1. A lexical item "far down" in the (intuitive, grammar-independent) parse tree influences "far-away" parts of the tree, as shown in these partial structures.

```
(a) S  
   / 
  NP  VP
 /     |
  V     Prep P
 /       |
put     wants a certain NP + type
```

"What do cashiers put in boxes?"

```
(b) S  
   / 
  WH-NPaux NP
 /     |
  V     Prep P
 /       |
put     wants a certain Prep P
```

```
(c) S  
   / 
  NP  VP
 /     |
  V     Prep P
 /       |
put     E is the "gap"; the completion of WH-NP is the "filler"
```

But notice that the subject and two arguments of "put" are all in the same tree fragment (a), and similarly with (b) and (c).

"local" if that fragment is an atomic unit.

```
(d) NP  (e) NP  (f) Prep  (g) NP
   N     N     Prep P     N
   |     |     |     |
   cashiers boxes in baskets
```

2. Substitution of partial tree $\gamma$ into initial tree $\alpha$ at (leaf) node $\eta$ is allowed if and only if $\gamma$'s root unifies with $\eta$.

3. Gorn numbering schematic:

```
O 2
/ 
1 2
/ 
1.1 2.1 2.2 2.3
/ 
2.2.1
/ 
2.2.1.1
```

4. Partial derivation tree

```
(a) S
   / 
  (c)@1  (e)@2.2  (f)@2.3
 /    
 g)@2
```
5. Adjunction of an auxiliary tree $\beta$ into an initial tree $\alpha$ at internal (non-leaf) node $\eta$ if and only if: $\beta$'s root unifies with $\eta$.

\[ \text{results in:} \]

\[ Z \]

\[ X \]

\[ X \]