Example Minimalist Derivation

The following derivations illustrate the operations that apply to derive the final syntactic object we're after.

TASK

Show the derivation for the sentence "John divorced Mary."

NUMERATION

Every derivation begins with a numeration of items from the lexicon. The numeration here contains labels, which are short for the actual feature bundles that are stored in the lexicon.
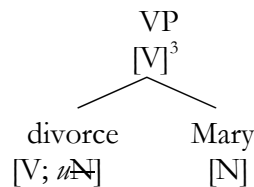
{John, divorce, Mary, *v*, *PAST*}[1]

LEXICAL ENTRIES

Label	Features		
	Category	Inflectional[2]	Selectional
John	[N]		
divorce	[V]		$[u$N] | <'TH>
Mary	[N]		
v	[*v*]	[V*, *u*Infl:_]	$[u$N, *u*V] | <AG>
PAST	[T]	[Infl:PAST]	[*uv*, N*]

DERIVATION

(1)   MERGE(divorce, Mary)   *label*   VP

$$
\begin{array}{c}
\text{VP}\\
\text{[V]}^3\\
\diagup\quad\diagdown\\
\text{divorce}\qquad\text{Mary}\\
\text{[V; } u\cancel{\text{N}}]\qquad\text{[N]}
\end{array}
$$

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[1] Notice that we have to add *v* and *PAST* to account for various movements and agreement facts we discussed in class. The label for "divorce" is also without "-ed" because it is technically not tensed until agree.

[2] For nouns like John and Mary, we won't specify their ɸ-features, since we haven't used them in any operation yet.

[3] The convention on features is the following: Feature types are separated by semicolons – features within a type are separated by commas.
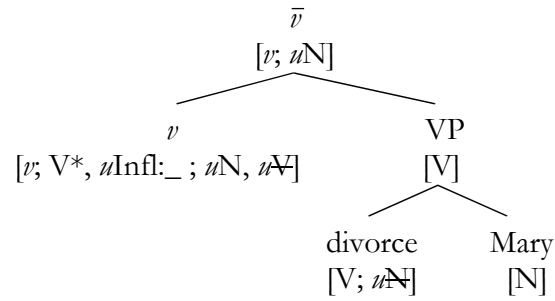
(1 continued)

This merger

  Percolates: the V category feature of *divorce*

  Checks: the uninterpretable selectional N feature on *divorce*
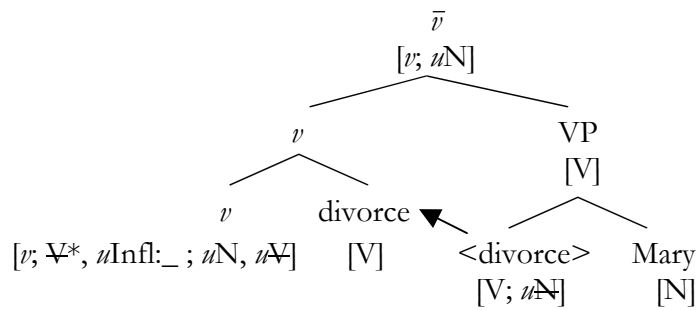
(2) MERGE(*v*, VP) *label* $\bar{v}$

```
                      v̄
                   [v; uN]
                  /        \
              v               VP
  [v; V*, uInfl:_ ; uN, u̶V̶]    [V]
                              /     \
                         divorce    Mary
                         [V; u̶N̶]    [N]
```

This merger

  Percolates: the *v* category feature of *v* and the uninterpretable selectional N feature of *v*.

  Checks: the uninterpretable selectional V feature on *v*

(3) MOVE(divorce, *v*) *and adjoin to little v*

```
                        v̄
                     [v; uN]
                    /        \
                 v              VP
               /   \            [V]
             v    divorce ▼    /     \
  [v; V̶*, uInfl:_ ; uN, u̶V̶] [V]  <divorce>  Mary
                                [V; u̶N̶]    [N]
```

  This movement is triggered by the strong inflectional V feature of *v*. After movement, this strong feature is checked.

