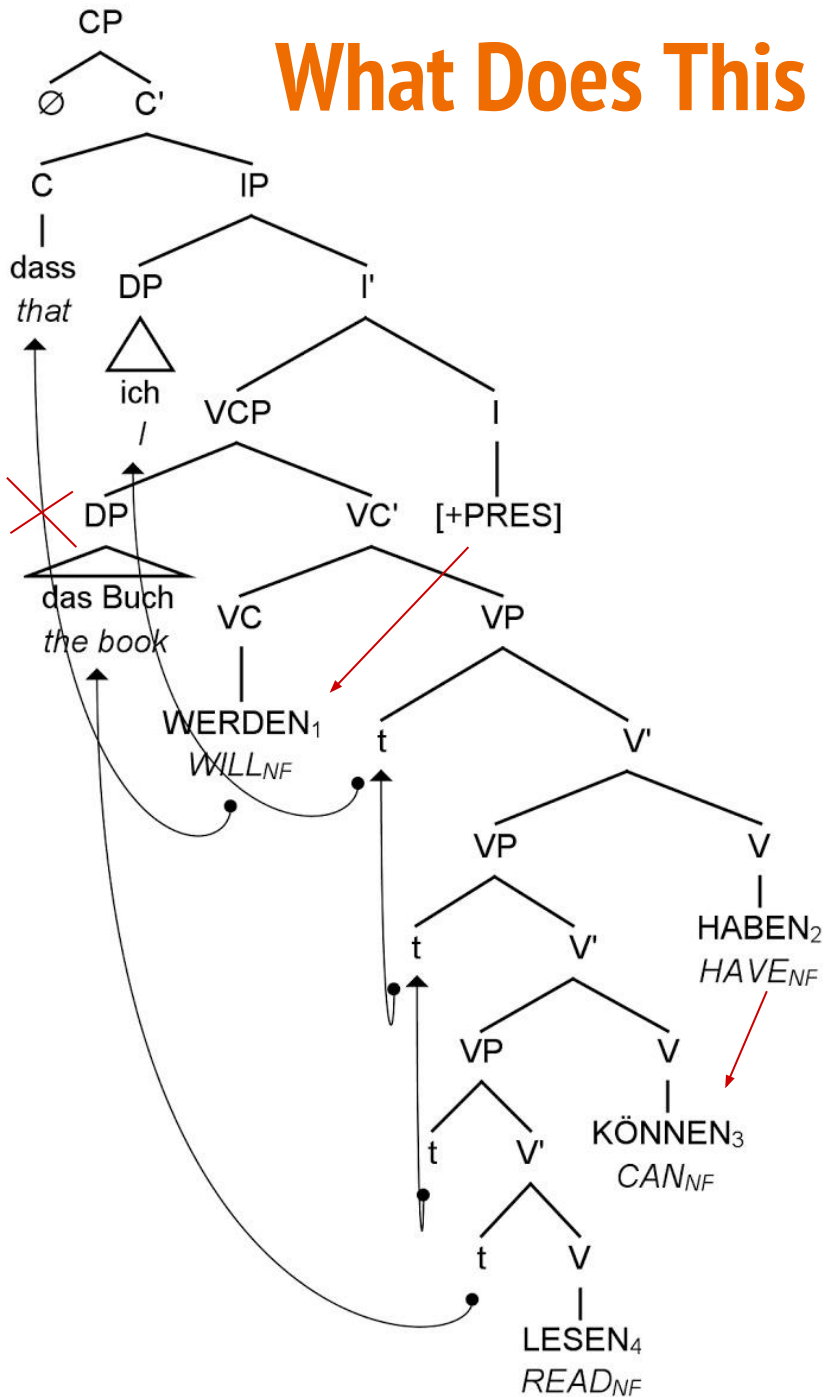
*lesen<sub>4</sub>*      *gekonnt<sub>3</sub>*      *haben<sub>2</sub>*      *wird<sub>1</sub>*  
*read<sub>NF</sub>*      *could<sub>PP</sub>*      *have<sub>NF</sub>*      *will<sub>F</sub>*

*? wird<sub>1</sub>*      *lesen<sub>4</sub>*      *gekonnt<sub>3</sub>*      *haben<sub>2</sub>. (!)*  
*will<sub>F</sub>*      *read<sub>NF</sub>*      *could<sub>PP</sub>*      *have<sub>NF</sub>*





