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Title: On E_0 -semigroups induced by completely positive maps on $M_n(C)$.

Abstract: We obtain new examples of Type *II* E_0 -semigroups of $B(K \otimes L^2(0, \infty))$ using q -pure maps $\phi : B(K) \rightarrow B(K)$, where K is a finite-dimensional Hilbert space. A linear map ϕ is said to be q -positive ($\phi \geq_q 0$) if $\phi(I + t\phi)^{-1}$ is completely positive for all $t \geq 0$, and is q -pure if it satisfies the further condition that $\phi \geq_q \psi \geq_q 0$ if and only if $\psi = \phi(I + t_0\phi)^{-1}$ for some $t_0 \geq 0$. Given a unital q -pure map ϕ acting on $B(K)$, we naturally define a boundary weight ω on $B(K \otimes L^2(0, \infty))$, inducing a *CP*-flow over K which dilates to an E_0 -semigroup. We determine when two unital q -pure maps ϕ_1 and ϕ_2 acting on $B(K_1)$ and $B(K_2)$ induce cocycle conjugate E_0 -semigroups, and we discuss current results.