

More Semantics

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Review of Quantifier Meaning

No American smokes.

Review of Quantifier Meaning

No American smokes.

set of Americans

set of people who smoke

Review of Quantifier Meaning

No American smokes.



set of Americans

set of people who smoke

no: the intersection of set #1 and set #2
is empty

Review of Quantifier Meaning

No American smokes.

Every Italian likes pasta.

no: the intersection of set #1 and set #2
is empty

Review of Quantifier Meaning

No American smokes.

Every Italian likes pasta.

no: the intersection of set #1 and set #2
is empty

every: set #1 is a subset of set #2

Review of Quantifier Meaning

No American smokes.

Every Italian likes pasta.

Many Alaskans ice-fish.

no: the intersection of set #1 and set #2
is empty

every: set #1 is a subset of set #2

Review of Quantifier Meaning

No American smokes.

Every Italian likes pasta.

Many Alaskans ice-fish.

no: the intersection of set #1 and set #2
is empty

every: set #1 is a subset of set #2

many: the intersection of set #1 and set #2
is "pretty large"

Downward Entailing Quantifiers

No American smokes.

No American smokes cigars.

Downward Entailing Quantifiers

No American smokes.



entails

No American smokes cigars.

Downward Entailing Quantifiers

No American smokes.



entails



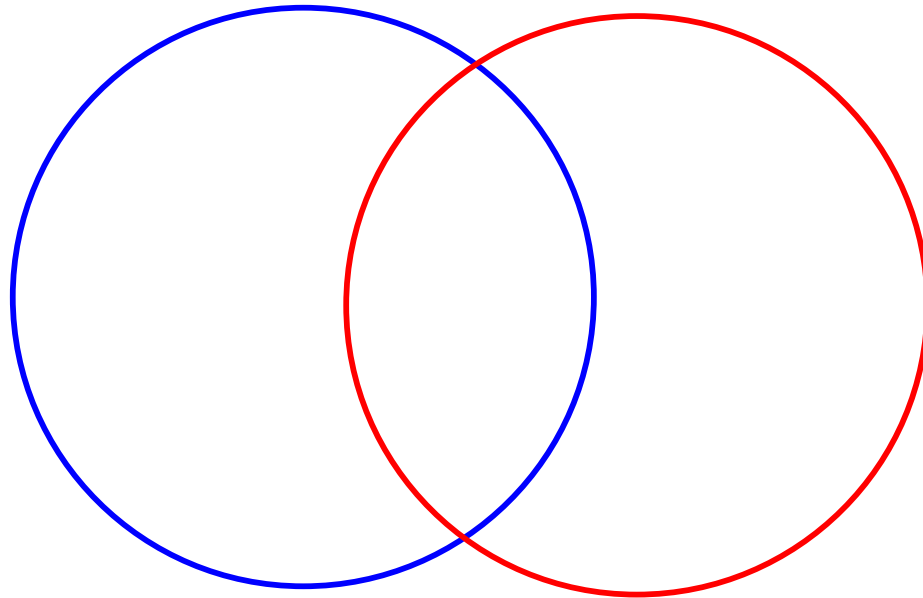
doesn't entail

No American smokes cigars.