# What Does This Do?



*wird*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>3</sub>      *können*<sub>2</sub>      *wird*<sub>1</sub>. (!)  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *will*<sub>F</sub>

*lesen*<sub>3</sub>      *wird*<sub>1</sub>      *können*<sub>2</sub>. (!)  
*read*<sub>NF</sub>      *will*<sub>F</sub>      *can*<sub>NF</sub>

*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

\**lesen*<sub>3</sub>      *können*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>F</sub>

\**habe*<sub>1</sub>      *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>

? *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>F</sub>

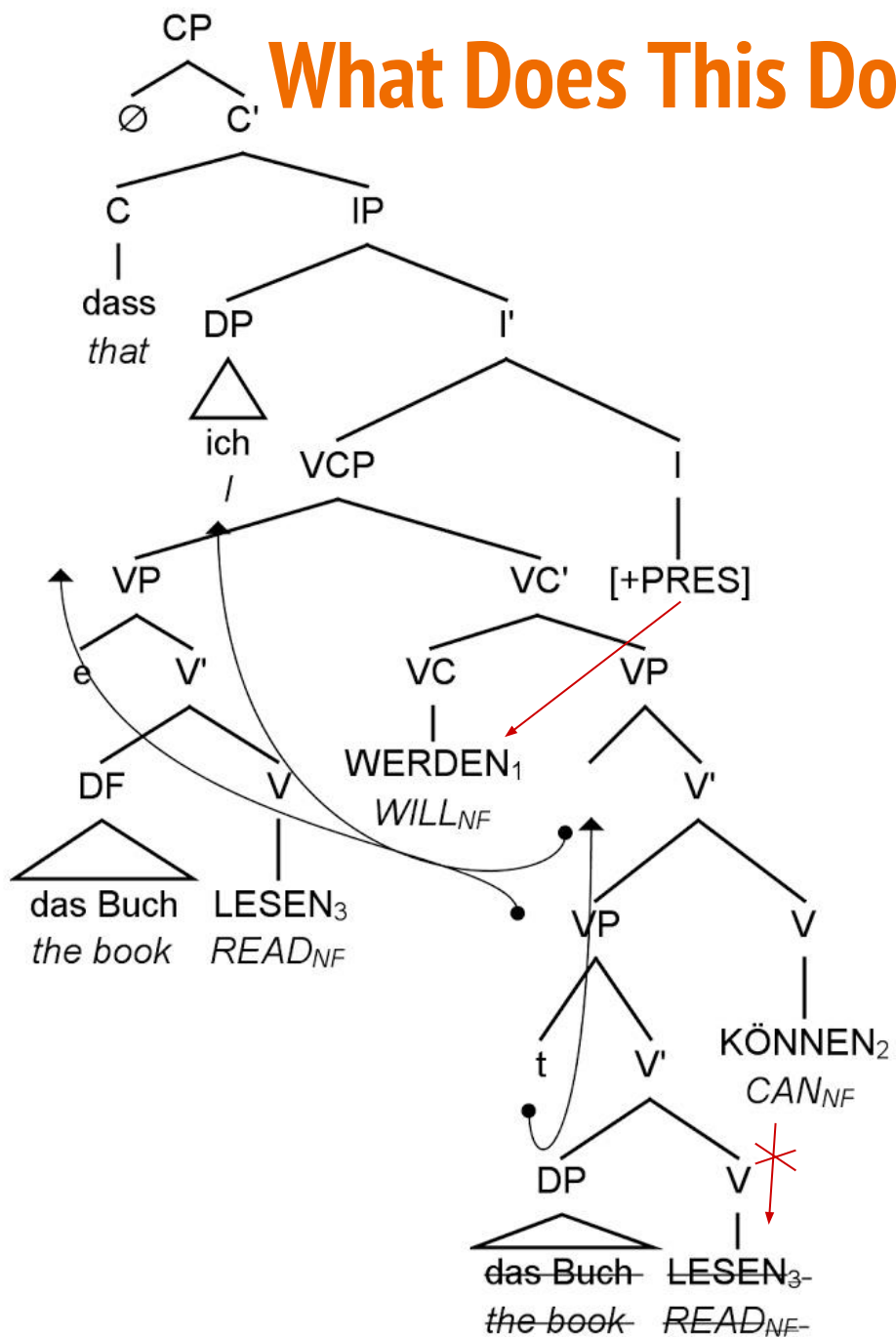
*wird*<sub>1</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>      *haben*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>NF</sub>

