Theta

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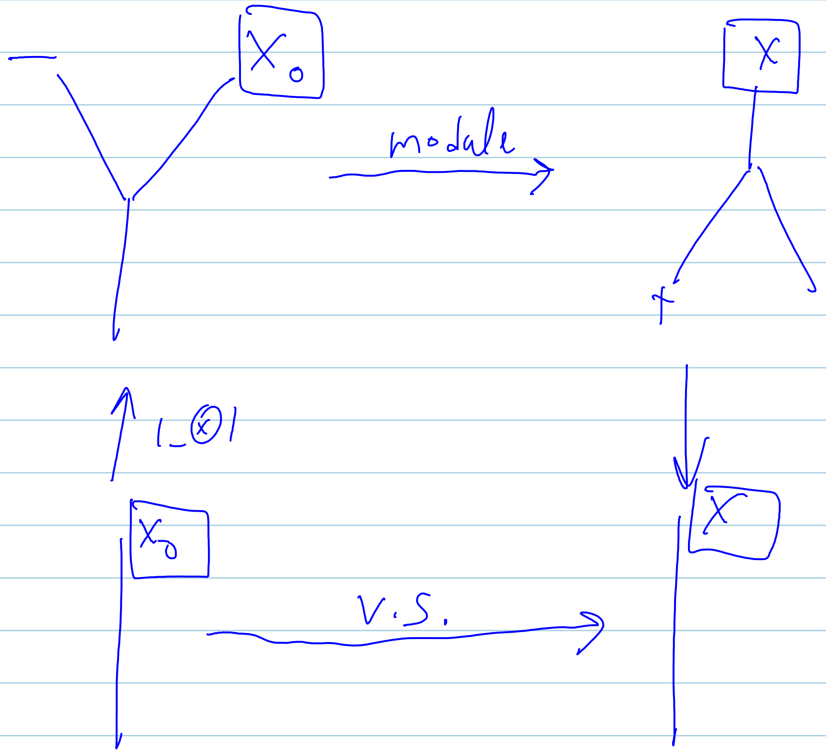
8:26 AM

Also look at Etingof-Schiffmann page 192/104 +.

For any object $X \in \mathcal{M}^{\mathfrak{a}_+}_{\mathfrak{a}_+}$, define the map θ : $\mathrm{Hom}_{\mathcal{M}^{\mathfrak{a}_+}_{\mathfrak{a}_+}}(M_- \otimes X_0, M_+^* \otimes X) \to \mathrm{Hom}_{\mathcal{C}}(X_0, X)$ by $\theta(f) = (1_+ \otimes 1_X) \circ f \circ (1_- \otimes 1_{X_0})$.

Lemma 1.3. *The map θ is an isomorphism.*

Proof. By Frobenius reciprocity, for any two dimodules X, Y over $\mathfrak{a}_+$, $\mathrm{Hom}_{\mathcal{M}^{\mathfrak{a}_+}_{\mathfrak{a}_+}}(M_- \otimes X, M_+^* \otimes Y) = \mathrm{Hom}_{\mathcal{M}^{\mathfrak{a}_+}}(X, M_+^* \otimes Y) = \mathrm{Hom}_{\mathcal{C}}(X, Y)$. This implies the Lemma.



I need a QRG to remind me what are $M_\pm$, $M_\pm^*$

In W:

What's X_0 ??