Downward Entailing Quantifiers

Americans

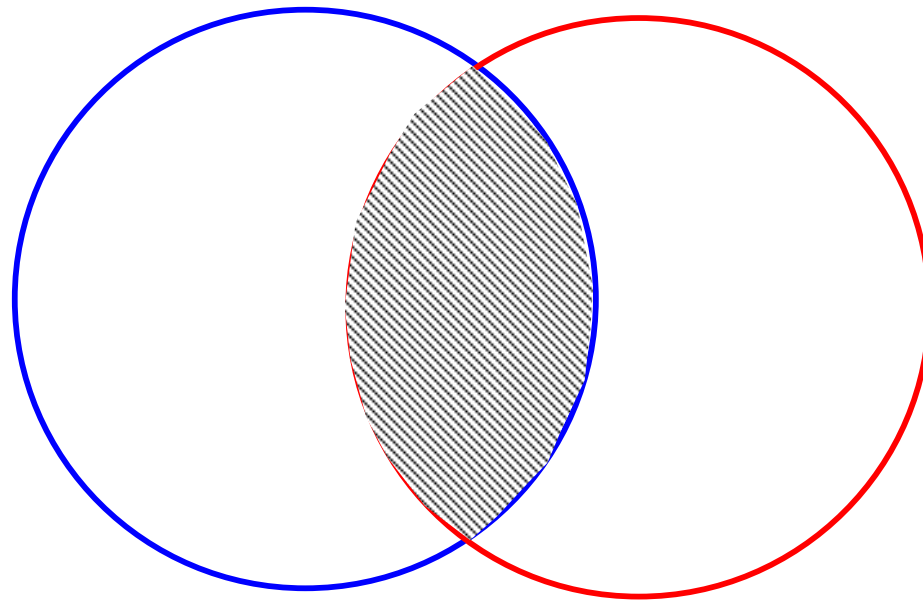
Smokers



Downward Entailing Quantifiers

Americans

Smokers

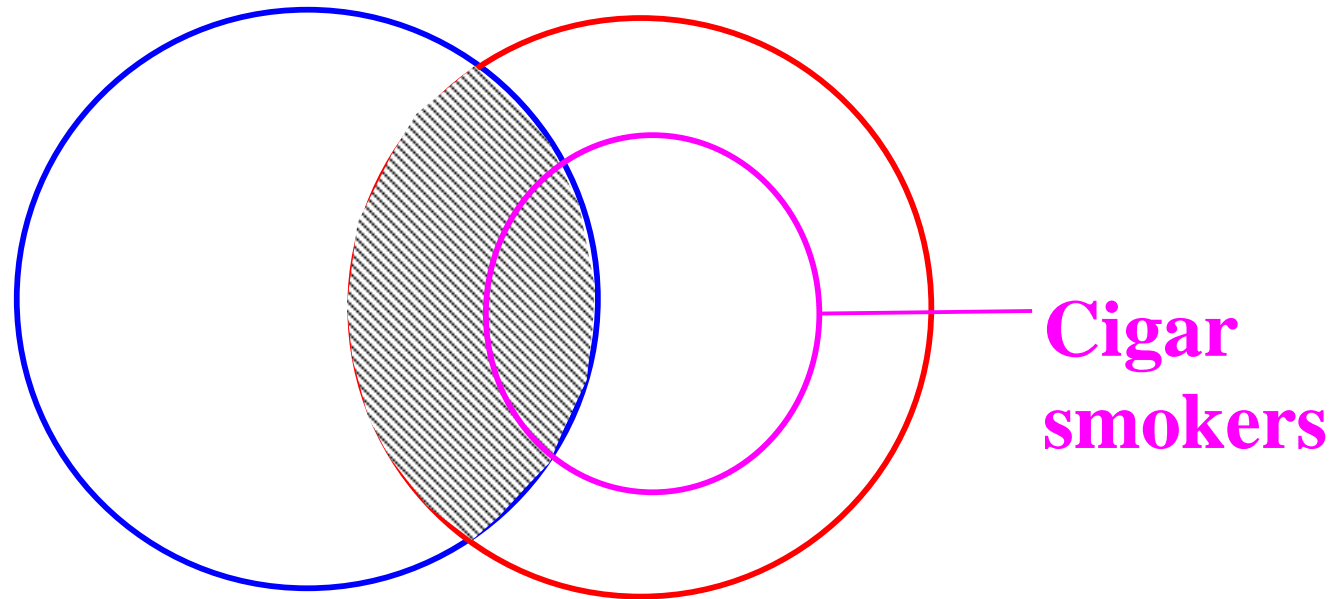


No American smokes.

Downward Entailing Quantifiers

Americans

Smokers



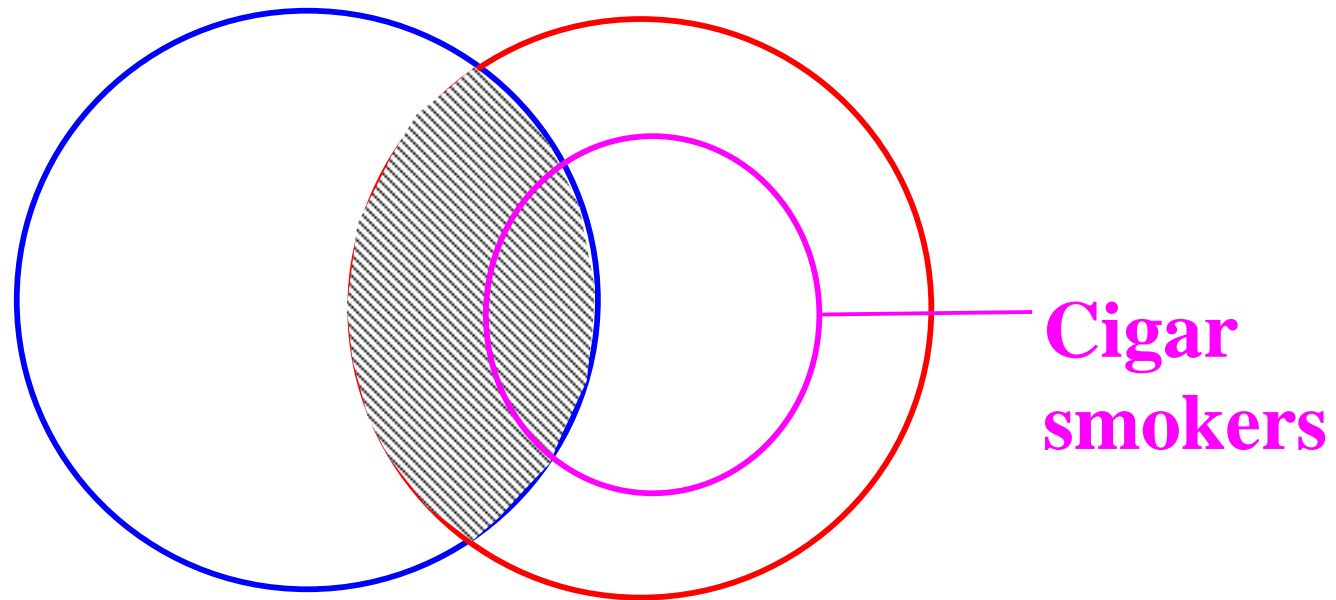
**Cigar
smokers**

No American smokes.

Downward Entailing Quantifiers

Americans

Smokers



No American smokes.

-->No American smokes cigars.

Downward Entailing Quantifiers

"No" is downward entailing:

if "No A are B" is true,
and C is a subset of B,
then "No A are C" is also true.

Downward Entailing Quantifiers

"No" is downward entailing:

If "No American smokes" is true,
and cigar smokers are a subset of smokers,
then "No American smokes cigars" is also true.

Downward Entailing Quantifiers

Is "every" downward entailing?

Downward Entailing Quantifiers

Is "every" downward entailing?

Every American smokes

Every American smokes cigars

Downward Entailing Quantifiers

Is "every" downward entailing?

Every American smokes

↓ doesn't entail

Every American smokes cigars

Downward Entailing Quantifiers

Is "every" downward entailing?

Every American smokes

↓ doesn't entail

Every American smokes cigars

--> no.

Downward Entailing Quantifiers

No one lifted a finger to help.

No one contributed a red cent.

No one saw anything.

Downward Entailing Quantifiers

No one lifted a finger to help.

No one contributed a red cent.

No one saw anything.

*Everyone lifted a finger to help.

*Everyone contributed a red cent.

*Everyone saw anything.

Downward Entailing Quantifiers

No one lifted a finger to help.

No one contributed a red cent.

No one saw anything.

*Everyone lifted a finger to help.

*Everyone contributed a red cent.

*Everyone saw anything.

-->what's with these expressions?

Downward Entailing Quantifiers

downward entailing?

no

✓

every

x

few

a few

most

more than ten

less than ten

Downward Entailing Quantifiers

downward entailing?

no	✓
every	x
few	✓
a few	x
most	x
more than ten	x
less than ten	✓

Downward Entailing Quantifiers

downward entailing?

no	✓	<u>no student</u> did anything...
every	X	* <u>every student</u> did anything...
few	✓	
a few	X	
most	X	
more than ten	X	
less than ten	✓	

Downward Entailing Quantifiers

downward entailing?

no	✓	<u>no student</u> did anything...
every	X	* <u>every student</u> did anything...
few	✓	<u>few students</u> did anything...
a few	X	* <u>a few students</u> did anything...
most	X	* <u>most students</u> did anything...
more than ten	X	* <u>more than ten students</u> did anything
less than ten	✓	<u>less than ten students</u> did anything...

Downward Entailing Quantifiers

No one lifted a finger to help.

No one contributed a red cent.

No one saw anything.

*Everyone lifted a finger to help.

*Everyone contributed a red cent.

*Everyone saw anything.

-->these expressions must be in a
downward entailing context.

Downward Entailing Quantifiers

John didn't lift a finger to help.

John didn't contribute a red cent.

John didn't see anything.

*John lifted a finger to help.

*John contributed a red cent.

*John saw anything.

-->what's licensing these expressions here?

Downward Entailing Quantifiers

John doesn't smoke.

