$$(1,2,\ldots,a_{1},\ldots,1',2',\ldots,a_{n}) \\ \downarrow^{(\tau \cdot \rho) \circ_{a_{1},\ldots,a_{n}}(\sigma_{1},\ldots,\sigma_{n})} \\ \downarrow^{\text{1st block}} \\ (\sigma_{\tau^{-1}(1)}(\rho_{\tau^{-1}(1)}(1)),\sigma_{\tau^{-1}(1)}(\rho_{\tau^{-1}(1)}(2)),\ldots,\sigma_{\tau^{-1}(1)}(\rho_{\tau^{-1}(1)}(a_{\tau^{-1}(1)})),\ldots \\ n\text{-th block} \\ \ldots,\sigma_{\tau^{-1}(n)}(\rho_{\tau^{-1}(n)}(1)),\sigma_{\tau^{-1}(n)}(\rho_{\tau^{-1}(n)}(2)),\ldots,\sigma_{\tau^{-1}(n)}(\rho_{\tau^{-1}(n)}(a_{\tau^{-1}(n)}))$$