1 Containment is represented by dominance

Phrases are sequences of words – the things that (informally) receive thematic roles and are (to a first approximation) inter-substitutable:

(1) The vice-president resides in a secure location.

\[
\text{LOCATION}_{PP} \rightarrow \text{at the White House, beyond Al Qaeda’s grasp, outside Washington D.C., near W.’s Crawford, TX ranch.}
\]

in addition, phrases can contain other phrases. For instance, the prepositional phrase in (3) contains a determiner phrase as a subconstituent

(3) ...[PP in [DP a secure location.]]

Containment of DP within PP represented by the parent-child relationship in a tree

\[
\begin{array}{c}
\text{S} \\
\text{DP} & \text{VP} \\
\text{D} & \text{N} & \text{V} & \text{PP} \\
\text{The vice-president} & \text{resides} & \text{in} & \text{a secure location}
\end{array}
\]

where DP is a child of PP. We say that, in this diagram, “PP dominates DP.” A more detailed phrase structure for (1) is given below

\[
\begin{array}{c}
\text{S} \\
\text{DP} & \text{VP} \\
\text{D} & \text{N} & \text{V} & \text{PP} \\
\text{The vice-president} & \text{resides} & \text{in} & \text{a secure location}
\end{array}
\]

The labelled-bracketing

\[
[S [DP [D The] [N vice-president]] [VP [V resides] [PP [P in] [DP [D a] [Adj secure] [N location]]]]]
\]

is a completely-equivalent notational variant of the phrase structure diagram.
1.1 Terminology roundup

**node** a place in a tree; distinguished places include

  - **root** a node that *is* the child of no other; has no siblings & is an ancestor to all
  - **leaf** a node that *has* no children
  - **internal node** neither root nor leaf!

**label** decoration written at a node; in syntax typically the category of the constituent (VP, PP, DP, ...)

**branching** refers to number of lines emanating downward

  - **non-** has 1 child
  - **binary-** has 2 children
  - **ternary-** has 3 children

**sisters** nodes are children of the same parent

**dominates** contains within; X dominates Y just in case there is a “purely downward”
path from X to Y

**precedes** comes before; X precedes Y just in case some dominator of X and some domi-
nator of Y are sisters

**immediate dominance** the single next-bigger constituent; X is the shortest constituent
longer than Y that contains Y

**immediate precedence** comes right before; there exists no Z such that X precedes Z
and Z precedes Y.

(4)

```
  A
 /\ /
B  C
 / \ /
D  E
```

In tree (4), all of these statements are true:

- A dominates B, C, D, and E  
- C dominates D and E  
- A immediately dominates B and C  
- C immediately dominates D and E

B and C are children of A

D and E are children of C

B and C are sisters

D and E are sisters
2. Which is the correct tree?

The number of conceivable binary trees for sentences of length $n$ grows at an alarming rate: 0, 1, 2, 5, 16, 48, 144, 432, 1296... which constituency claims are correct?

**substitution** since Names and Pronouns can substitute for DPs, they are dominated by DP

**topicalization test** assume topicalization rule only applies to constituents (p154)

- John will buy those same shoes
- Those same shoes, John will buy
- * Those same, John will buy shoes
- * Same shoes, John will buy those

- [PP To France, ] Harry brought his army
- * army to, Harry brought his France

[CP That his father had been murdered, Hamlet knew
- * knew that his father, Hamlet had been murdered.

Everyone expected her to be angry at Petruccio...
- and [AP angry at her suitor, ] Katherine was
- * angry at her, Katherine was suitor.

**pro-form test** pronouns typically can only be co-referential with other DP. it with CP,

- one with NP, so with VP and AP.

Al-Jazeera claims [CP that bin Laden is still alive ]$_j$ and no one disputes it$_j$
- Jenna is [AP angry at her father ]$_k$ and so$_k$ is Barbara.

Petruccio wanted [DP a vocal [NP wife]$_i$,] but Hortensio wanted [DP a quiet [NP one]$_i$]

**VP deletion test** if the deleted VP is —— in the ...will too construction, the antecedent must be a full VP

- Henry has [VP passed the wine to Falstaff], and Bardolph will —— too.
- * Henry has passed the wine to Falstaff, and Bardolph has —— Pistol.

Petruccio will [VP find a wife] and Hortensio will —— too.
- * Petruccio will find a wife, and Bianca will —— a husband

**coordination test** usually, only full constituents can be coordinated with constituents of the same type using and, or.

- The scribe wrote a book and the king wrote to his wife
- * The scribe wrote [DP a book ] and [PP to his wife]