John doesn't smoke cigars.

Downward Entailing Quantifiers

John doesn't smoke.



entails

John doesn't smoke cigars.

Downward Entailing Quantifiers

John doesn't smoke.



entails

John doesn't smoke cigars.

--> *not* creates a downward entailing context.

Downward Entailing Quantifiers

Expressions like *lift a finger*, *a red cent*, and *anything* are

Negative Polarity Items (NPIs)

-->need to be in a downward entailing context.

Quantifiers and Ellipsis

VP-ellipsis:

John bought a book, and Mary did ____ too.

Quantifiers and Ellipsis

VP-ellipsis:

John bought a book, and Mary did  too.

"buy a book"

Quantifiers and Ellipsis

identity condition on VP-ellipsis:

John bought a book, and Mary did  too.

"buy a book"

*"sell an okapi"

Quantifiers and Ellipsis

VP-ellipsis:

John bought a book, and Mary did too.

"buy a book"



John dislikes his father, and Bill does ___ too.

Quantifiers and Ellipsis

VP-ellipsis:

John bought a book, and Mary did too.

"buy a book"

John dislikes his father, and Bill does too.

"dislike his (J or B's) father"

Quantifiers and Ellipsis

Antecedent Contained Deletion (ACD)

John visited every city [that Mary did ___]

Quantifiers and Ellipsis

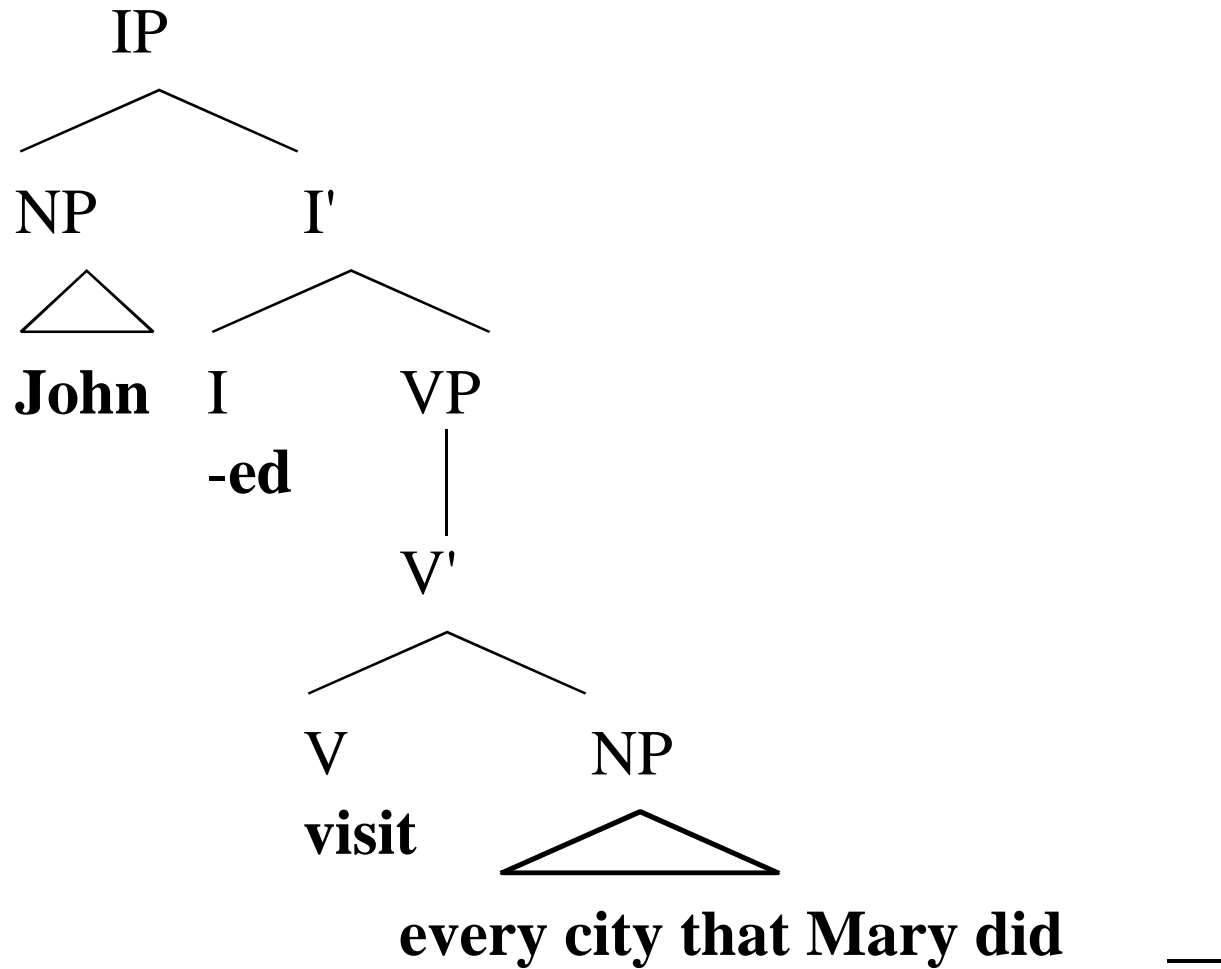
Antecedent Contained Deletion (ACD)

John visited every city [that Mary did]

