

# Feature Grammar Practice Solution

# Feature Grammar Practice

- **Initial Grammar:**

S → NP VP

VP[subcat=ditrans] → V NP NP

NP → NNP

NP → Det N

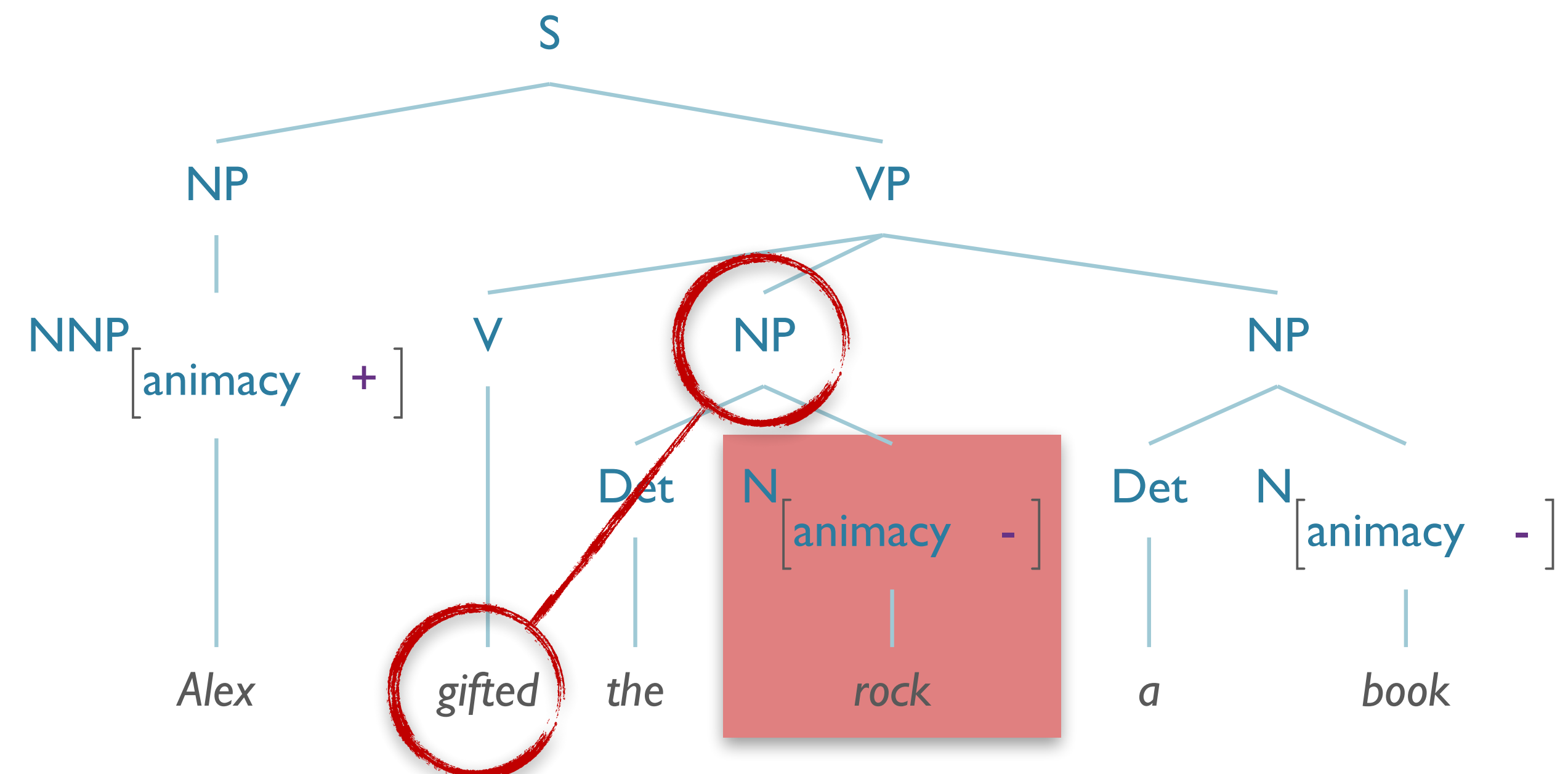
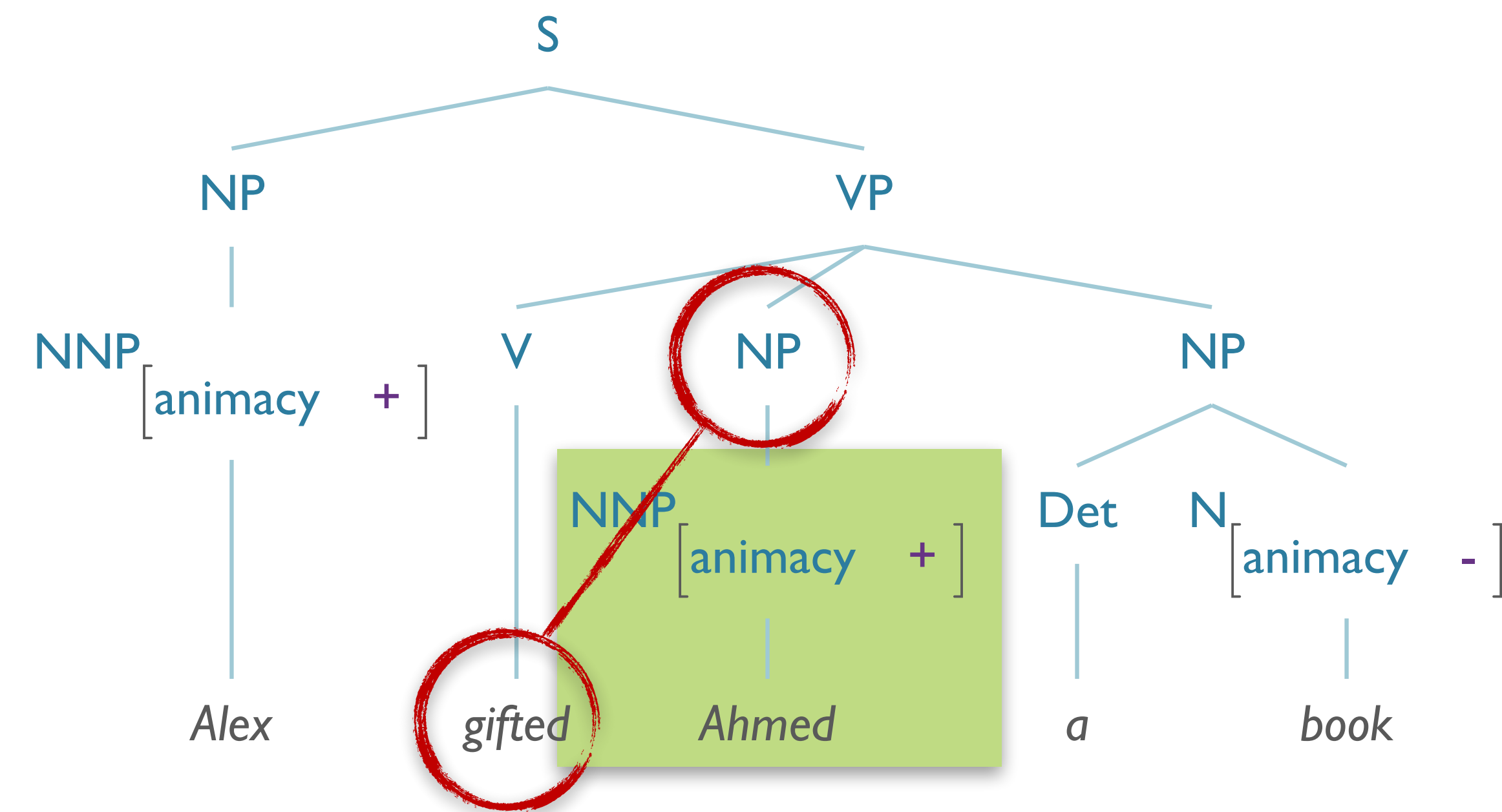
NNP[animacy=True] → 'Alex' | 'Ahmed'

V → 'gifted'

Det → 'a' | 'the'

N[animacy=False] → 'book' | 'rock'

# Feature Grammar Practice



# A possible solution

```
grammar='''%start S
S -> NP VP
```

```
# In this analysis, we create agreement between  
# a verb requires an animate arg (but doesn't  
# have an 'animacy' characteristic itself)
```

```
VP -> V[dojb_animacy=?oa] NP[animacy=?oa] NP  
V[dojb_animacy=True] -> 'gifted'
```

```
NP[animacy=?a] -> NNP[animacy=?a]  
NP[animacy=?a] -> Det N[animacy=?a]  
NNP[animacy=True] -> 'Alex' | 'Ahmed'
```

```
Det -> 'a' | 'the'  
N[animacy=False] -> 'book' | 'rock'  
'''
```

