We start with the (by now familiar) grammar 2.9, which is the unambiguous version of grammar 2.4

$$\begin{aligned} T &\rightarrow R \\ T &\rightarrow \mathrm{a}T\mathrm{c} \\ R &\rightarrow \\ R &\rightarrow \mathrm{b}R \end{aligned}$$

2.9

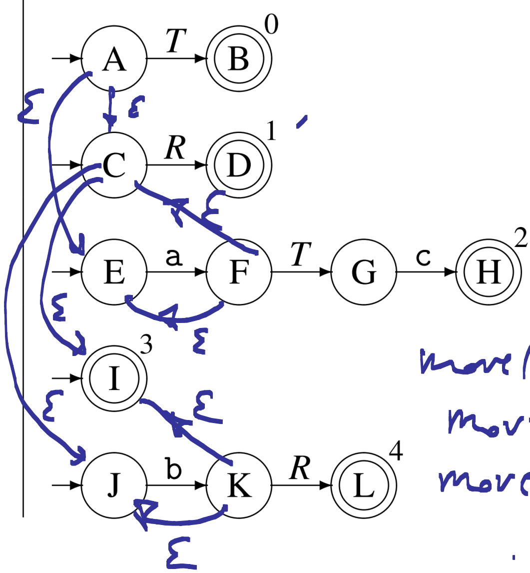
$$\begin{aligned} T &\rightarrow R \\ T &\rightarrow \mathrm{a}T\mathrm{c} \\ R &\rightarrow \\ R &\rightarrow R\mathrm{b}R \end{aligned}$$

2.4

We add a production $S' \to S$, where S is the (original) start symbol

$$
\begin{array}{llcl}
0: & T' & \longrightarrow & T \\
1: & T & \longrightarrow & R \\
2: & T & \longrightarrow & \mathtt{a}T\mathtt{c} \\
3: & R & \longrightarrow & \\
4: & R & \longrightarrow & \mathtt{b}R
\end{array}
$$

We convert each production to an NFA

Production	NFA
$T' \rightarrow T$	
$T \rightarrow R$	
$T \rightarrow \mathrm{a}T\mathrm{c}$	
$R \rightarrow$	
$R \rightarrow \mathrm{b}R$	

We combine the individual NFAs for each production with ε-transitions linking states corresponding to the same nonterminals:

move$(\underline{0}, a)$ = ε-closure({F}) = {C, E, F, $\underline{I}$, J} = $\underline{3}$

move$(\underline{0}, b)$ = {K, I, J} = [illegible]

move(3, R) = {$\underline{D}$} = $\underline{2}$

move(3, a) = $\underline{3}$

move(3, b) = $\underline{4}$

move(3, T) = {G} = 5

move(4, R) = {L} = $\underline{6}$

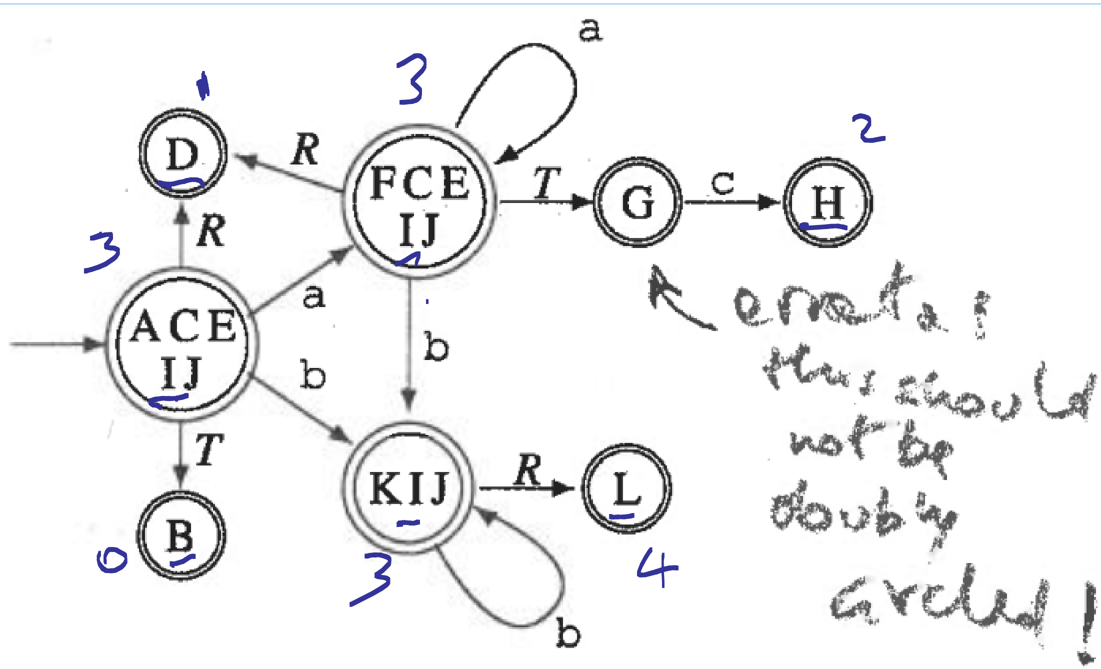
move(5, c) = {$\underline{H}$} = 7

state	epsilon-transitions
A	C, E
C	I, J
F	C, E
K	I, J

ε-closure({A}) = {A, C, E, $\underline{I}$, J} = $\underline{0}$

move$(\underline{0}, T)$ = ε-closure({B}) = {$\underline{B}$} = $\underline{1}$

move$(\underline{0}, R)$ = ε-closure({D}) = {$\underline{D}$} = $\underline{2}$



D
R
FCE IJ
a
T
G
c
H
ACE IJ
b
KIJ
L
B
errata!
this should not be doubly circled!

Fig. 2.32 [M]