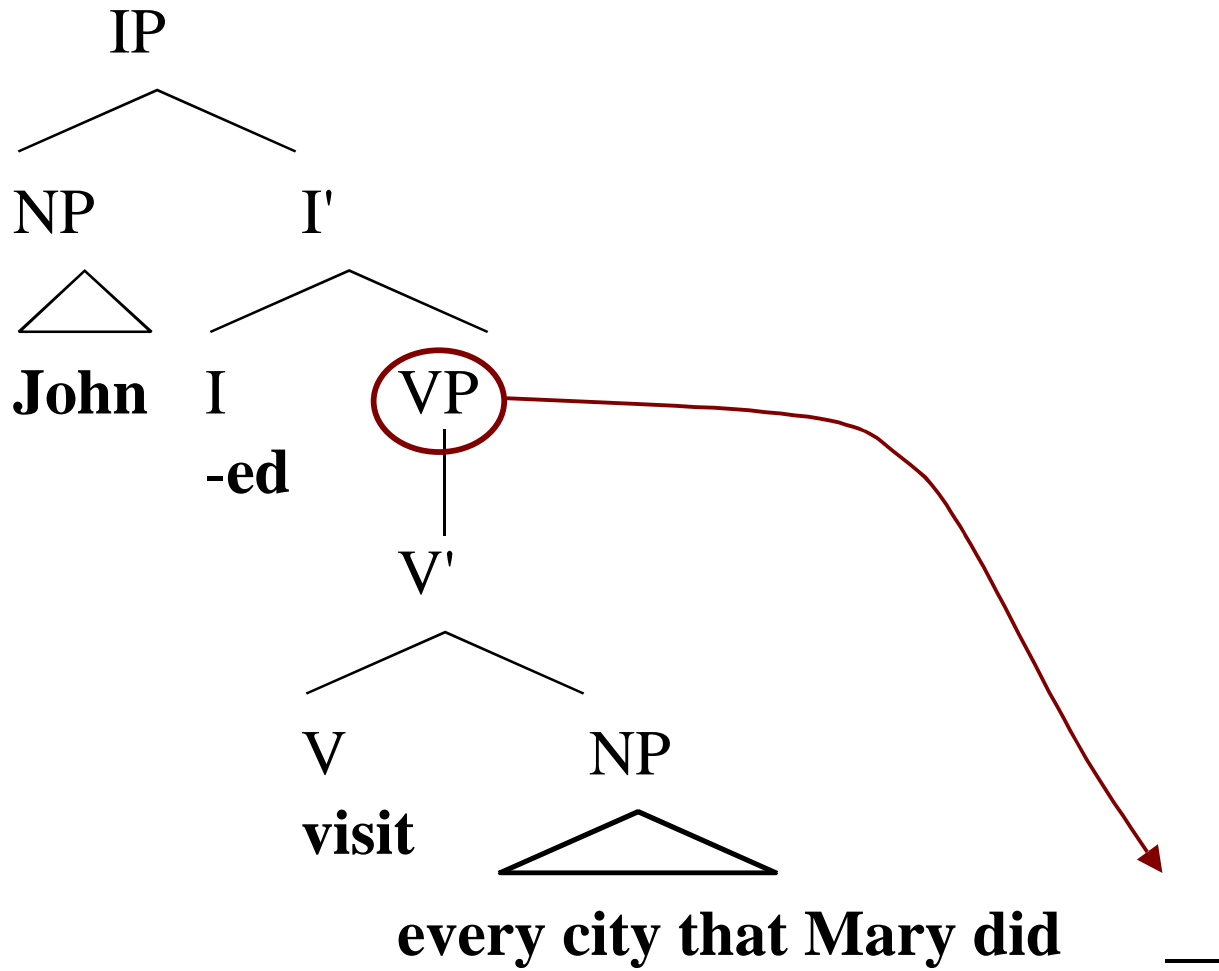
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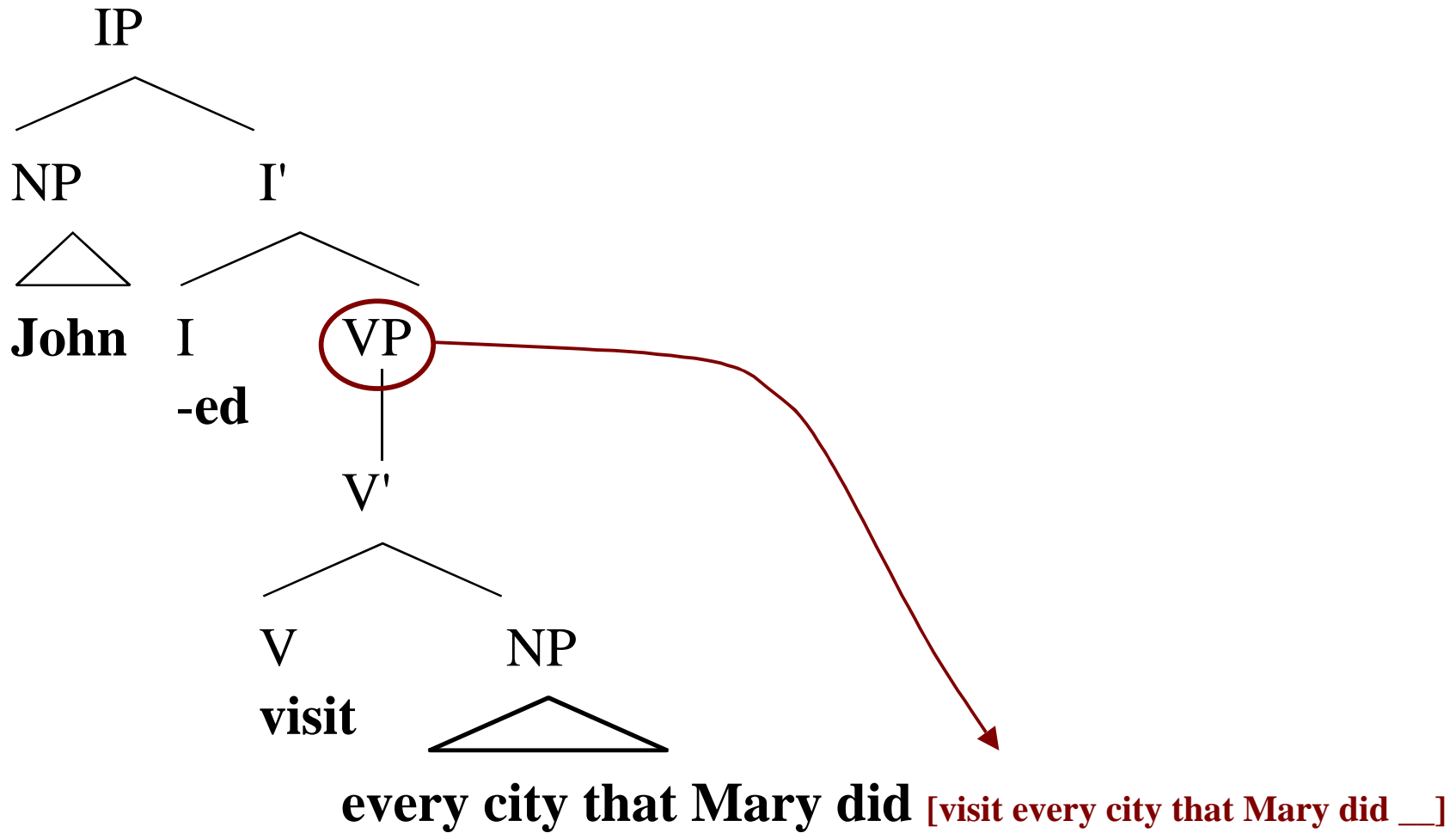
Quantifiers and Ellipsis



