

$$\sigma'_{\lambda'}(V(P_b^{L+1})) = \sigma_s(V(P_a^{L+1} \setminus \{v_a^{L+1}\})) = V(K_a^{L+1}), \sigma'_{\lambda'}(V(P_a^{L+1} \setminus \{v_a^{L+1}\})) = \sigma_s(V(P_b^{L+1})) = V(K_b^{L+1}).$$