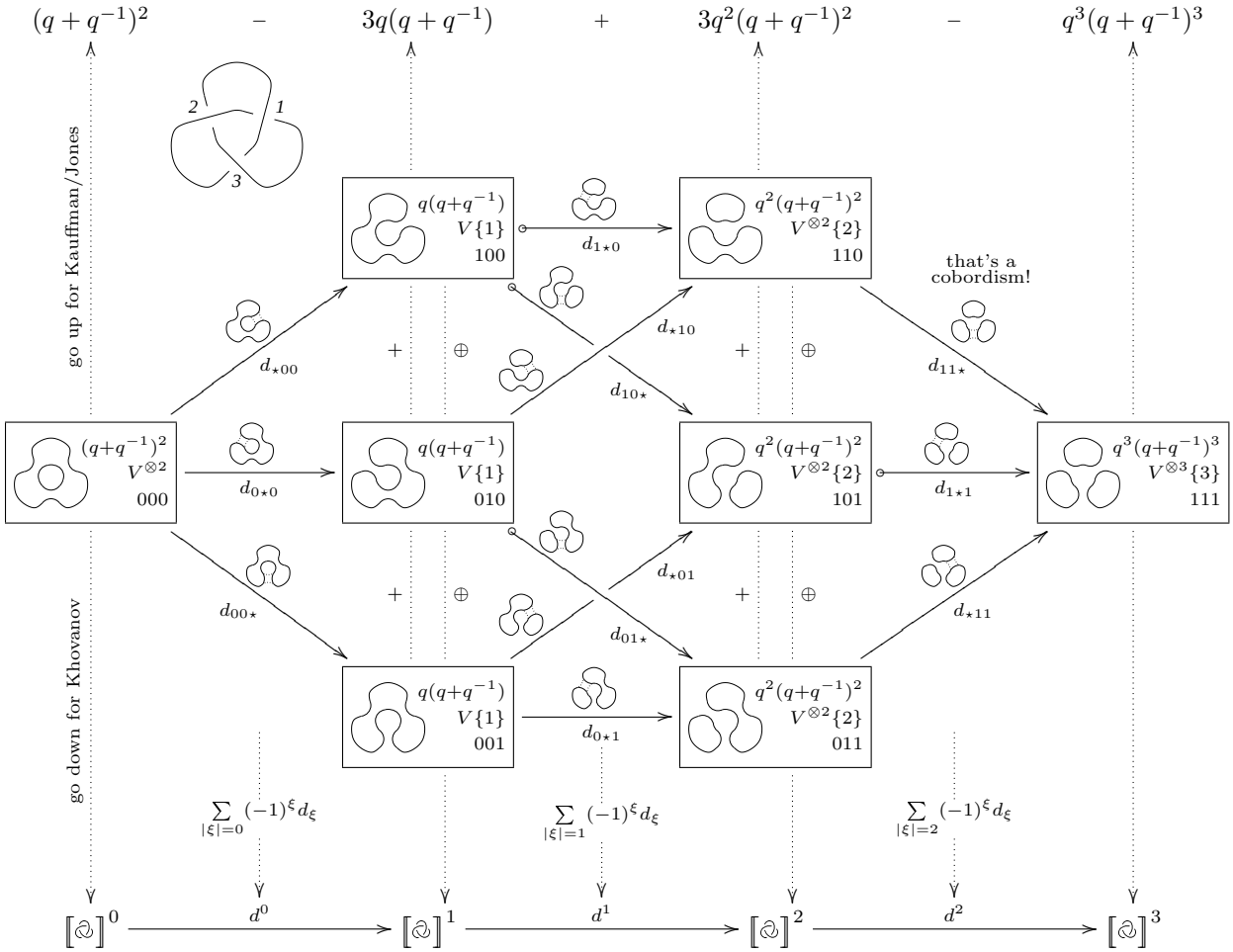
$(q+q^{-1})^2$ − $3q(q+q^{-1})$ + $3q^2(q+q^{-1})^2$ − $q^3(q+q^{-1})^3$
go up for Kauffman/Jones
2
1
3
$q(q+q^{-1})$ $V\{1\}$ 100
$q^2(q+q^{-1})^2$ $V^{\otimes 2}\{2\}$ 110
that's a cobordism!
$d_{1\star 0}$
$d_{\star 00}$
$d_{\star 10}$
$d_{10\star}$
$d_{11\star}$
$(q+q^{-1})^2$ $V^{\otimes 2}$ 000
$q(q+q^{-1})$ $V\{1\}$ 010
$q^2(q+q^{-1})^2$ $V^{\otimes 2}\{2\}$ 101
$q^3(q+q^{-1})^3$ $V^{\otimes 3}\{3\}$ 111
$d_{0\star 0}$
$d_{1\star 1}$
$d_{00\star}$
$d_{\star 01}$
$d_{01\star}$
$d_{\star 11}$
$q(q+q^{-1})$ $V\{1\}$ 001
$q^2(q+q^{-1})^2$ $V^{\otimes 2}\{2\}$ 011
$d_{0\star 1}$
go down for Khovanov
$\sum_{|\xi|=0}(-1)^\xi d_\xi$
$\sum_{|\xi|=1}(-1)^\xi d_\xi$
$\sum_{|\xi|=2}(-1)^\xi d_\xi$
$[\![\circlearrowleft]\!]^0$ d^0 $[\![\circlearrowleft]\!]^1$ d^1 $[\![\circlearrowleft]\!]^2$ d^2 $[\![\circlearrowleft]\!]^3$