*wird*<sub>1</sub>      *haben*<sub>2</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>. (!)  
*will*<sub>F</sub>      *have*<sub>NF</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>      *wird*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>      *will*<sub>F</sub>

? *wird*<sub>1</sub>      *lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>. (!)  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>

# What Does This Do?



*wird*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>3</sub>      *können*<sub>2</sub>      *wird*<sub>1</sub>. (!)  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *will*<sub>F</sub>

*lesen*<sub>3</sub>      *wird*<sub>1</sub>      *können*<sub>2</sub>. (!)  
*read*<sub>NF</sub>      *will*<sub>F</sub>      *can*<sub>NF</sub>

*habe*<sub>1</sub>      *lesen*<sub>3</sub>      *können*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

\**lesen*<sub>3</sub>      *können*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>F</sub>

\**habe*<sub>1</sub>      *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>.  
*have*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>

? *lesen*<sub>3</sub>      *gekonnt*<sub>2</sub>      *habe*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>F</sub>

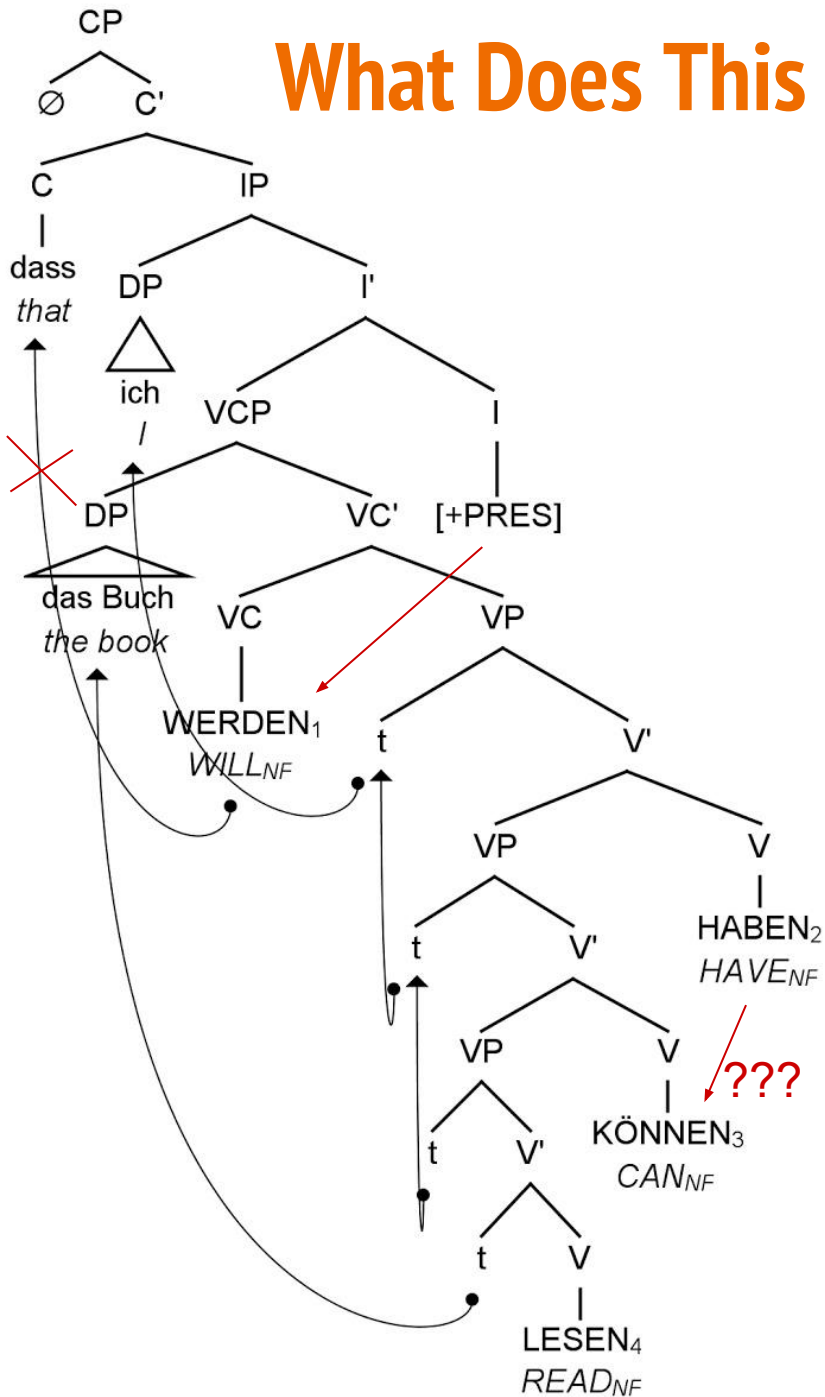
*wird*<sub>1</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>      *haben*<sub>2</sub>.  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>      *have*<sub>NF</sub>

