

**Abstract.** Let  $H$  denote a complex Hilbert space and  $B(H)$  denote the algebra of all bounded linear operators on  $H$ . In this paper, we study the class of pairs of operators  $A, B \in B(H)$  that have the following property:  $AT = TB$  implies  $B^*T = TA^*$  for all  $T \in C_1(H)$  (trace class operators). The main result is the equivalence between this character and the fact that the ultraweak closure of the range of a generalized derivation is closed under taking adjoints which is also equivalent to the generalized D-symmetric operators.