

Optionality Implies Islandhood

Thomas Graf

`mail@thomasgraf.net`

`http://thomasgraf.net`

Department of Linguistics, NYU

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Take-Home Message

- (1) a. Which book did John complain that he lost?
b. * Which book did John complain **because he lost**?
c. * Which book did John complain **after losing**?

Questions

- Why do some phrases block extraction?
- Can they be given a theory-neutral characterization?

Mathematical Solution

- Island effects are an inevitable consequence of optionality.
- Non-islands are not optional for syntax or semantics.

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Outline

- 1 Three Strong Islands
 - Adjuncts
 - Coordination
 - Relative Clauses
- 2 The Math: Optionality and Grammaticality Inferences
 - Ojuncts: Formalizing Optionality
 - Optionality Closure
- 3 Deriving Island Effects
- 4 Empirical Challenges
 - Not all Constructions Satisfy Optionality
 - Optional Non-Islands?
 - Two Open Problems
- 5 Conclusion & Outlook

Adjuncts

- extraction usually blocked
 - (2) a. Which book did John complain that he lost t ?
 - b. * Which book did John complain **because he lost t ?**
 - c. * Which book did John complain **after losing t ?**
- gaps licensed
 - (3) Which book did John burn t **after reading e ?**
- usually optional
 - (4) **(Obviously)** I will **(easily)** ace this **((very) challenging)** exam **(because I (really) am that smart)**.

Coordination

- extraction usually blocked
 - (5) a. Ed brewed beer and Greg drank it.
 - b. * Which beer did **Ed brew *t* and Greg drink it?**
 - c. * Which wine did **Ed brew beer and Greg drink *t*?**
- across-the-board extraction possible
 - (6) a. Which wine did **Ed brew *t* and Greg drink *t*?**
- mostly optional (modulo morphological/semantic agreement)
 - (7) a. Ed brewed beer and Greg drank it.
 - b. Ed brewed beer.
 - (8) a. Ed and Greg are brewing beer.
 - b. * Ed are brewing beer.
 - (9) a. Ed and Greg met.
 - b. * Ed met.

Relative Clauses

- usually block extraction

(10) * Which politician does John dislike the reporter
that/who interviewed t ?

- gaps only if created by movement

(11) a. Which politician does John dislike t **that the reporter interviewed e ?**

b. * Which politician did John tell the reporter
that/who interviewed e that Mark dislikes t ?

- usually optional

(12) a. the man that John works with that I admire

b. the man that John works with

c. the man that I admire

d. the man

The Big Picture

As a rule of thumb, adjuncts, coordinations and relative clauses

- 1 block extraction,
- 2 allow for gaps,
- 3 are optional.

The Big Question

Could (1) and (2) be related to optionality?

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Ojuncts

The notion of an **ojunct** provides an abstract characterization of optional phrase markers.

Intuitive Definition (Ojunct)

A phrase marker is an **ojunct** iff it can be removed from every well-formed tree without affecting grammaticality.

Under most Minimalist conceptions of movement, ojuncts are necessarily islands:

Theorem (Islandhood)

No ojunct can be extracted from if the extraction step involves checking a dependency at the target site.

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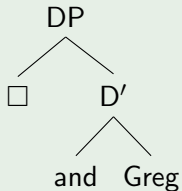
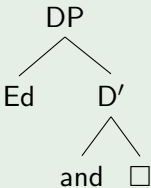
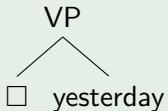
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Footed Trees

Definition (Footed Tree)

A **footed tree** is a tree that contains exactly one instance of the placeholder symbol □.

Example



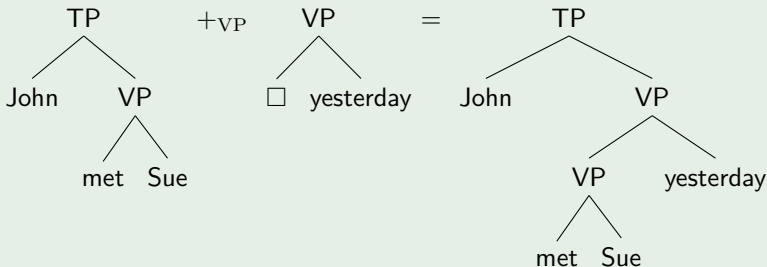
Tree Substitution

Footed trees are combined with other trees via *tree substitution*.

Definition (Tree Substitution)

For **s** a tree and **t** a footed tree, $s +_n t$ is the tree obtained by inserting **t** above node n in **s** such that \square in **t** is replaced by n .

