



An Addendum to “Hypergroup deformations of semigroups”

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Unfortunately, in [2] we overlooked a fundamental class of examples studied by Michael Voit ([3], Sections 5 and 6), which are also generalizations of the class of Dunkl-Ramirez discrete hypergroups [1], and their duals are also almost discrete, i.e., one-point compactifications of discrete countably infinite spaces. These examples are clearly (hermitian) hypergroup deformations of the semigroup $(\mathbb{Z}_+, <, \max)$.

Voit studied his class of examples to illustrate factorization of probability measures on certain symmetric, i.e., hermitian hypergroups. In [2], we arrived at the class via necessary conditions for a hypergroup deformation $(S, *)$ of an infinite “max” semigroup $(S, <, \cdot)$ with identity, the first necessary condition being that $(S, <, \cdot)$ is isomorphic to $(\mathbb{Z}_+, <, \max)$. The sufficiency had a simple computational proof. Of course, it should have been attributed to Voit [3], had we been aware of this class of examples. As is clear from our Theorem 3.2, general discussion after Remark 3 and Corollary 3.3, the two classes, viz., Voit’s class and the (hermitian) hypergroup deformations of $(\mathbb{Z}_+, <, \max)$, coincide. Because Voit discusses the dual \widehat{K} of any such hypergroup K , the detailed proofs in Sect. 3.3 should have been avoided.

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