

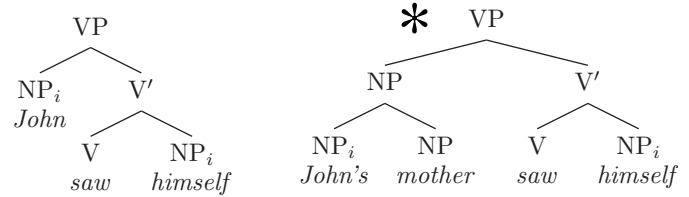
CAS LX 522 Syntax I

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Binding theory, NPIs, c-command
(4.3)

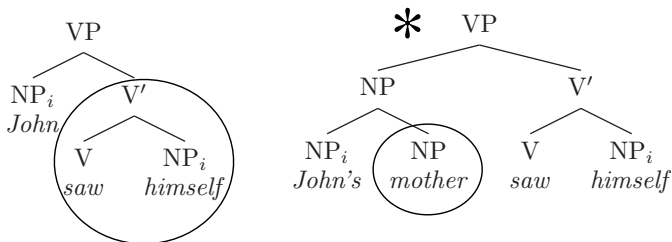
C-command domains

- So, again, what is the difference between the relationship between *John* and *himself* in the first case and in the second case?



C-command domains

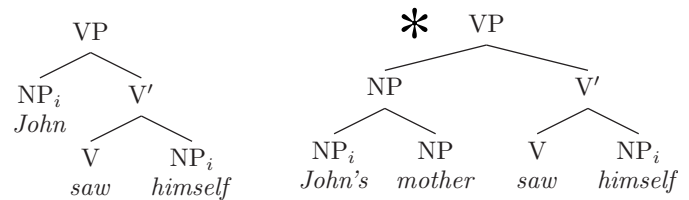
- In the first case, the NP *John* c-commands the NP *himself*. But not in the second case.



Binding

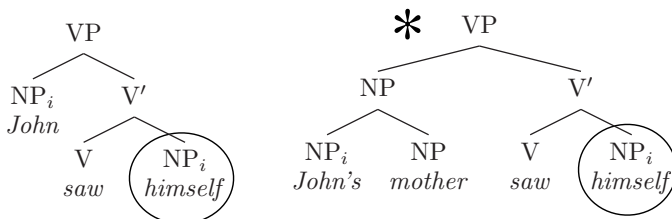
A binds B iff

- A c-commands B
 - A is coindexed with B
- “if and only if”



Principle A

Principle A of the Binding Theory (preliminary)
An anaphor must be bound.



A is for anaphor? That's good enough for me.

Principle A

- We now know why these are ungrammatical too:
 - *Himself_i saw John_i in the mirror.
 - *Herself_i likes Mary_i's father.
 - *Himself_i likes Mary_i's father_i.
- There is nothing that c-commands and is coindexed with *himself* and *herself*.
- The anaphors are not bound, which violates Principle A.

Binding domains

- But this is not the end of the story; consider
 - 1) *John_i said that himself_i likes pizza.
 - 2) *John_i said that Mary called himself_i.
- In these sentences the NP *John* c-commands and is coindexed with (=binds) *himself*, satisfying our preliminary version of Principle A—but the sentences are ungrammatical.

Binding domains

- 1) John_i saw himself_i in the mirror.
 - 2) John_i gave a book to himself_i.
 - 3) *John_i said that himself_i is a genius.
 - 4) *John_i said that Mary dislikes himself_i.
- What is wrong? *John* binds *himself* in each case. What is different?
 - In the ungrammatical cases, *himself* is in an embedded clause.

Binding domains

Principle A of the Binding Theory (revised)
An anaphor must be bound in its binding domain.

Binding Domain (preliminary)
The binding domain of an anaphor is the smallest clause containing it.

- It seems that not only does an anaphor need to be bound, it needs to be bound nearby (or locally).

Pronouns

- 1) *John_i saw him_i in the mirror.
 - 2) John_i said that he_i is a genius.
 - 3) John_i said that Mary dislikes him_i.
 - 4) John_i saw him_j in the mirror.
- How does the distribution of pronouns differ from the distribution of anaphors?
 - It looks like it is just the *opposite*.

Principle B

Principle B of the Binding Theory
A pronoun must be free in its binding domain.

Free
Not bound

- 1) *John_i saw him_i.
- 2) John_i's mother saw him_i.



B is for bpronoun, that's good enough for me.

Principle C

- We now know where pronouns and anaphors are allowed. Consider the following.
- *Stuart_i saw him_i in the mirror.
- Stuart_i's mother saw him in the mirror.
- *He_i saw Stuart_i in the mirror.
- His_i mother saw Stuart_i in the mirror.

Principle C

- What's going wrong with these sentences? The pronouns are unbound as needed for Principle B. What are the binding relations here?
- *He_i likes John_i.
- *She_i said that Mary_i fears clowns.
- His_i mother likes John_i.
- His_i mother said that John_i fears clowns.



Principle C

- Binding is a means of assigning reference.
- R-expressions have intrinsic reference; they can't be assigned their reference from somewhere else.
- R-expressions can't be bound, at all.

Principle C of the Binding Theory
An R-expression must be free.

C is for r-eCpression, that's... oh, never mind.

Binding Theory

Principle A

An anaphor must be bound in its binding domain.

Principle B

A pronoun must be free in its binding domain.