Example



Optionality

Definition (Optionality)

Given a grammar G , a footed tree t is **optional** wrt G iff it holds for every tree of the form $\mathbf{s} +_n \mathbf{t}$ that $\mathbf{s} +_n \mathbf{t}$ is generated by G only if \mathbf{s} is generated by G .

Definition (Ojunct)

A phrase marker is an **ojunct** of grammar G iff it is the result of removing \square from a footed tree that is optional wrt G .

Ojunct Extension

What does optionality tell us about grammars with ojuncts?
 What is the general shape of the **generated language**?

Definition (Adjunct Extensions)

Let **s** and **t** be trees.

Then **t** is an **ojunct extension** of **s** for grammar G ($s <_G t$) iff **t** is the result of inserting one or more ojuncts of G in **s**.

Example

- **Obviously** I will ace this exam $<_G$ **Obviously** I will **easily** ace this exam
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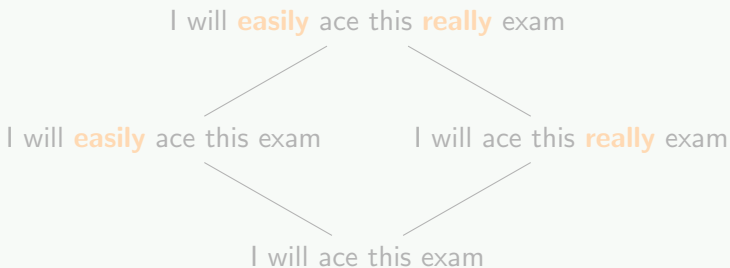
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Characterizing Ojunct Languages

Theorem (Optionality Closure)

If t is an ojunct extension of s for G and G generates t , then G generates s .

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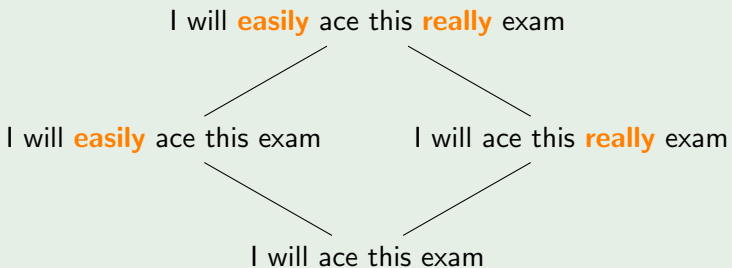


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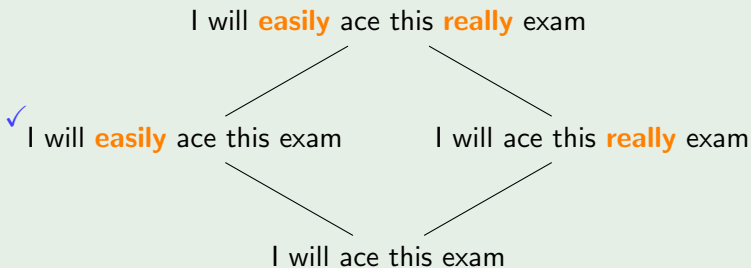


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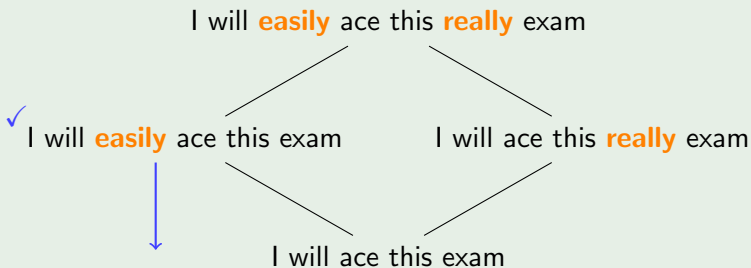


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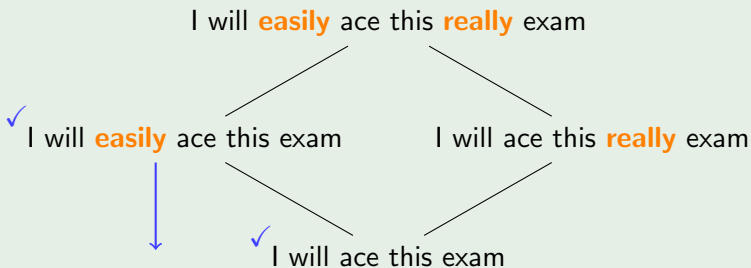