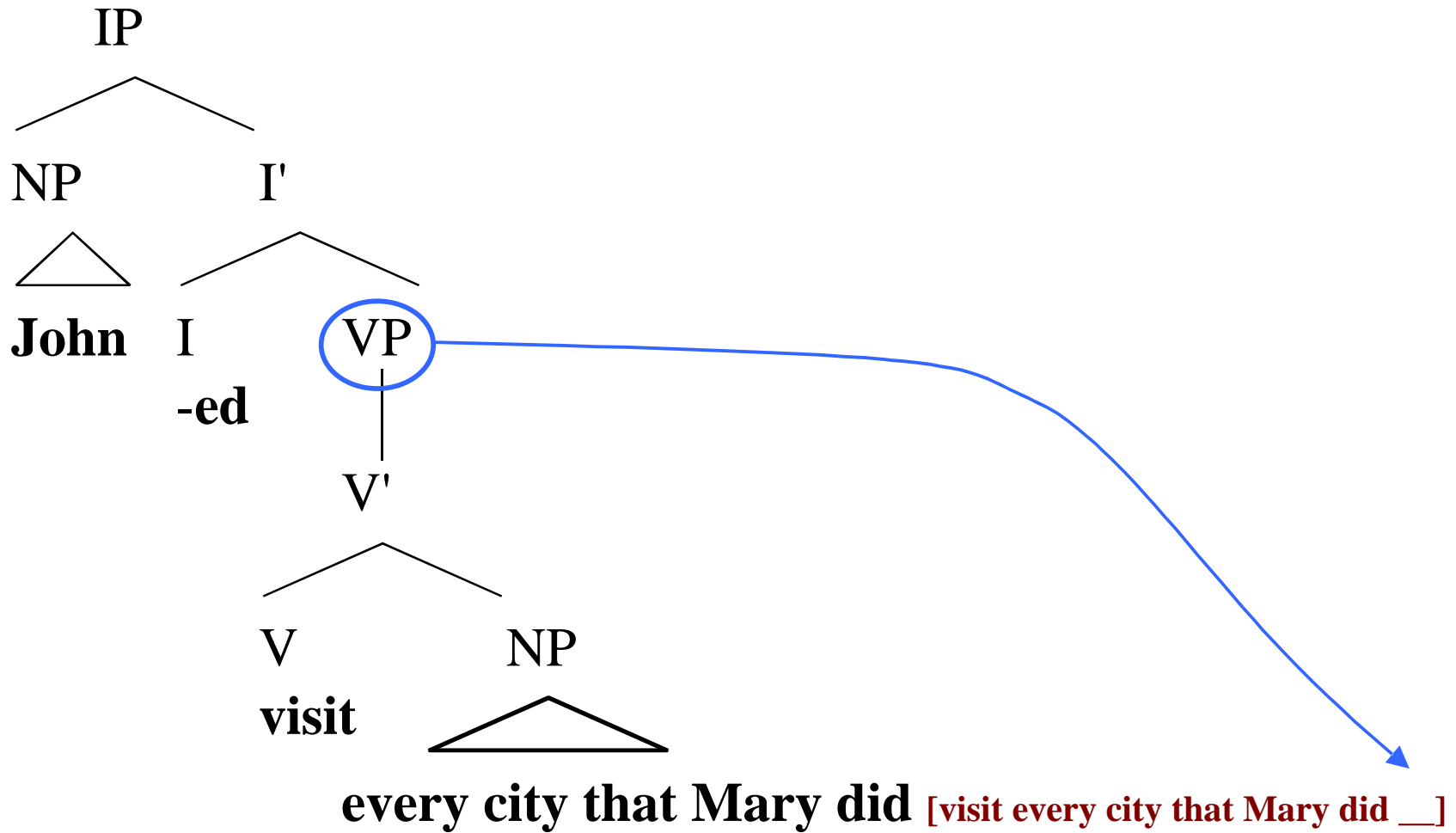
Quantifiers and Ellipsis



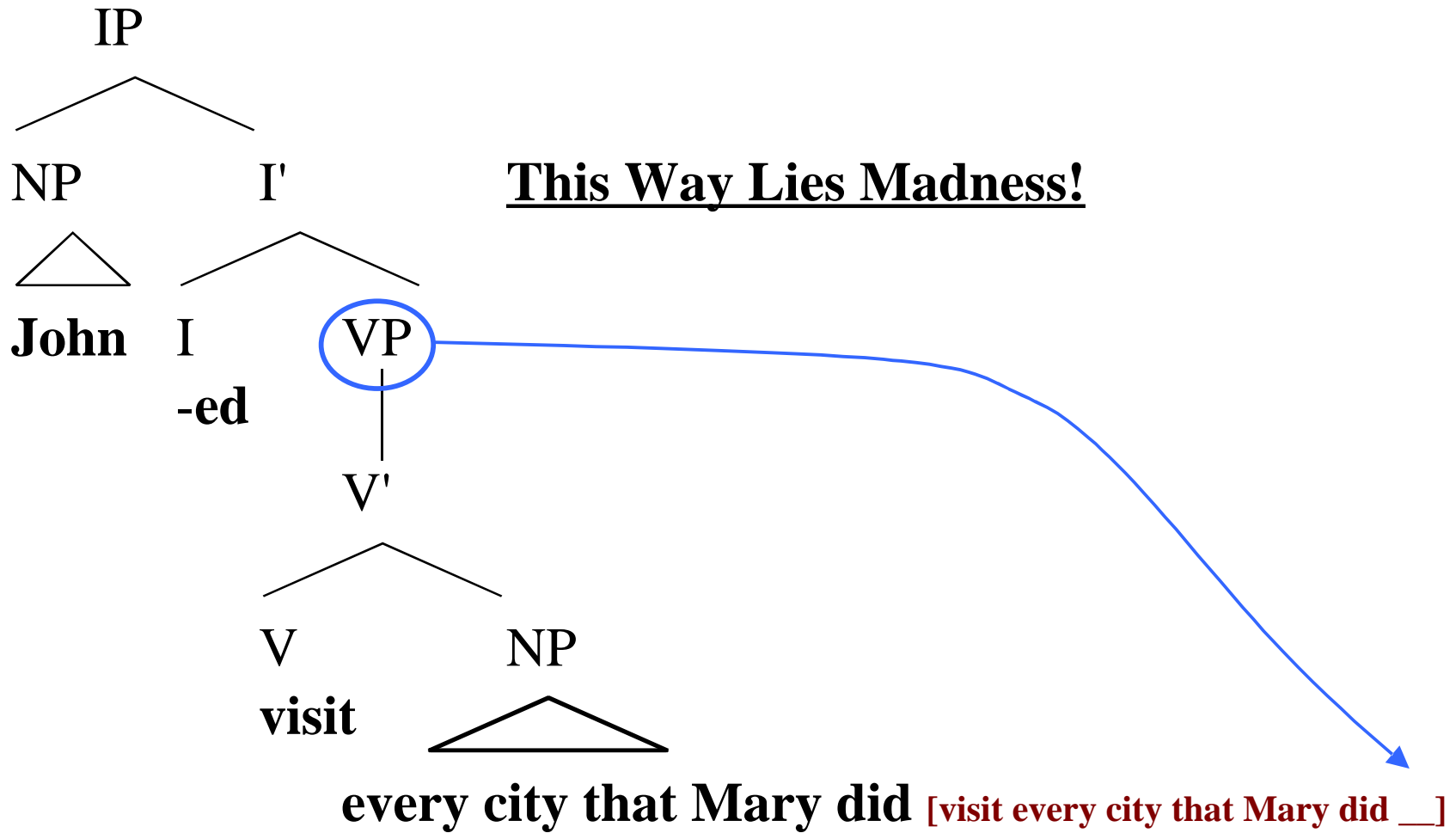
Quantifiers and Ellipsis



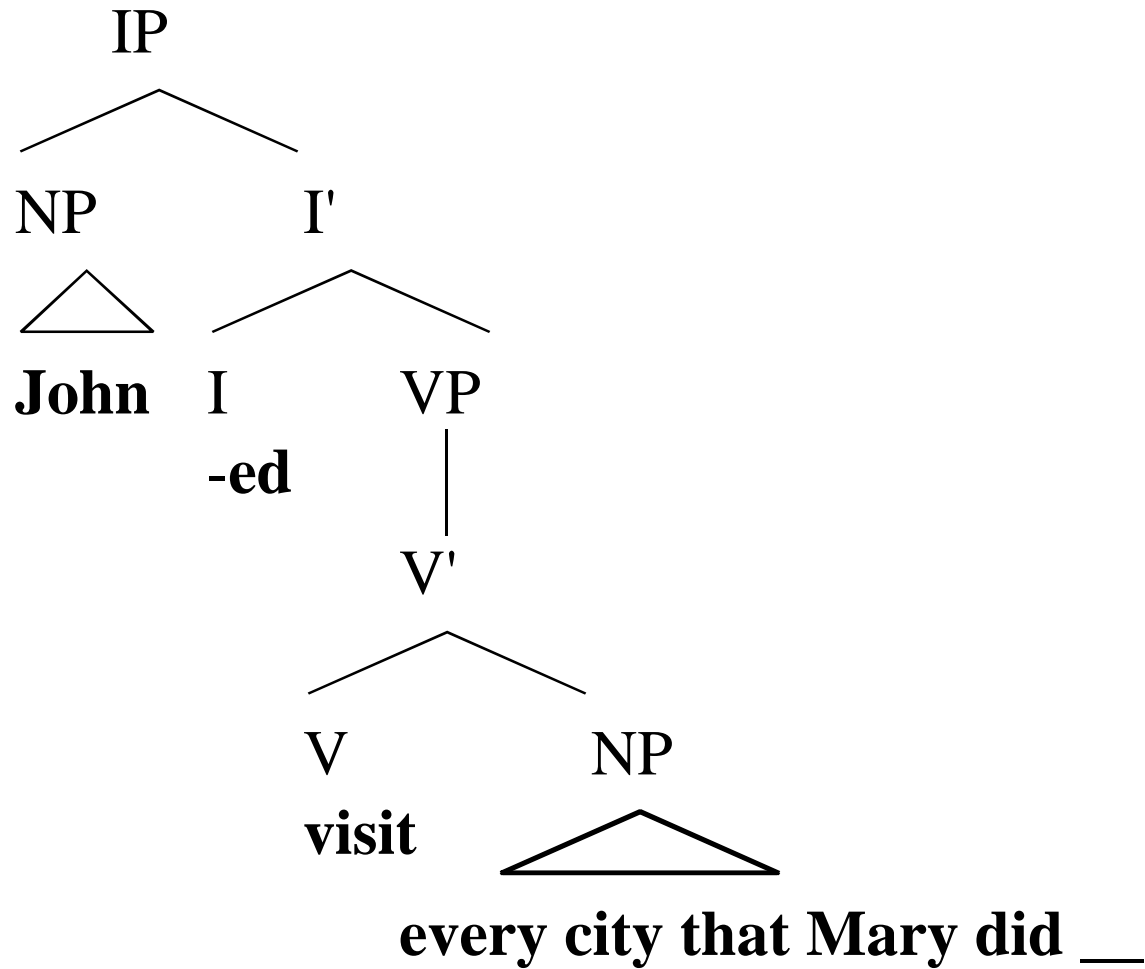
Quantifiers and Ellipsis



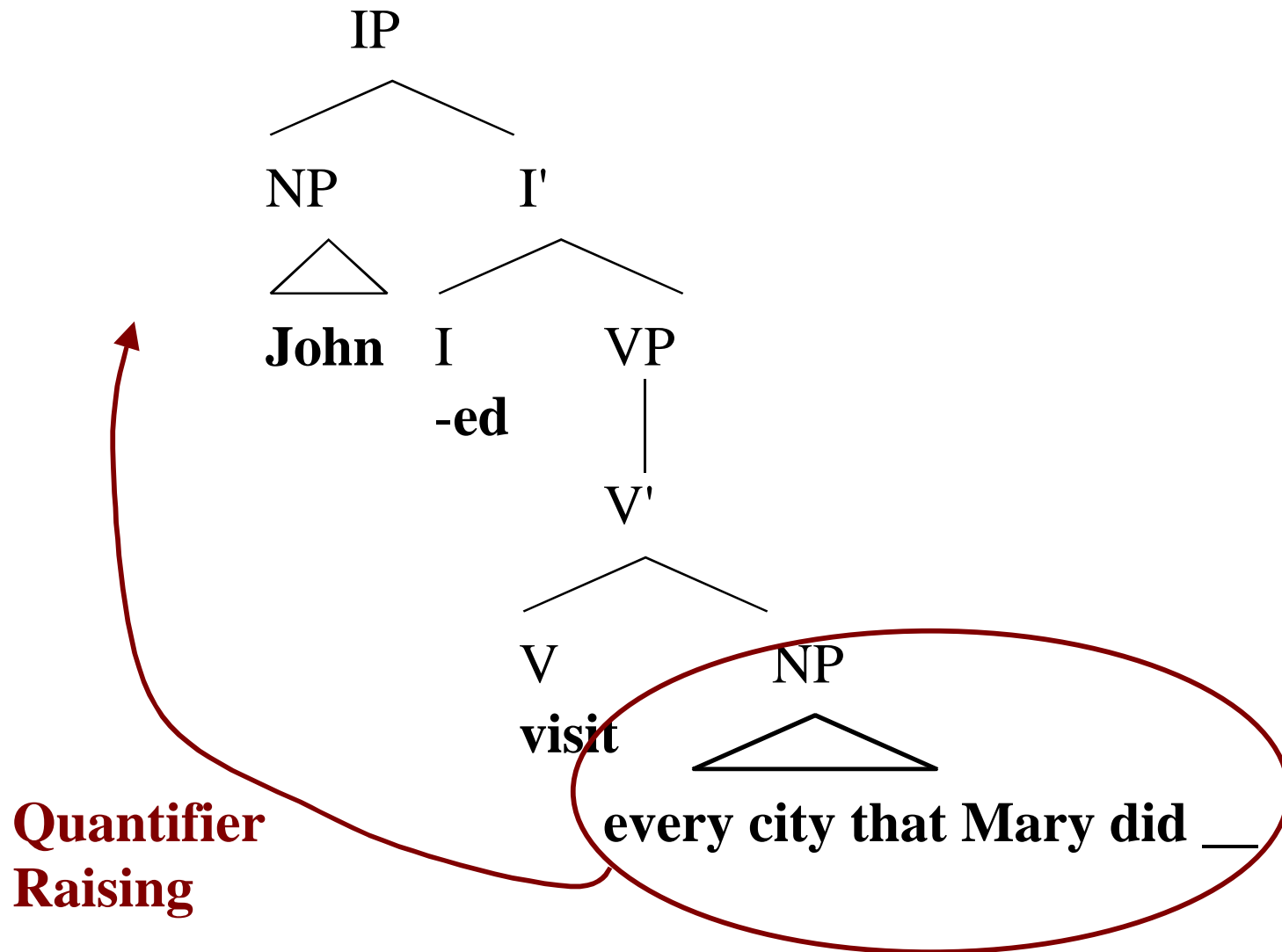
Quantifiers and Ellipsis



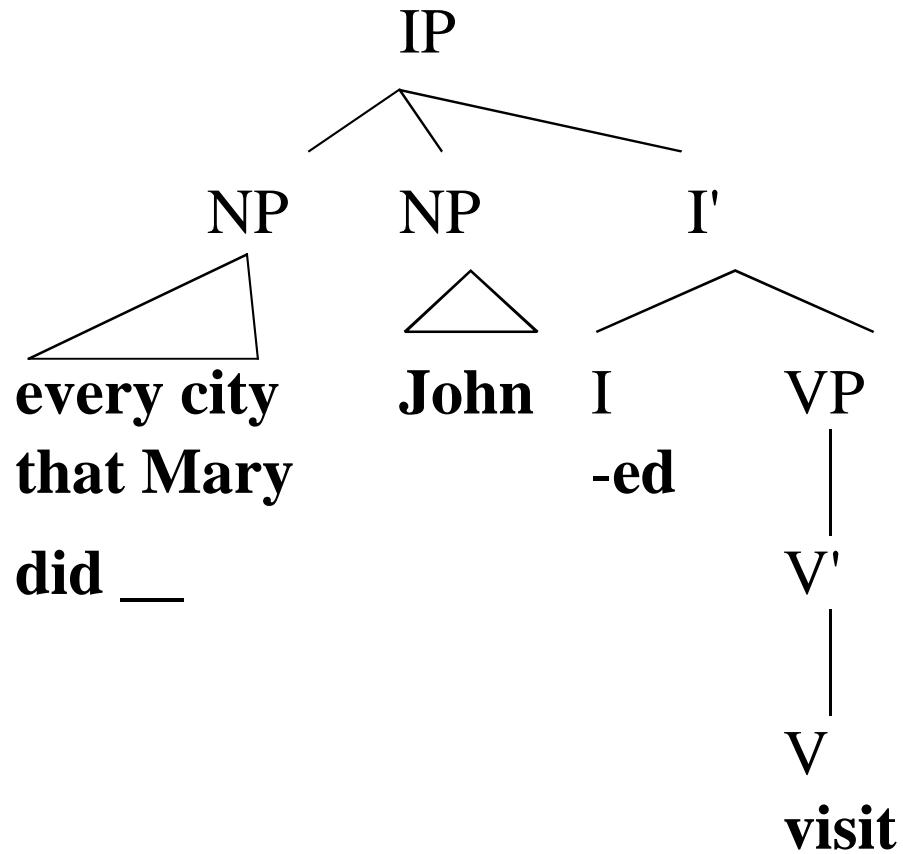
Quantifiers and Ellipsis



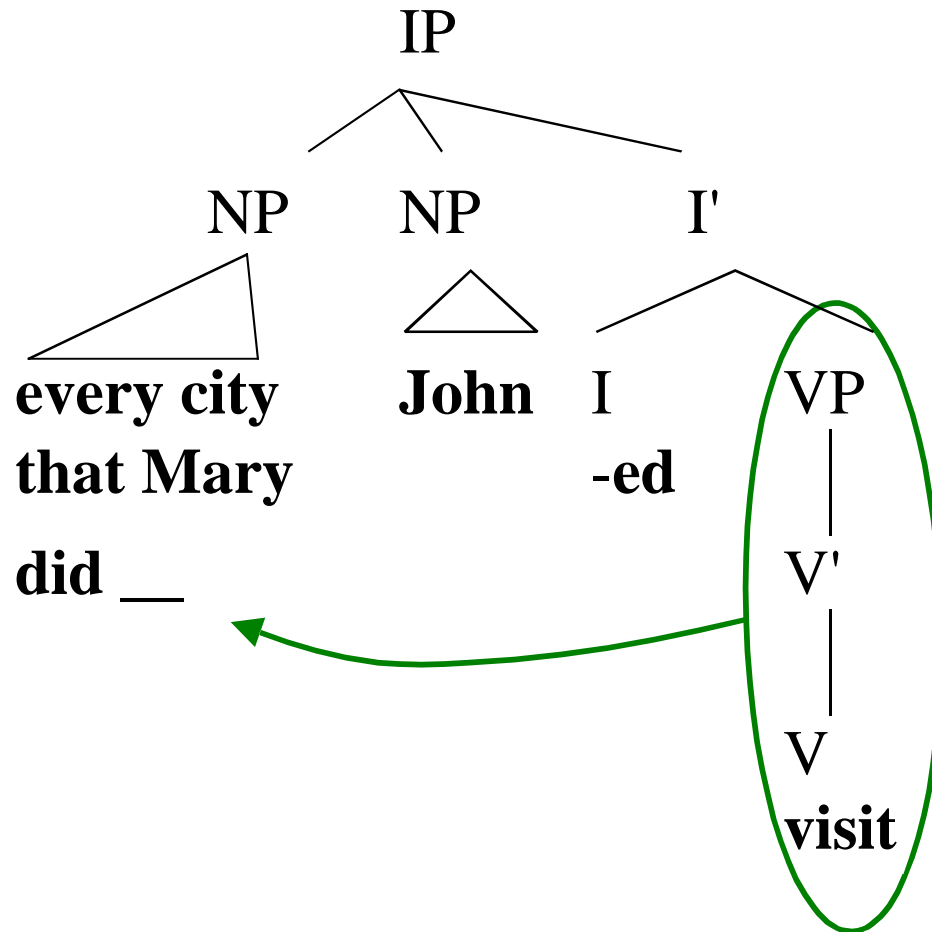
Quantifiers and Ellipsis



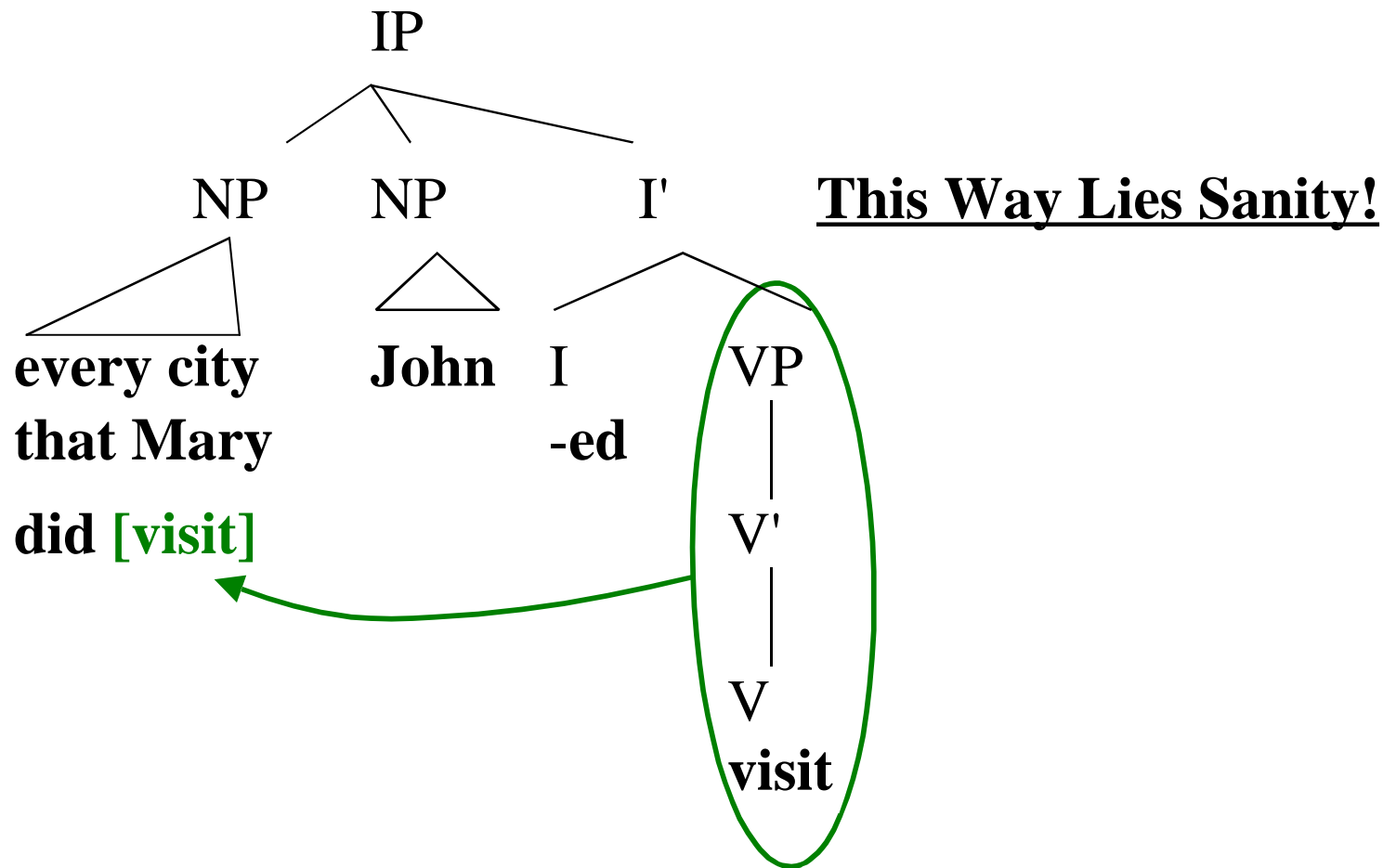
Quantifiers and Ellipsis



Quantifiers and Ellipsis



Quantifiers and Ellipsis



Quantifiers and Ellipsis

John refused to visit every city Mary visited.

Quantifiers and Ellipsis

John refused to visit every city Mary visited.

- > John said, "I won't visit every city Mary visited"
