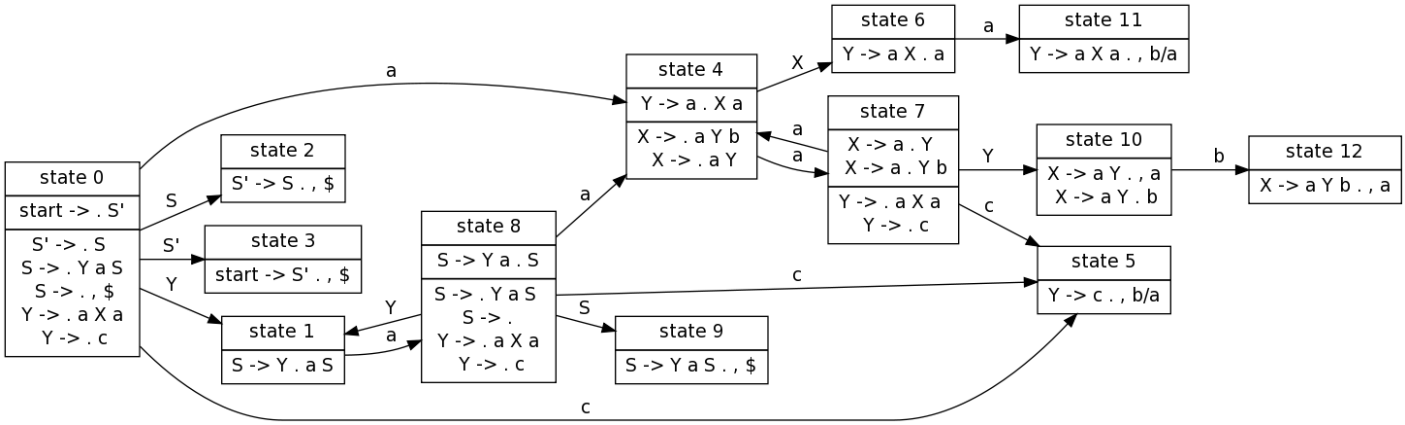
The following is the auxiliary grammar (G'), as per Bermudez and Logothetis 1989:

Auxiliary Grammar

```
S'0 →   S0 .
S0 →    Y0 a S8
      | .
Y0 →    a X4 a
      | c .
X4 →    a Y7 b
      | a Y7 .
Y7 →    a X4 a
      | c .
S8 →    Y8 a S8
      | .
Y8 →    a X4 a
      | c .
```



Grammar

```
S' →S .
S → Y a S
  | .
X → a Y b
  | a Y .
Y → a X a
  | c .
```

LALR(1) Table

	$	c	a	b	S'	S	Y	X
0	r(S → &epsilon)	s5	s4		s3	s2	s1	
1			s8					
2	r(S' → S)							
3	acc							
4			s7					s6
5			r(Y → c)	r(Y → c)				
6			s11					
7		s5	s4				s10	
8		s5	s4			s9	s1	
9	r(S → Y a S)							
10			r(X → a Y)	s12				
11			r(Y → a X a)	r(Y → a X a)				
12			r(X → a Y b)					

It is LALR(1).

Return home to enter a new grammar.