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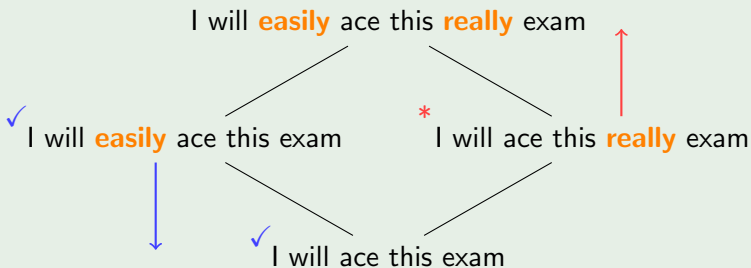


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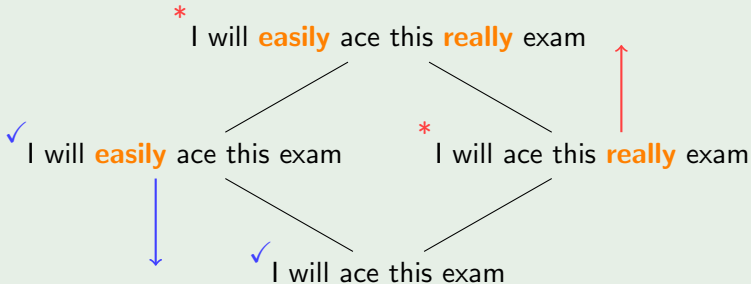


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Example



Interim Summary

Intuitive Definition (Ojunct)

A phrase marker is an **ojunct** iff it can be removed from every well-formed tree without affecting grammaticality.

Any grammar with ojuncts has the following inference patterns:

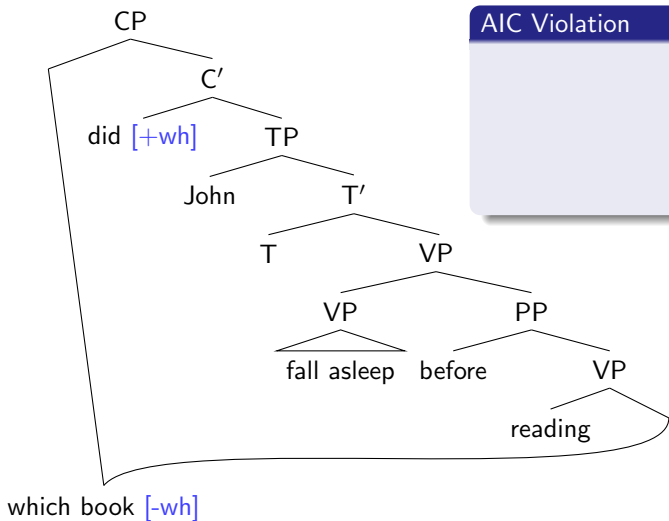
- ↓ grammaticality is downward entailing with respect to $<_G$,
- ↑ ungrammaticality is upward entailing with respect to $<_G$.

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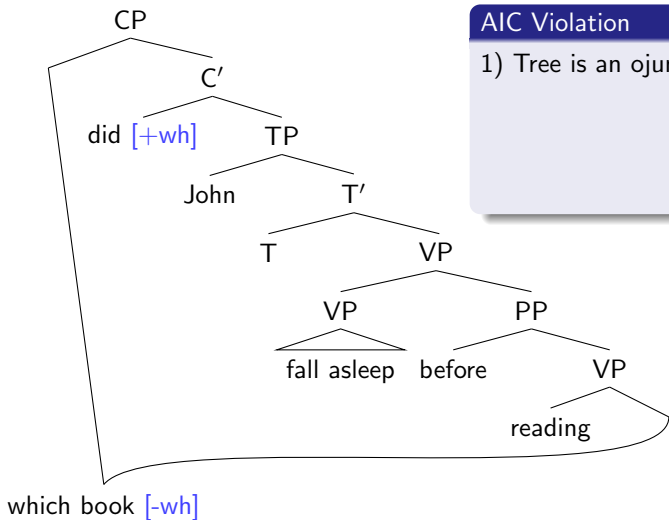
Deriving the Adjunct Island Constraint

The AIC follows from **optionality closure and feature checking**.