*wird*<sub>1</sub>      *haben*<sub>2</sub>      *lesen*<sub>4</sub>      *können*<sub>3</sub>. (!)  
*will*<sub>F</sub>      *have*<sub>NF</sub>      *read*<sub>NF</sub>      *can*<sub>NF</sub>

*lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>      *wird*<sub>1</sub>.  
*read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>      *will*<sub>F</sub>

? *wird*<sub>1</sub>      *lesen*<sub>4</sub>      *gekonnt*<sub>3</sub>      *haben*<sub>2</sub>. (!)  
*will*<sub>F</sub>      *read*<sub>NF</sub>      *could*<sub>PP</sub>      *have*<sub>NF</sub>

# What Does This Do?



*wird<sub>1</sub>*  
*will<sub>F</sub>*      *lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *können<sub>2</sub>*  
*can<sub>NF</sub>*

*lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *können<sub>2</sub>*  
*can<sub>NF</sub>*      *wird<sub>1</sub>*. (!)  
*will<sub>F</sub>*

*lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *wird<sub>1</sub>*  
*will<sub>F</sub>*      *können<sub>2</sub>*. (!)  
*can<sub>NF</sub>*

*habe<sub>1</sub>*  
*have<sub>F</sub>*      *lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *können<sub>2</sub>*  
*can<sub>NF</sub>*

\**lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *können<sub>2</sub>*  
*can<sub>NF</sub>*      *habe<sub>1</sub>*.  
*have<sub>F</sub>*

\**habe<sub>1</sub>*  
*have<sub>F</sub>*      *lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *gekonnt<sub>2</sub>*.  
*could<sub>PP</sub>*

? *lesen<sub>3</sub>*  
*read<sub>NF</sub>*      *gekonnt<sub>2</sub>*  
*could<sub>PP</sub>*      *habe<sub>1</sub>*  
*have<sub>F</sub>*

