$$(\underbrace{\rho_{1,1}(1),\rho_{1,1}(2),\dots,\rho_{1,1}(k_{1,1})}_{\text{1st block}},\dots,\underbrace{\rho'_{i,j}(1)\rho'_{i,j}(2),\dots,\rho'_{i,j}(k_{i,j})}_{(a_1+\cdots+a_{i-1}+j)\text{-th block}},\dots,\underbrace{\rho'_{n,a_n}(1),\rho'_{n,a_n}(2),\dots,\rho'_{n,a_n}(k_{n,a_n})}_{(a_1+\cdots+a_n)\text{-th block}}))$$

$$(\dots,\underbrace{\rho_{1,1}(1),\rho_{1,1}(2),\dots,\rho_{1,1}(k_{1,1})}_{\tau\circ_{a_1,\dots,a_n}(\sigma_1,\sigma_2,\dots,\sigma_n)(1)\text{th block}},\dots,\underbrace{\rho'_{n,a_n}(1),\rho'_{n,a_n}(2),\dots,\rho'_{n,a_n}(k_n,a_n)}_{\tau\circ_{a_1,\dots,a_n}(\sigma_1,\sigma_2,\dots,\sigma_n)(a_1+\cdots+a_n)\text{-th block}},\dots,)$$