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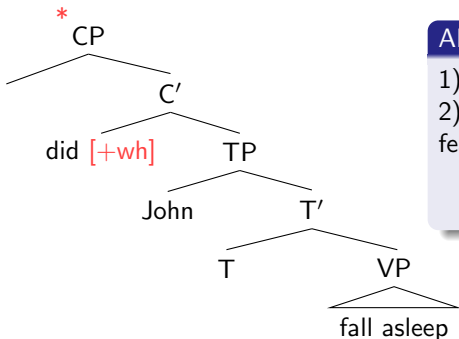


AIC Violation

- 1) Tree is an adjunct extension

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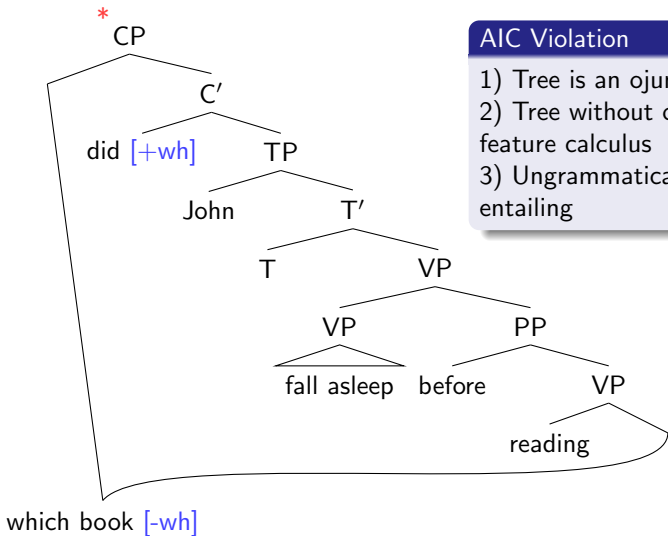


AIC Violation

- 1) Tree is an adjunct extension
- 2) Tree without adjunct violates feature calculus

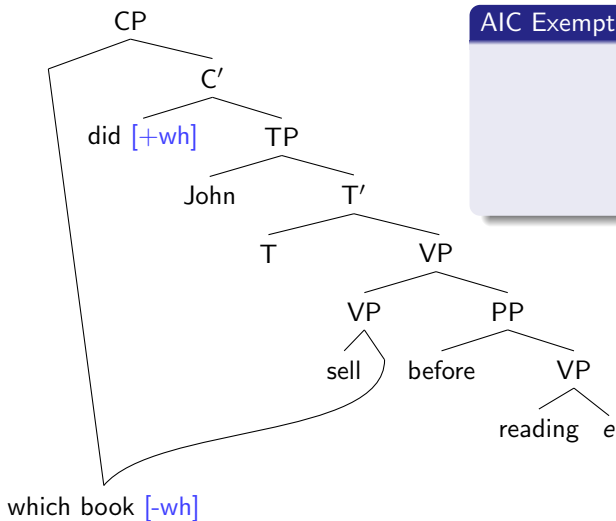
Deriving the Adjunct Island Constraint

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Why Parasitic Gaps are Different

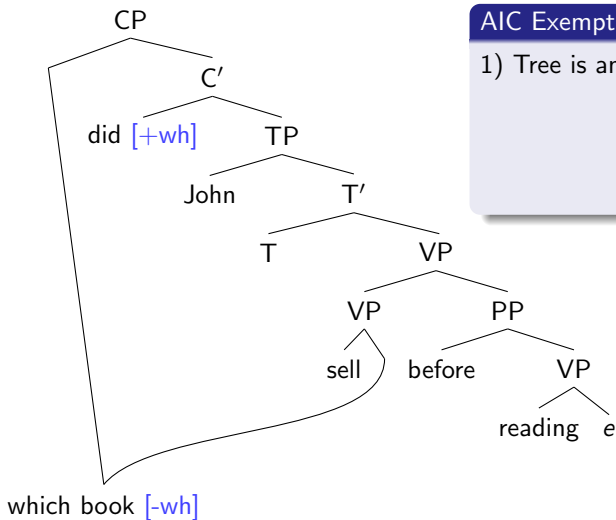
PGs piggyback on a **mandatory feature checker**.



AIC Exemption

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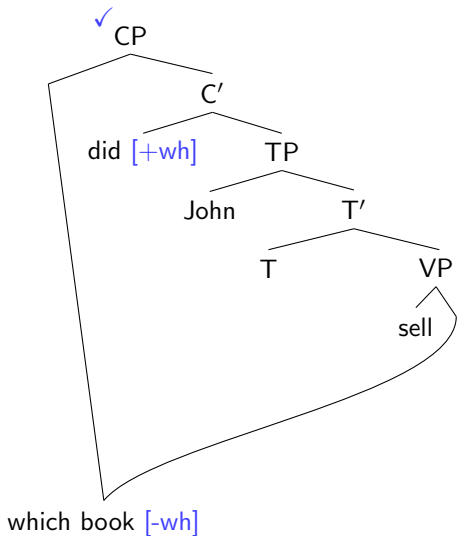


