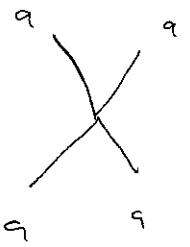
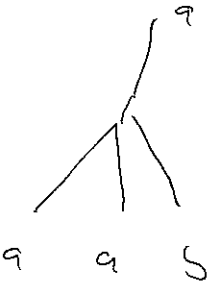
$a\,a \to a^+\,a^+$



$\Delta Q = 0$

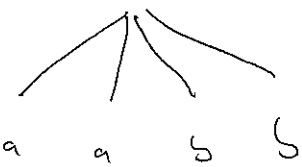
$a\,a \to a^+\,b$



$\Delta Q = -\xi_a - \xi_b$

$= -(\xi_a + \xi_b)$

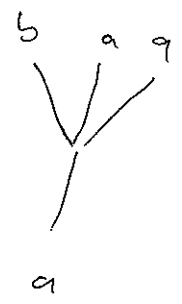
$a\,a \to b\,b$



$\Delta Q = -2\xi_a - 2\xi_B$

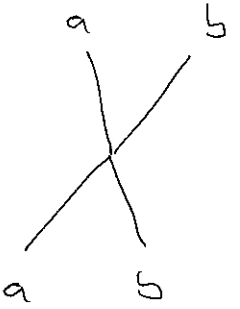
$= -2(\xi_a + \xi_B)$

$a\,b \to a^+\,a^+$



$\Delta Q = (\xi_a + \xi_B)$

$a\,b \to a^+\,b$



$\Delta Q = 0$

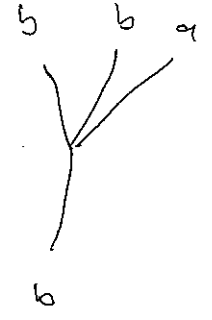
$a\,b \to b^+\,b$

$\Delta Q = -(\xi_a + \xi_B)$

$b\,b \to b^+\,a^+$

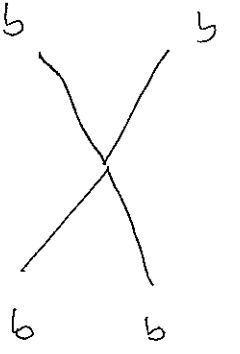
$\Delta Q = 2(\xi_a + \xi_B)$

$b\,b \to b^+\,a^+$



$\Delta Q = (\xi_a + \xi_B)$

$b\,b \to b^+\,b^+$



$\Delta Q = 0$