$$\begin{array}{c}
\mathbf{U}_{f} \times (\mathbf{X}_{f} * \mathbf{X}_{g} * \mathbf{X}_{h}) & \xrightarrow{\operatorname{dyn}_{(f_{\S}^{g}(g_{\S}^{g}h))}} & (\mathbf{X}_{f} * \mathbf{X}_{g} * \mathbf{X}_{h}) \\
\operatorname{id}_{\mathbf{U}_{f}} \times (\operatorname{coh}_{(f_{\S}^{g}g)_{\S}^{g}h} \times \operatorname{id}_{(\mathbf{X}_{h})}) \uparrow & & \operatorname{coh}_{(f_{\S}^{g}g)_{\S}^{g}h} \\
\mathbf{U}_{f} \times ((\mathbf{X}_{f} * \mathbf{X}_{g}) \times (\mathbf{X}_{h})) & (\mathbf{X}_{f} * \mathbf{X}_{g}) \times (\mathbf{X}_{h}) \\
\operatorname{id}_{\mathbf{U}_{f}} \times (\operatorname{coh}_{f_{\S}^{g}g} \times \operatorname{id}_{(\mathbf{X}_{h})}) \uparrow & & \operatorname{coh}_{f_{\S}^{g}g} \times \operatorname{id}_{(\mathbf{X}_{h})} \\
\mathbf{U}_{f} \times (((\mathbf{X}_{f}) \times (\mathbf{X}_{g})) \times (\mathbf{X}_{h})) & \xrightarrow{\mathbf{dyn}_{(f_{\S}^{g}g)_{\S}^{g}h}} ((\mathbf{X}_{f}) \times (\mathbf{X}_{g})) \times (\mathbf{X}_{h})
\end{array}$$