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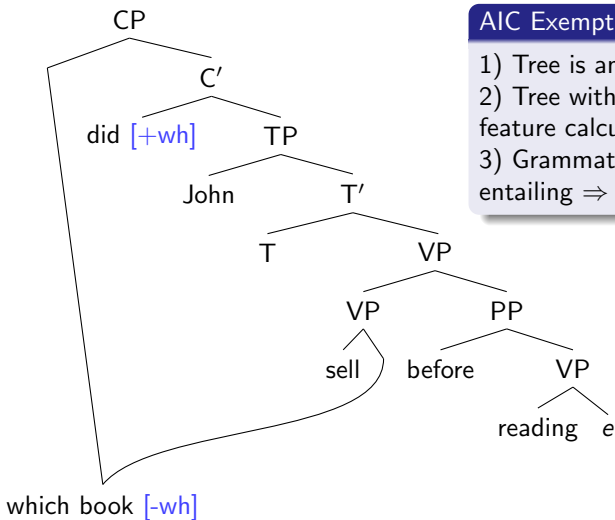


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- 1) Tree is an ojunct extension
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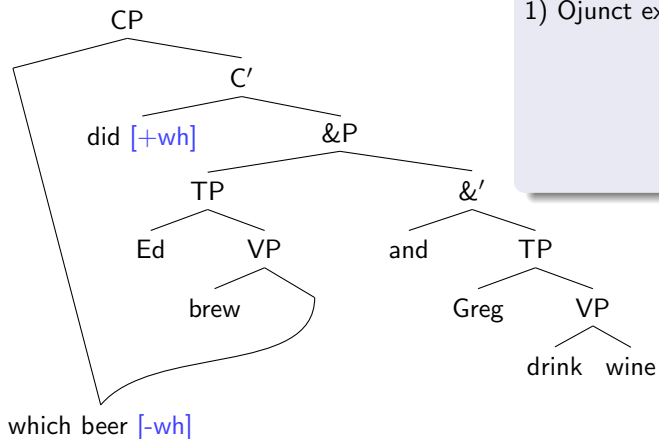
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AIC Exemption

- 1) Tree is an o-junct extension
- 2) Tree without o-junct satisfies feature calculus
- 3) Grammaticality isn't upward entailing \Rightarrow nothing follows

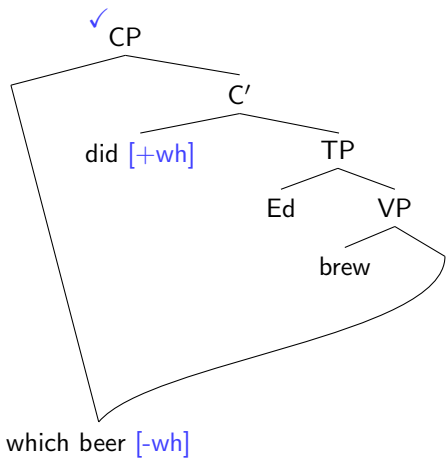
Deriving the Coordinate Structure Constraint



CSC Violation

- 1) Ojunct extension of two trees

Deriving the Coordinate Structure Constraint



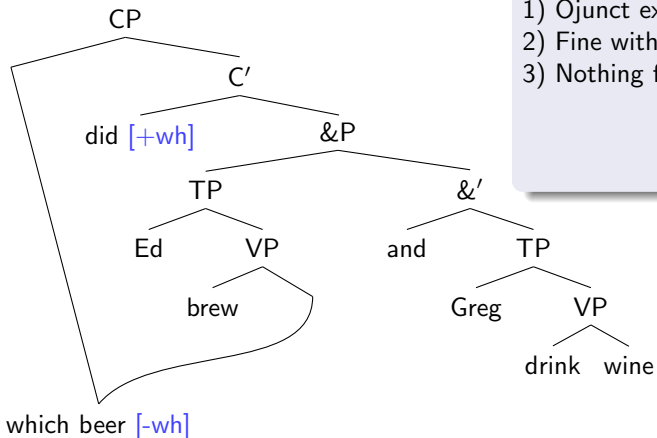
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- 1) Ojunct extension of two trees
- 2) Fine without second conjunct

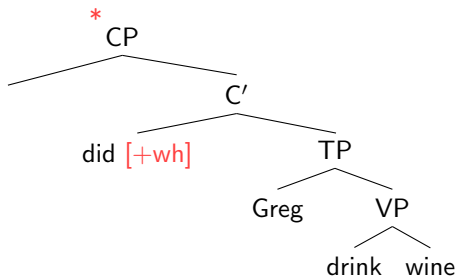
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Deriving the Coordinate Structure Constraint



