

$$\begin{array}{ccc}
\mathbf{U}_f \times S(\mathbf{X}_f * \mathbf{X}_g * \mathbf{X}_h) & \xrightarrow{\text{dyn}_{f \circ (g \circ h)}} & S(\mathbf{X}_f * \mathbf{X}_g * \mathbf{X}_h) \\
\text{Id}_{\mathbf{U}_f} \times \text{coh}_{f \circ (g \circ h)} \uparrow & & \uparrow \text{coh}_{f \circ (g \circ h)} \\
\mathbf{U}_f \times (S(\mathbf{X}_f) \times S(\mathbf{X}_g * \mathbf{X}_h)) & \xrightarrow{\text{dyn}'_{f \circ (g \circ h)}} & S(\mathbf{X}_f) \times S(\mathbf{X}_g * \mathbf{X}_h) \\
\text{Id}_{\mathbf{U}_f} \times (\text{Id}_{S(\mathbf{X}_f)} \times \text{coh}_{g \circ h}) \uparrow & & \uparrow \text{Id}_{S(\mathbf{X}_f)} \times \text{coh}_{g \circ h} \\
\mathbf{U}_f \times (S(\mathbf{X}_f) \times (S(\mathbf{X}_g) \times S(\mathbf{X}_h))) & \xrightarrow{\text{dyn}''_{f \circ (g \circ h)}} & S(\mathbf{X}_f) \times (S(\mathbf{X}_g) \times S(\mathbf{X}_h))
\end{array}$$