Binding Theory

Xinyu Zhu
PhD student
Newcastle University

1. Introduction

- Relationship of referring between arguments (i.e., NP/DPs) in a sentence.

- E.g.
    - (1) John guessed that Mary had betrayed him.
    - (2) John guessed that Mary had betrayed herself.
    - (3) *John guessed that Mary had betrayed her.
    - (4) *John guessed that Mary had betrayed himself.
    Or
    - (5) She hurts Mary.
    - In this sentence 'Mary' cannot refer to the same person as 'she'. 'She' is someone else.

- Binding Theory under the Government and Binding framework is such a theory to account for these linguistic phenomena.

1. Introduction

- What does binding theory argue?
    - NPs must satisfy certain binding conditions to form a grammatical sentence.

- Therefore, we need to find out:
    - Types of NPs with different referring requirements.
    - What are binding conditions?
    - How does binding happen?
    - Where does binding happen?

- I.e.,
    - Anaphor, Pronoun, R-expression
    - Binding Condition A & B & C
    - C-command, co-index
    - Binding domain

3

2. Types of NPs in terms of different referring requirements

1. Anaphors:
- Reflexives: himself/ herself/ itself…
    - John guessed that $Mary_i$ had betrayed $herself_i$.
- Reciprocals: each other/one another…
    - Teachers don't want their $students_i$ blaming $each\ other_i$.

2. Pronoun: him/ her/ it...

    $John_i$ guessed that Mary had betrayed him_i.

3. R(eferring)-expression: proper names, John, Mary …

    He_k thinks that She_i hurts $Mary_{*i/*k/j}$.

Note: co-indexing (He_i -> $Himself_i$) means they share the same referent.

4

3. Binding Conditions

- Binding Condition A:

Anaphors are subject to binding condition A that: anaphor must be bound in its binding domain.

- Binding Condition B:

Pronouns are subject to binding condition B that: pronoun must be free (un-bound) in its binding domain.

- Binding Condition C:

R-expressions are subject to binding condition C that: r-expression must be free everywhere.

We can understand the term bound (binding) as referring relationship. That is, if A binds B (B is bound by A), then A and B refer to the same referent.

Then:

How to define being bound or not formally?

Where is the binding domain?
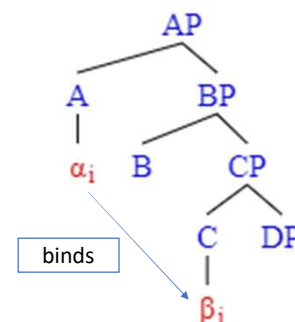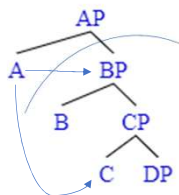
5

4. To be bound or not, that is the question.

- Two factors to define binding:
    - (1) C-command
    - (2) Co-index

- **α binds β iff:**
    - (1) α c-commands β.
    - (2) α is co-indexed with β.

- C-command: node A c-commands B if the first branching node dominating A also dominates B.

6

5. To define binding domain
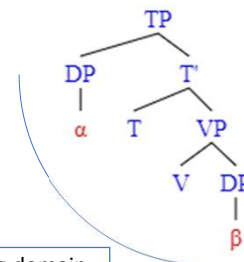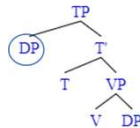
- Also, two factors to define binding domain
(1) A governor
(2) The closest subject

- The binding domain of β must contain the governor of β and the closest subject.

- Governor: head, X^0

- Subject: normally [Spec, TP]

Binding domain

6. Implementations

- Binding Condition A:
Anaphors are subject to binding condition A that: anaphor must be bound in its binding domain.

➤ John guessed that [$_{TP}$ Mary$_i$ had betrayed herself$_i$].
- First, the binding domain of anaphor herself is the whole TP [Mary had betrayed herself]:
    - Governor [V betrayed]
    - The closest subject [DP Mary]
- Second, DP herself is bound by DP Mary:
    - DP Mary c-commands DP herself.
    - DP Mary and DP herself are co-indexed.
- Therefore, this sentence satisfies binding condition A:
    - Anaphor herself is bound by DP Mary in its binding domain.

6. Implementations

- Binding Condition B:

Pronouns are subject to binding condition B that: pronoun must be free (un-bound) in its binding domain.

- ➤ *John guessed that [$_{TP}$ Mary$_i$ had betrayed her$_i$].
- First, the binding domain of pronoun her is the whole TP [Mary had betrayed her]:
    - Governor [V betrayed]
    - The closest subject [DP Mary]
- Second, DP her is bound by DP Mary:
    - DP Mary c-commands DP her.
    - DP Mary and DP her are co-indexed.
- Therefore, this sentence violates binding condition B:
    - The pronoun her is bound by DP Mary in its binding domain.
    - However, the pronoun should be free in its binding domain.
    - The sentence is therefore ungrammatical.

9

7. Summary

- We can therefore attribute NPs with the features of [± Anaphoric] & [± Pronominal]

Anaphors: [+ Anaphoric] & [- Pronominal]
Pronouns: [- Anaphoric] & [+ Pronominal]
R-expressions: [- Anaphoric] & [- Pronominal]

- More to explore:

1. how about non-overt NPs?
Trace
PRO
A'-bound variables

2. How about Mandarin?
张三觉得李四喜欢他自己。
张三觉得李四喜欢自己。

10