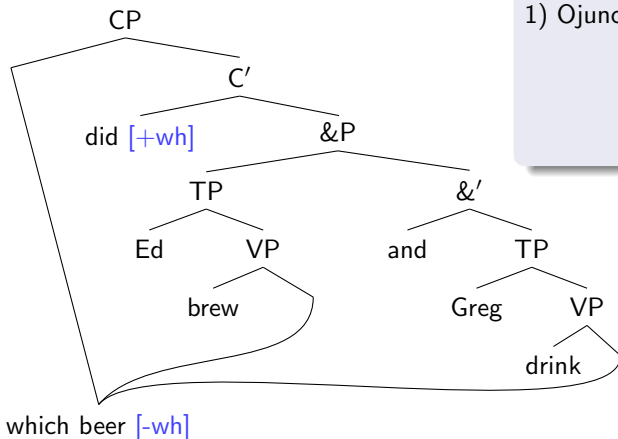
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- 4) Bad without first conjunct

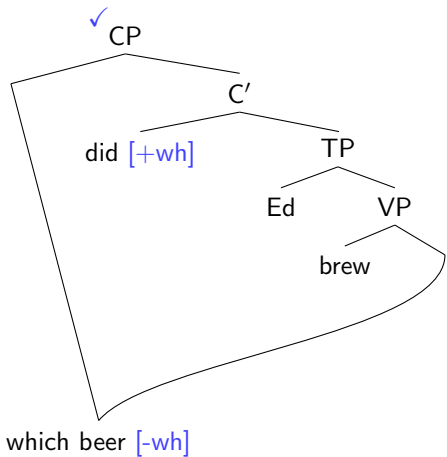
Why ATB Extraction is Different

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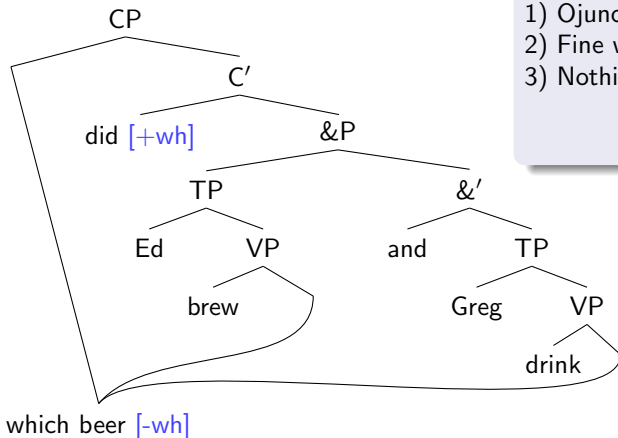
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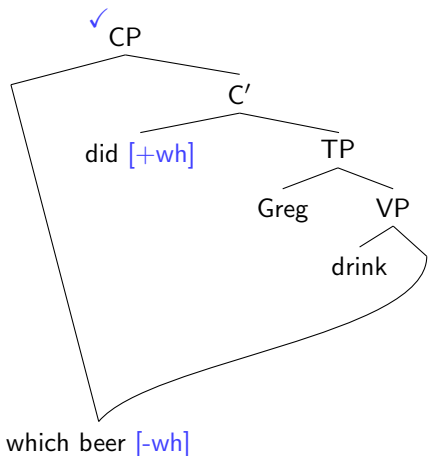
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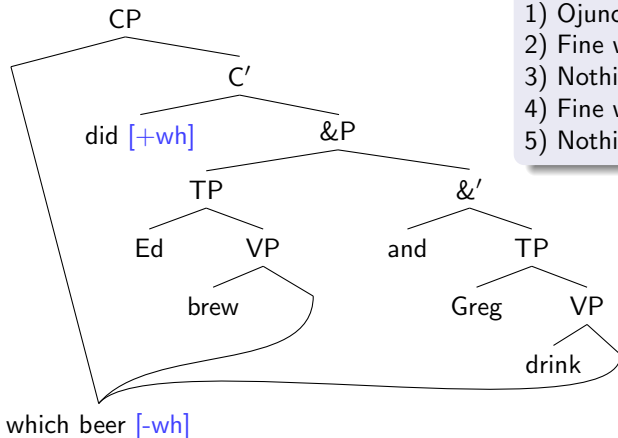
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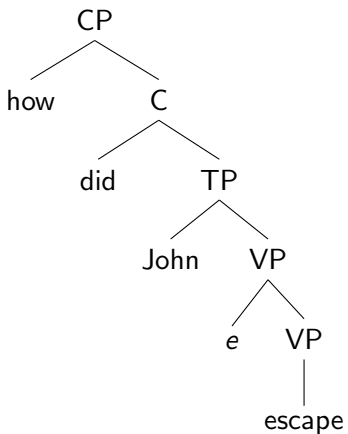
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Why Islands May Move