(4) MERGE (John, $\bar{v}$)   *label* vP

vP
[v]
├── John
│   [N]
└── $\bar{v}$
    [v; uN̶]
    ├── v
    │   ├── v
    │   │   [v; V̶*, uInfl:_ ; uN, uV̶]
    │   └── divorce
    │   [V]
    └── VP
        [V]
        ├── <divorce>
        │   [V; uN̶]
        └── Mary
            [N]
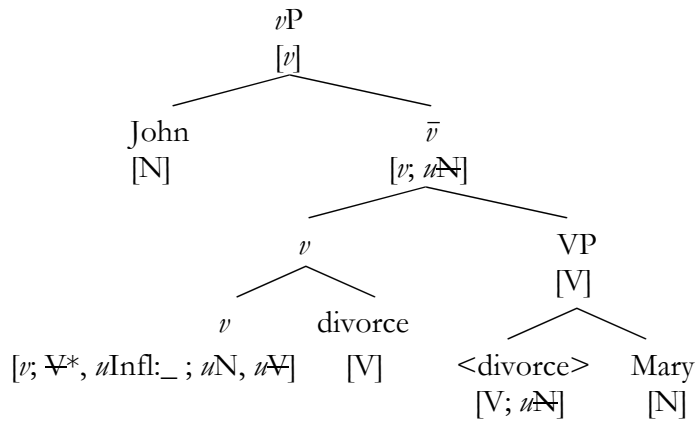
This merger
　　　Percolates: the v category feature $\bar{v}$.
Checks: uninterpretable selectional N feature of $\bar{v}$.
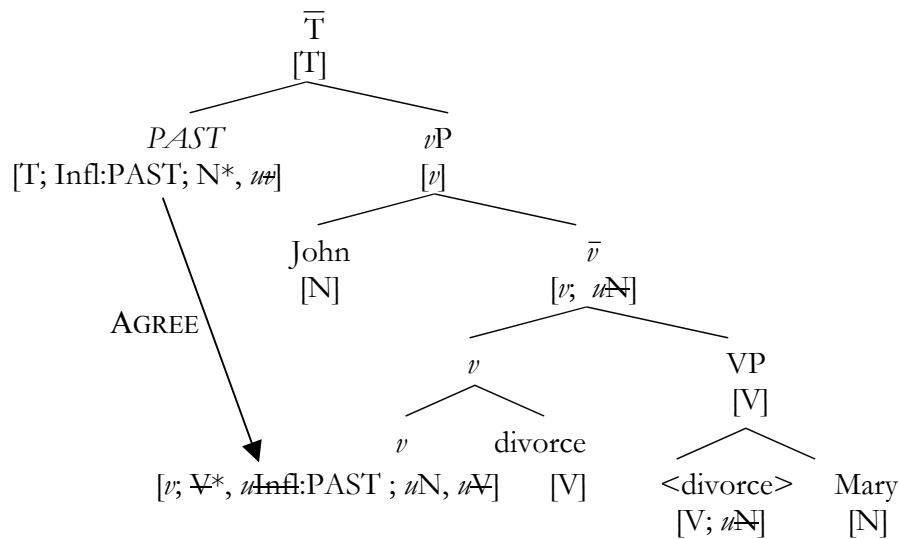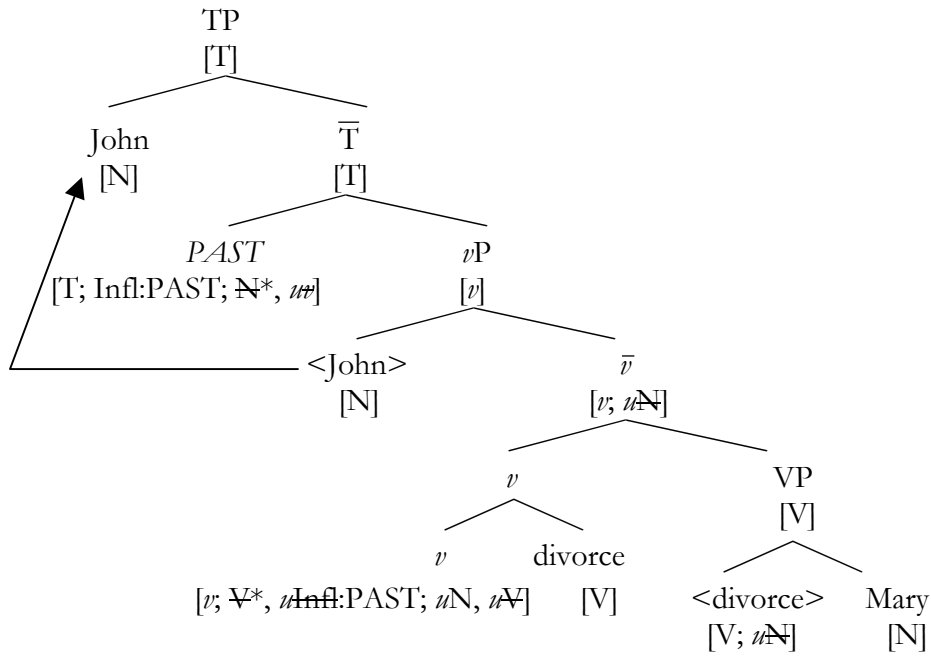
(5) MERGE (*PAST*, vP)   *label* $\overline{\text{T}}$

$\overline{\text{T}}$
[T]
├── *PAST*
│   [T; Infl:PAST; N*, uv̶]
│   │ AGREE →
│   └── [v; V̶*, uI̶n̶f̶l̶:PAST ; uN, uV̶]
└── vP
    [v]
    ├── John
    │   [N]
    └── $\bar{v}$
        [v; uN̶]
        ├── v
        │   ├── v
        │   └── divorce
        │   [V]
        └── VP
            [V]
            ├── <divorce>
            │   [V; uN̶]
            └── Mary
                [N]

The merger
　　　Percolates: the T category feature of *PAST*.
　　　Checks: the uninterpretable v selectional feature of *PAST*.
This merger also comes with an application of AGREE(*PAST*, v) thereby valuing the uninterpretable inflectional Infl feature of v. AGREE checks that feature as well.

(6)   [4]MOVE John and adjoin to $\overline{\text{T}}$ *label*   TP

TP
[T]

John
[N]

$\overline{\text{T}}$
[T]

PAST
[T; Infl:PAST; ~~N~~*, *u̶v̶*]

*v*P
[*v*]

<John>
[N]

$\overline{v}$
[*v*; *u̶N̶*]

v

VP
[V]

v   divorce
[*v*; ~~V~~*, *u̶Infl̶*:PAST; *u*N, *u̶V̶*]   [V]

<divorce>   Mary
[V; *u̶N̶*]   [N]

This movement checks the strong selectional N feature of *PAST*.

At this point in the derivation, all the items in the numeration are used up, and all uninterpretable features have been checked and all unvalued features valued. A convergence has been reached.

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[4] We haven't done this in class yet, so don't worry about the details.