

The following is the auxiliary grammar ( $G'$ ), as per Bermudez and Logothetis 1989:

### Auxiliary Grammar

$$S'_0 \rightarrow S_0 \cdot$$

$$S_0 \rightarrow A_0 a$$

$$| b A_5 c$$

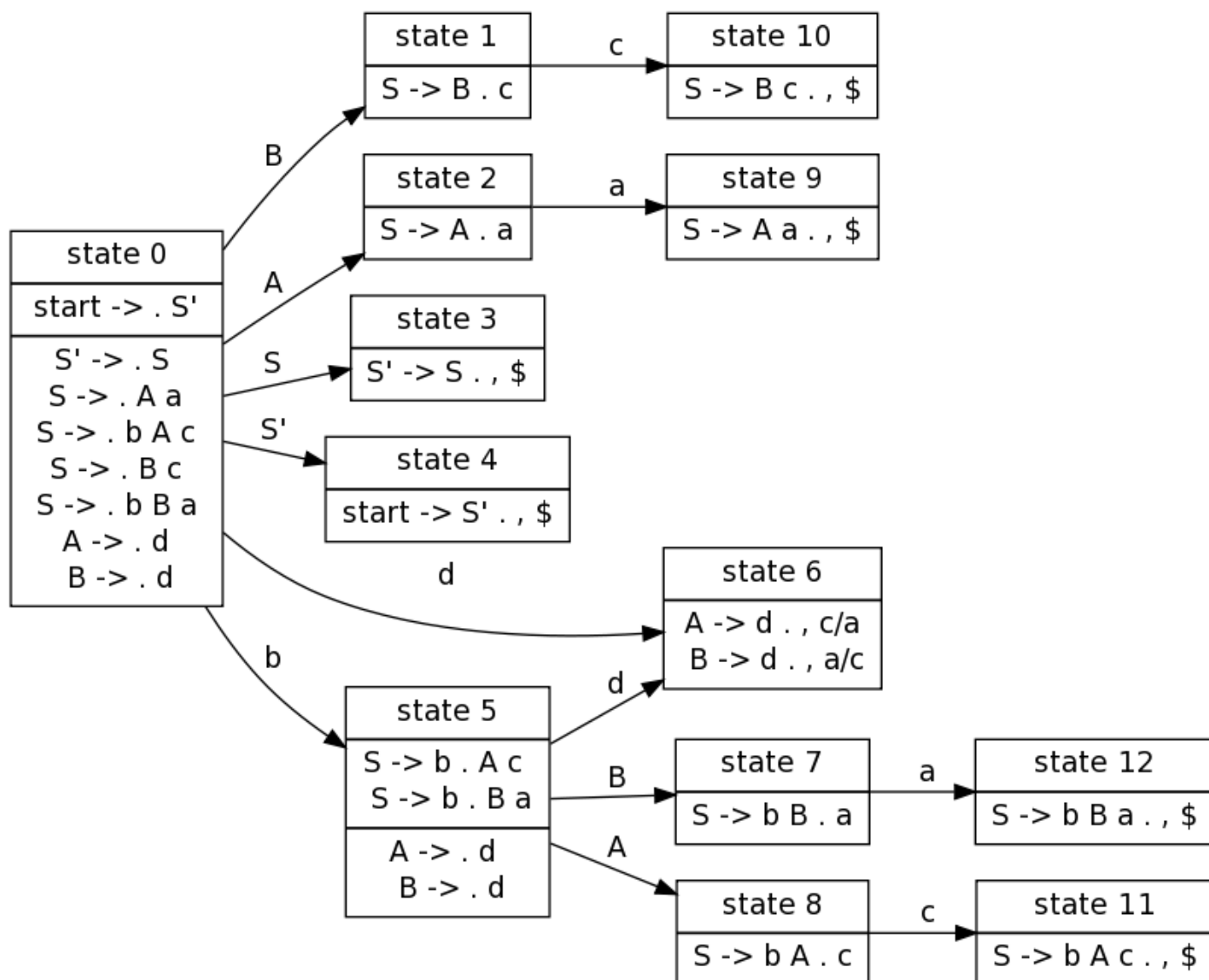
$$| B_0 c$$

$$| b B_5 a \cdot$$

$$A_0 \rightarrow d \cdot$$

$$B_0 \rightarrow d \cdot$$

$$A_5 \rightarrow d \cdot$$

$$B_5 \rightarrow d \cdot$$


### Grammar

$$S' \rightarrow S \cdot$$

$$S \rightarrow A a$$

$$| b A c$$

$$| B c$$

$$| b B a \cdot$$

$$A \rightarrow d \cdot$$

$$B \rightarrow d \cdot$$

### LALR(1) Table

	\$	d	a	b	c	S'	S	A	B
0		s6		s5		s4	s3	s2	s1
1				s10					
2			s9						
3	r(S' → S)								
4	acc								

5		s6					s8	s7
6			$r(A \rightarrow d)/r(B \rightarrow d)$		$r(A \rightarrow d)/r(B \rightarrow d)$			
7			s12					
8					s11			
9	$r(S \rightarrow A a)$							
10	$r(S \rightarrow B c)$							
11	$r(S \rightarrow b A c)$							
12	$r(S \rightarrow b B a)$							

It is not LALR(1) because:

- reduce/reduce conflict in state 6.

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