Displacement of an adjunct possible via base merger

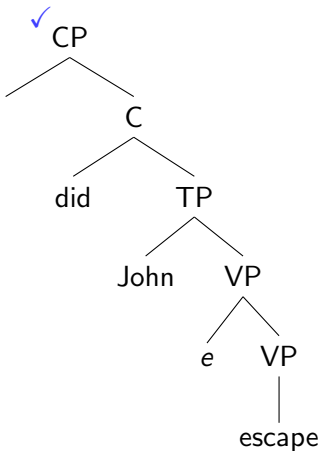


Base Merge Exemption

1) Tree is an adjunct extension

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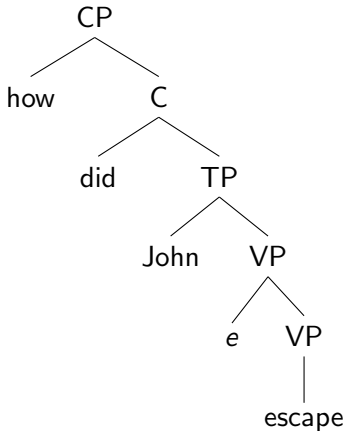


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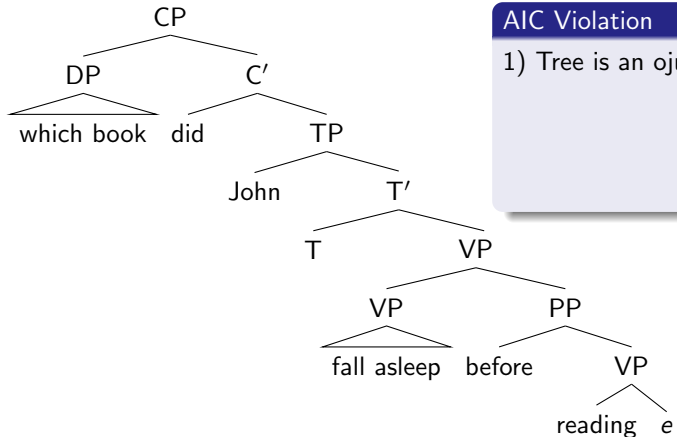
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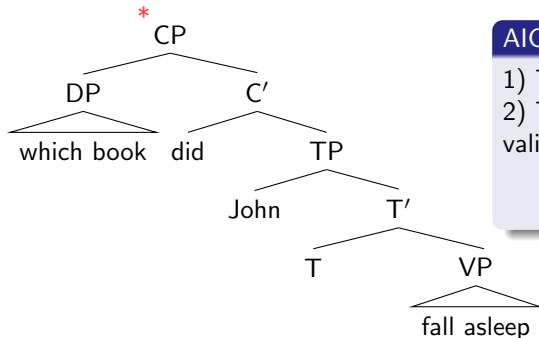
Base Merger Extraction from Ojuncts is Still Impossible



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Base Merger Extraction from Ojuncts is Still Impossible



AIC Violation

- 1) Tree is an oject extension
- 2) Tree without oject has no valid "origin" e

Interim Summary

- Ojuncts are incompatible with instances of extraction that depend on the presence of the ojunct.
 - feature-driven movement
 - origin-controlled base merger
- All other kinds of extraction should be subject to cross-linguistic variation.
 - ATB (mover originates outside ojunct)
 - parasitic gaps (ojunct imposes constraints on tree, but not the other way round)
 - base merger displacement of entire ojunct (like parasitic gaps)

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The Account So Far

- **Mathematical Fact**

With minimal assumptions about Move, all ojuncts are islands while still allowing for parasitic gaps and ATB extraction.

- **Empirical Assumption**

Adjuncts, coordinations and relative clauses are ojuncts.
But is this true?

Two Issues

- Not all relevant constructions qualify as ojuncts.
- Some phrases look like ojuncts yet are not islands.

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Obligatory Adjuncts

Not all adjuncts are optional.

- (13)
- a. This child reads well.
 - b. This book reads *(well).
 - c. John laughed a [?](quiet) laugh.
 - d. John behaved *(badly/like a brute) to Chris.

If these adjuncts are not optional, they should allow for extraction.
This seems to be the case:

- (14)
- a. How does the book read?
 - b. How did John behave to Chris?
 - c. What did John behave like to Chris?

Conjuncts and Agreement

At a surface-level, conjuncts matter for ϕ -agreement and semantic number requirements.

(15) Ed *(and Greg) are brewing beer.

(16) Ed *(and Greg) met.

