Review of: "The Change of Basis Groupoid"

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Potential competing interests: No potential competing interests to declare.

The note on the change of basis in finite dimensional vector spaces is an attempt to put an algebraic structure on the the set of matrices implementing changes of variable. Some (rather strong) assumptions are are required, like the vector space being ordered (though it is not clear if whether the order should be compatible with the algebraic structure) and the basis is totally ordered. Also, Definition 4 is rather odd, and not clear why it should be true or could be assumed at the first place (it seems that two completely different pairs of bases could happen to have the same change of basis matrices). Finally, the groupoid--as it is presented here--seems to depend only on the pairs of indices of matrices and simply is noting but a full equivalnce relation groupoid (am I missing something?).