

## Generalized Hilbert operators

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If  $g$  is an analytic function in the unit disc  $D$ , we consider the generalized Hilbert operator  $H_g$  defined by

$$H_g(f)(z) = \int_0^1 f(t)g'(tz) dt.$$

We study these operators acting on classical spaces of analytic functions in the unit disc. More precisely, we address the question of characterizing the function  $g$  for which the operator  $H_g$  is bounded (compact) on the Hardy spaces  $H^p$ , the weighted Bergman spaces  $A_\alpha^p$  or on the spaces of Dirichlet type  $D_\alpha^p$ .