Principle C

An R-expression must be free.

Binding

X binds Y iff X c-commands Y and X and Y are coindexed (a.k.a.: "Y is bound by X").

Free

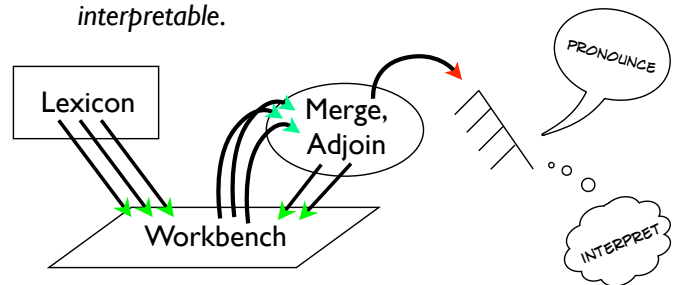
Not bound

Binding Domain

The binding domain of an anaphor is the smallest clause containing it.

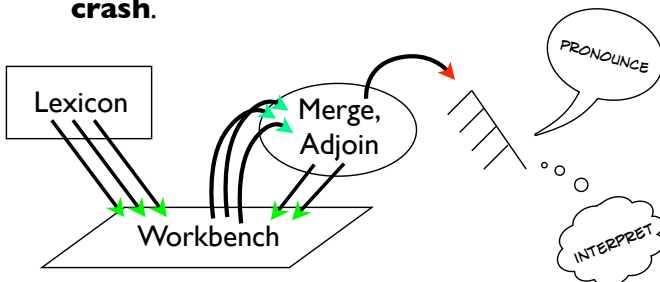
Constraints on interpretation

- Binding Theory is about interpretation.
- Only a structure that satisfies Binding Theory is *interpretable*.



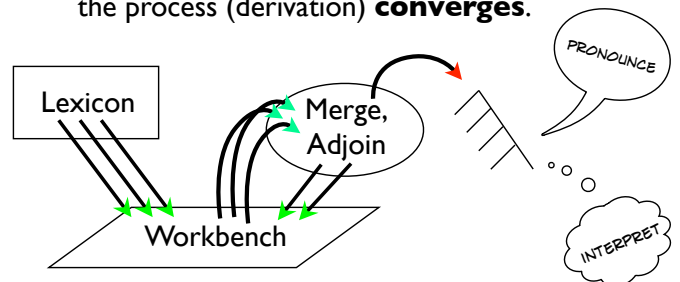
Constraints on interpretation

- If we put together a tree that isn't interpretable, the process (derivation) is sometimes said to **crash**.



Constraints on interpretation

- If we succeed in putting together a tree that is interpretable (satisfying the constraints), we say the process (derivation) **converges**.



I hadn't seen anyone ever lift a finger yet.

- | | |
|---|--|
| 1) Pat didn't invite anyone to the party. | 7) *Pat invited anyone to the party. |
| 2) Pat does not know anything about syntax. | 8) *Pat knows anything about syntax. |
| 3) Pat hasn't ever been to London. | 9) *Pat has ever been to London. |
| 4) Pat hasn't seen <i>Forrest Gump</i> yet. | 10) *Pat has seen <i>Forrest Gump</i> yet. |
| 5) Pat didn't lift a finger to help. | 11) *Pat lifted a finger to help. |
| 6) Pat didn't have a red cent. | 12) *Pat had a red cent. |

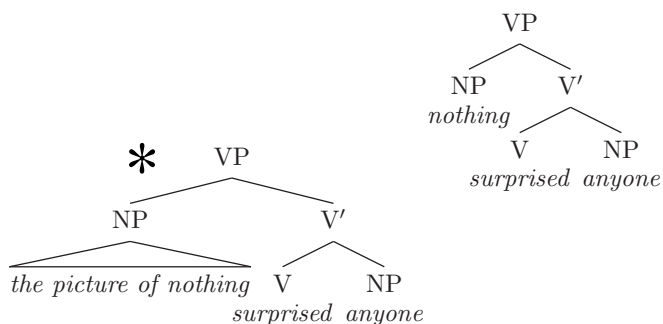
Licensing

- NPIs (Negative Polarity Items) are permitted, given "license to appear" by a negative expression. Without a licenser, an NPI is not possible.
 - John didn't invite Mary/anyone to the party (, did he?)
 - John invited Mary/*anyone to the party (, didn't he?)
 - Nobody invited Mary/anyone to the party (, did they?)
- NPIs are licensed by negation in a sentence.

Negative Polarity Items

- But it isn't quite as simple as that. Consider:
 - I didn't see anyone.
 - *I saw anyone.
 - *Anyone didn't see me.
 - *Anyone saw me.
- It seems that simply having negation in the sentence isn't by itself enough to license the use of an NPI.
- Negation has to precede the NPI?
 - *The picture of nobody pleased anyone.

Negative Polarity Items



Pondering some apparent early disobedience

- Young kids (5-6 years) seem to accept sentences like (1) as meaning what (2) means for adults.
 - Mama Bear is pointing to her.
 - Mama Bear is pointing to herself.
- Suppose that, contrary to appearances, kids *do* know and obey Principle B. Look carefully at the definitions of Binding Theory. If Principle B isn't the problem, what do you think kids are getting wrong to allow (1) to have the meaning of (2)?
- Think in particular about how you decide which index to assign to *her*. What is the implication of having the same index? What is the implication of having different indices?