State operators on monotone basic algebras

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Basic algebras form a large class which contains certain classes of algebras of many valued and quantum logics. For example, MV-algebras, orthomodular lattices and lattice effect algebras can be viewed as particular cases of basic algebras.

States on basic algebras, which are mappings into the real interval [0,1], constitute analogues of measures on basic algebras. State operators (or internal states) on basic algebras are unary operations satisfying some properties of states.

We study state operators on monotone basic algebras and, moreover, we give connections between states and state operators on them.