

# BOTTOM-UP PARSE EXAMPLE

## BACKUP STATES

## CURRENT STATE

## INPUT

The rich benefit the most

rich benefit the most

benefit the most

the most

the most

most

(FAIL)

most

(FAIL)

the most

the most

most

(FAIL)

most

(FAIL)

benefit the most

benefit the most

the most

most

(FAIL)

the most

most

SUCCESS!

## RULES

S --> NP VP

NP --> Det A N

NP --> Det N

VP --> V

VP --> V NP

VP --> V ADVL

ADVL --> Det SUPERL

## Lexicon

benefit: N, V

most: SUPERL

rich: A, N

the: Det

(Det N)<sub>3</sub>

(Det A V)<sub>4</sub>

(Det A N Det)<sub>5</sub>

(Det A V Det)<sub>5</sub>

(Det N N)<sub>4</sub> (Det N V)<sub>4</sub>

(NP V)<sub>4</sub>

Det  
Det A  
Det A N

NP  
NP Det  
NP Det SUPERL

NP ADVL  
◇ Det A N Det

Det A N Det SUPERL

Det A N ADVL  
◇ Det A V

Det A VP  
Det A VP Det  
Det A VP Det SUPERL

Det A VP ADVL  
◇ Det A V Det

Det A V Det SUPERL

Det A V ADVL

Det A VP  
◇ Det N

NP  
NP N  
NP N Det  
NP N Det SUPERL

NP N ADVL  
◇ NP V

NP V Det  
NP V Det SUPERL

NP V ADVL

NP VP

S