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**Stefan Richter\*** ([Richter@math.utk.edu](mailto:Richter@math.utk.edu)), The University of Tennessee, Department of Mathematics, Knoxville, TN 37996-0614. *Boundary behavior and invariant subspaces in spaces of analytic functions.*

Let  $H^2$  denote the Hardy space of the unit disc. The classical theorem of Beurling relates the function theory of the functions in  $H^2$  to the operator theory of the unilateral shift. Much of the success of the  $H^2$  theory is due to the fact that functions in the Hardy space have boundary values on the unit circle. For spaces that are larger than  $H^2$  such as the Bergman space it turns out that the existence of functions without nontangential limits has direct consequences for the operator theory of the corresponding shift operators.

In this talk I will make the statements of the above paragraph precise and I will also have a look at the corresponding situation for the unit ball or polydisc in  $\mathbb{C}^n$ . (Received September 13, 2010)