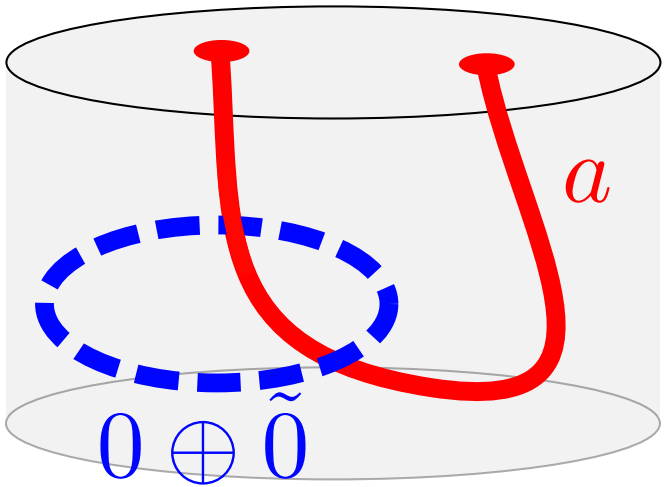
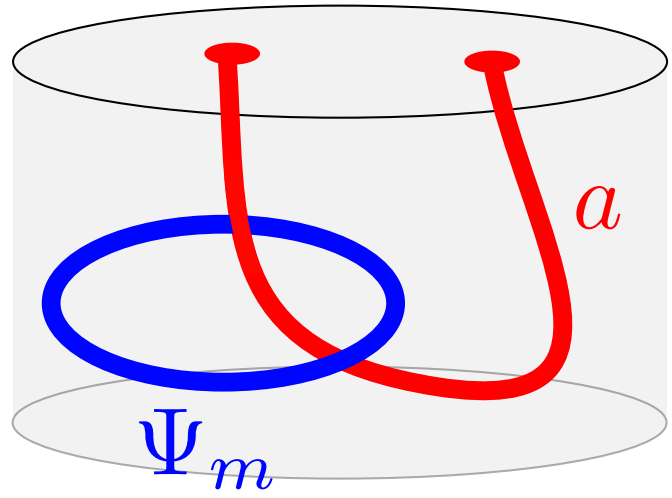
$$(|0\rangle_c + |1\rangle_c)\,|$$  $$\rangle \rightarrow$$

$$|0\rangle_c\,|$$ 

$$\rangle + |1\rangle_c\,|$$ 

$$\rangle =$$

$$(|0\rangle_c + \tilde{S}(a, \Psi_m)\,|1\rangle_c)|$$  $$\rangle$$