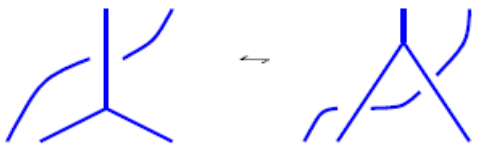
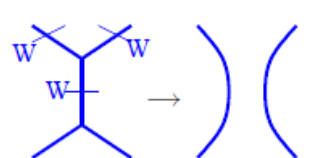


From <http://www.math.toronto.edu/~drorbn/Talks/Strasbourg-1109/>:


Theorem. There exists a homomorphic expansion Z for wTT. In particular, Z respects $R4$ and intertwines annulus and disk unzips:




$V \cdot (\Delta \otimes 1)(R) = R^{13} R^{23} V$ in $\mathcal{A}^w(\uparrow_3)$



$VV^* = I$ in $\mathcal{A}^w(\uparrow_2)$

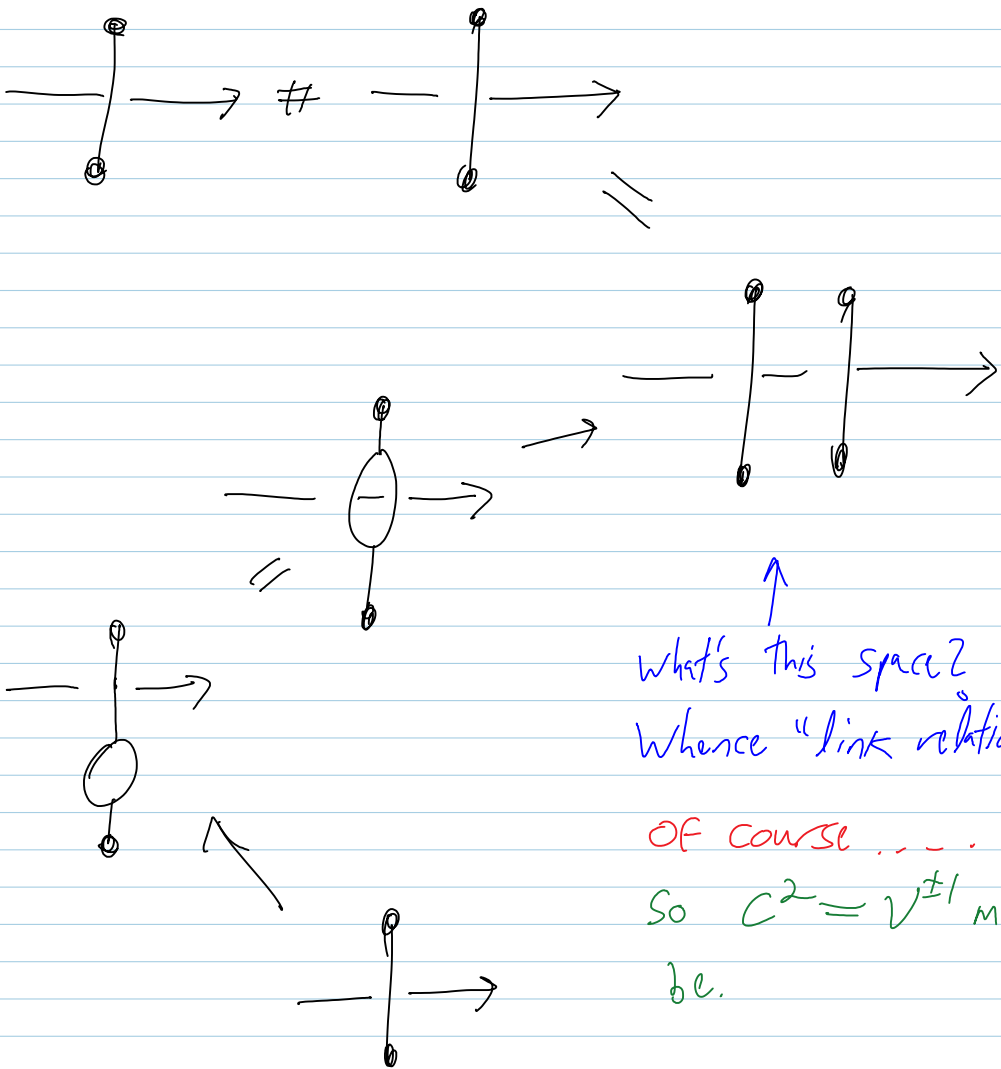


$V \cdot \Delta(\omega) = \omega \otimes \omega$ in $\mathcal{A}^w(\uparrow_2)$



Kashiwara-Vergne-Alekseev-Enriquez-Torrosian

\Rightarrow



Note: the lower strand may well be punctured.