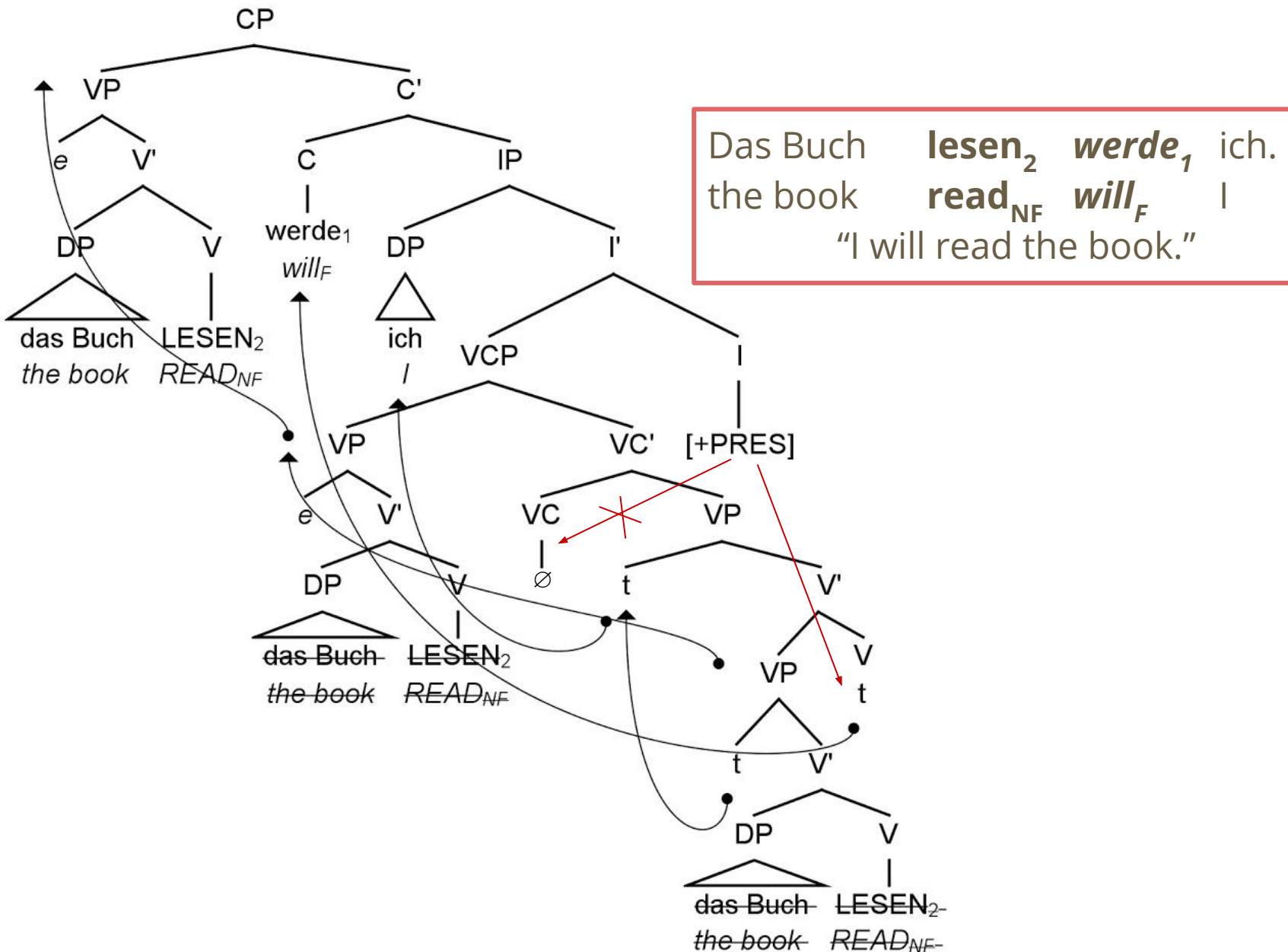
*wird<sub>1</sub>*      *lesen<sub>4</sub>*      *können<sub>3</sub>*      *haben<sub>2</sub>*.  
*will<sub>F</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*      *have<sub>NF</sub>*

*wird<sub>1</sub>*      *haben<sub>2</sub>*      *lesen<sub>4</sub>*      *können<sub>3</sub>*. (!)  
*will<sub>F</sub>*      *have<sub>NF</sub>*      *read<sub>NF</sub>*      *can<sub>NF</sub>*

