source tree

S:?Y
|
P:?X
/ \
L:?X   R:?X ↓
|
B:?Y ↓

B:?Y ↓
↑
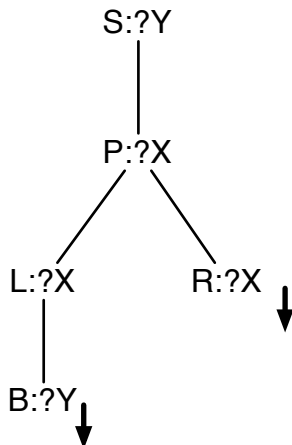B:b   ⇒   B:b
| |
bar   bar

ciVariables: ?X b

(1) collect all open variables
ciVariables: `[?X ?Y ]`

(2) substitute something into the node B
ciVariables: `[?X  b ]`

L:?X   `[?X ?Y ]`   L:?X
| `[?X  b ]` |
B:b   --------   B:b
| `[?X  b ]` |
bar   ⇒   bar

L:a   L:a
L:?X   ⇗   / \
| ping   L*   ⇒   ping   L
B:b |
                                    B:b
                                     |
                                    bar

(3) parent rule from B
ciVariables: `[?X  b ]`

(4) adjoin something into node L
ciVariables: `[ a  b ]`