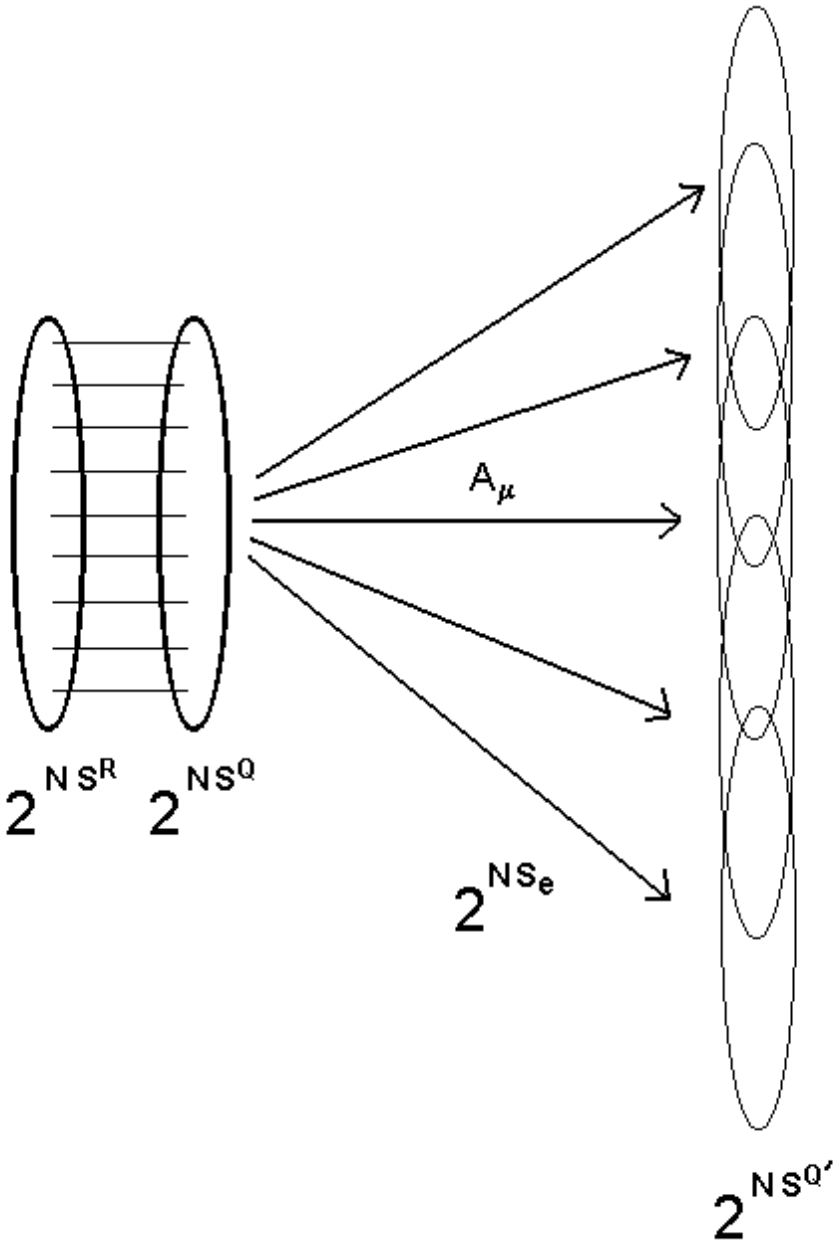

Graphical interpretation of Lloyd's argument

N copies of RQ (each in state $|\Psi^{RQ}\rangle$)

dim (input typical subspace) $\approx 2^{NS^Q}$

effective number of terms in operator sum representation $\approx 2^{NS_e}$

dim (output typical space) $\approx 2^{NS^{Q'}}$

N.B. -- "Images" of input in the space of the output probably "overlap" so that they cannot be distinguished