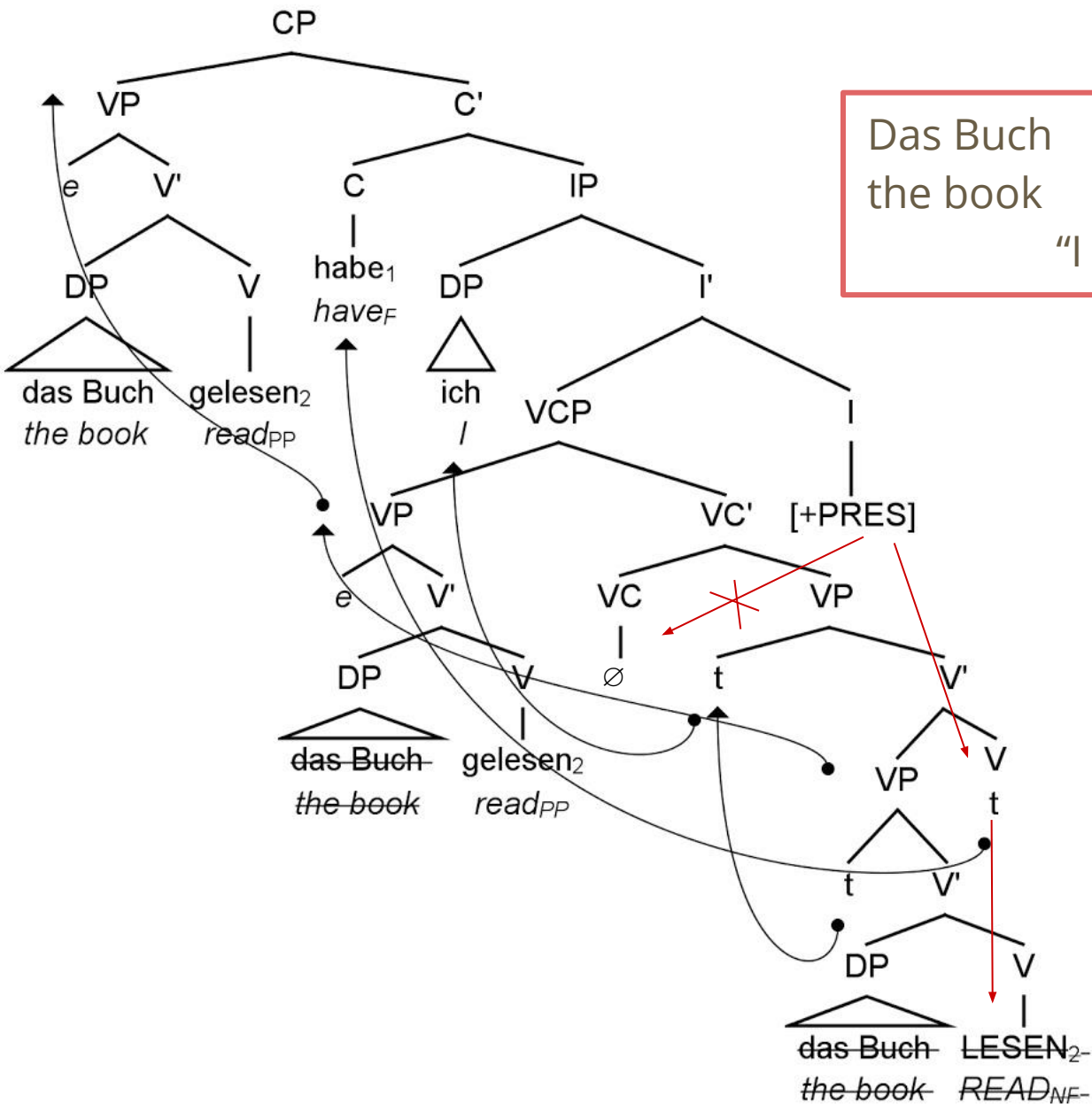
*lesen<sub>4</sub>*      *gekonnt<sub>3</sub>*      *haben<sub>2</sub>*      *wird<sub>1</sub>*.  
*read<sub>NF</sub>*      *could<sub>PP</sub>*      *have<sub>NF</sub>*      *will<sub>F</sub>*

? *wird<sub>1</sub>*      *lesen<sub>4</sub>*      *gekonnt<sub>3</sub>*      *haben<sub>2</sub>*. (!)  
*will<sub>F</sub>*      *read<sub>NF</sub>*      *could<sub>PP</sub>*      *have<sub>NF</sub>*

## Other Lucky Circumstances



# Other Lucky Circumstances



Das Buch      **gelesen<sub>2</sub>**      **habe<sub>1</sub>**      ich.  
 the book      **read<sub>PP</sub>**      **have<sub>F</sub>**      I  
 "I have read the book."

CP

Ø C'



... dass ich **habe**<sub>1</sub> keiner **lesen**<sub>3</sub> **können**<sub>2</sub>  
 ... that I **have**<sub>F</sub> nothing **read**<sub>NF</sub> **can**<sub>NF</sub>  
 "... that I have read nothing"

# Remaining Issues

In the (very) misquoted words of our favorite teacher,

“This seems wrong, but there’s probably at least *something* right about it.”

- There’s no solid evidence for this special structure other than the fact that it allows these sentence configurations.
- Why is *werden* so common both in the *Oberfeld* and verb-finally?
- Why do different base generations occur depending on the number of verbs in the sentence?
- Why is it so common in sentences with modal verbs and not so with other combinations?



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