- > John said, "I won't visit Paris, London, or Tuscaloosa"
(and those are the cities Mary visited)

Quantifiers and Ellipsis

John refused to visit every city Mary visited.



- > John said, "I won't visit every city Mary visited"
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Quantifiers and Ellipsis

John refused to visit every city Mary visited.



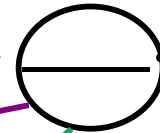
- > John said, "I won't visit every city Mary visited"
- > John said, "I won't visit Paris, London, or Tuscaloosa"
(and those are the cities Mary visited)

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

Quantifiers and Ellipsis

John refused to visit every city Mary did



"visited"

"refused to visit"

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

2 ambiguities:

- "visit" vs. "refuse to visit"

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

2 ambiguities:

- "visit" vs. "refuse to visit"
- John's refusal mentions "every city", or not.

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

2 ambiguities:

- "visit" vs. "refuse to visit"
- John's refusal mentions "every city", or not.

in principle, **4 readings:**

- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had visited these cities)
- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had refused to visit these cities)

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

2 ambiguities:

- "visit" vs. "refuse to visit"
- John's refusal mentions "every city", or not.

in principle, **4 readings:**

- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had visited these cities)
- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had refused to visit these cities)
- John said, "I refuse to visit every city Mary visits"
- John said, "I refuse to visit every city Mary refuses to visit"

Quantifiers and Ellipsis

John refused to visit every city Mary did ____.

2 ambiguities:

- "visit" vs. "refuse to visit"
- John's refusal mentions "every city", or not.

in fact, **only 3 readings:**

- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had visited these cities)
- John said, "I refuse to visit Paris, Rome, or Tuscaloosa"
(and Mary had refused to visit these cities)
- John said, "I refuse to visit every city Mary visits"
- ~~John said, "I refuse to visit every city Mary refuses to visit"~~

But why? To be continued...