Possible Answer

- Optionality must hold with respect to morphological dependencies, not specific feature values.
- Semantic requirements are ignored.

Binding and NPIs in Coordinations

- (17) a. ? Every woman and no man has ever had a period.
 b. * Every woman has ever had a period.
- (18) * (Jón og) afar sínir voru
 Jón and grandpas POSS-REFL.NOM.PL were
 glaðir.
 happy.NOM.PL
 '(Jón and) his grandpas were happy.'

Worrying, but all relevant examples are deviant for independent reasons:

- (19) a. * Which actress has (every TMZ reporter and) no fanboy of *t* ever talked to?
 b. * Which field did the dean introduce every professor (of *t*) and no student of *t* to any senators?

Interim Summary

Optionality must be computed over **abstract structures** that allow us to ignore

- concrete ϕ -feature instantiations,
- some semantic requirements
 - size of set denoted by DP,
 - NPI-licensing,
 - binding requirements.

If one relegates these conditions to PF and LF, then optionality — over syntactic trees with Agree dependencies — should apply to these cases.

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This still leaves us with o-juncts that are not islands!

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Subject *by*-Phrases and Instrumentals

In passives, *by*-phrases are optional but do not block extraction.
The same holds for instrumentals.

- (20) a. Mary was assaulted (**by John**) (**with a hammer**).
b. Which man was Mary assaulted by *t*?
c. What kind of weapon was Mary assaulted with *t*?

However, these phrases are **semantic arguments of the verb**.

Truswell Sentences

Truswell adjuncts also allow for extraction (Truswell 2007).

(21) Which car did John drive Mary crazy **trying to fix**?

Truswell's Generalization

Adjunct denotes an event e' that is related via R to the event e of the matrix clause

⇒ does not have standard (Neo-Davidsonian) denotation

⇒ adjunct behaves more like a **semantic argument**

The Big Picture

- **more fine-grained classification** than just argument vs adjunct
(cf. Dowty 2003; Needham and Toivonen 2011)

	sem-argument	sem-adjunct
syn-adjunct	Truswell adjuncts	ojuncts
syn-argument	arguments	case-marked adjuncts (?)

- whatever mechanism gives rise to the optionality of ojuncts also limits their semantic denotation
- non-adjunct semantics implies usage of a different mechanism that does not give rise to optionality

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Remaining Challenge 1: Cross-linguistic variation

- The class of ojunctions should be relatively stable across languages.
- But there is cross-linguistic variation, e.g. extractability from relative clauses in Scandinavian (Erteschik-Shir 1973).

A (Stipulative) Solution

Extraction from ojunctions is possible if the feature at the target site need not be checked. Languages could differ as to which features must always be checked.

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Remaining Challenge 2: Resumptive Pronouns

No island violations with resumptive pronoun instead of trace
(e.g. Lebanese Arabic)

- (22) ha-l-muttahame tfeezaʔto lamma/laʔanno
 this-the-suspect.SGFEM surprised.2 when/because
 ʔræfto ʔanno hiyye nhabasit.
 know.2 that she imprisoned.3SGFEM

'This suspect, you were surprised when/because you knew
 that she was imprisoned.'
 Aoun et al. (2001:575)

follows if binding rather than movement is involved

Problems

- Antecedent and adjunct must both be dropped
 ⇒ discontinuous adjuncts?
- Why only licit with overt pronouns?

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Conclusion

- **Why do we see (strong) island effects?**

Because islandhood is a necessary consequence of optionality given standard feature checking requirements.

- **Why are there exceptions?**

- Because not all adjuncts/conjuncts are indeed optional.
- Because not all extractions involve movement.

- **So what counts as optional?**

That's the $\$10^7$ question!

Conjecture

Ojuncts are created by some mechanism that differs from standard Merge and gives rise to their optionality and intersective semantics. Whatever cannot be handled by this mechanism is not an ojunct.

References

- Aoun, Joseph, Lina Choueiri, and Norbert Hornstein. 2001. Resumption, movement and derivational economy. *Linguistic Inquiry* 32:371–403.
- Dowty, David. 2003. *The dual analysis of adjuncts/complements in categorial grammar*. Berlin: Mouton de Gruyter.
- Erteschik-Shir, Nomi. 1973. *On the nature of island constraints*. Doctoral Dissertation, MIT.
- Needham, Stephanie, and Ida Toivonen. 2011. Derived arguments. In *Proceedings of the LFG11 Conference*, ed. Miriam Butt and Tracy Holloway King, 401–421.
- Truswell, Robert. 2007. Tense, events, and extraction from adjuncts. In *Proceedings of the 43rd Annual Meeting of the Chicago Linguistic Society*.