

ON POSITIVE OPERATORS WITHOUT INVARIANT SUBLATTICES

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Abstract: It is still not known as of today whether a positive operator on an infinite-dimensional Banach lattice has a non-trivial, closed invariant subspace. This led some researchers to distinguish, using their natural order structure, among different types of subspaces of Banach lattices. To this circumstance, A.K. Kitover and A.W. Wickstead have constructed in 2007 examples of positive operators on the discrete Banach lattices c_0 , c , and ℓ_p ($1 \leq p < \infty$) without non-trivial closed invariant sublattices. The purpose of this talk is to slightly modify some of the examples given by Kitover and Wickstead and obtain further examples of positive operators without non-trivial, closed invariant sublattices. We will also show, via an example again, that our approach of taking a multiple of one of the shift operators does not work for both shifts.

This is joint work with Uğur Gönüllü and Tunç Mısırlıoğlu.