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**Alexander A Katz\*** ([katza@stjohns.edu](mailto:katza@stjohns.edu)), St. John's University, Dep. of Math & CS, 300 Howard Ave., DaSilva Hall 335, Staten Island, NY 10301. *On generalization of real  $W^*$ -algebras.*

Using the theory of double centralizers due to Johnson, we obtain real analogues of Reid's results by defining a real  $QW^*$ -algebra as being a real  $C^*$ -algebra, such that the algebra of double centralizers of each closed real  $*$ -subalgebra is contained in a suitable related closed real  $*$ -subalgebra. We show that in general non-abelian case each real  $W^*$ -algebra is a real  $QW^*$ -algebra, and a real  $QW^*$ -algebra is a real  $AW^*$ -algebra (a Baer real  $C^*$ -algebra), while in the abelian case the real  $QW^*$ -algebras and real  $AW^*$ -algebras are the same objects. We as well show that if  $A$  is a real  $QW^*$ -algebra, then so are its center, any maximal abelian  $*$ -subalgebra, and any subalgebra of the form  $eAe$  for  $e$  a projection in  $A$ . (Received August 07, 2005)