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Corrigendum

Volume 45, Number 2, in the article "Invariant Subspaces and Cocycles in Nonselfadjoint Crossed Products" by Kichi-Suke Saito, pp. 177–193:

Since publication we have discovered some errors in Section 3. Propositions 3.6, 3.9, and 3.10, and Theorems 3.7 and 3.8 are incorrect, because the invariant subspace structure is more complicated than described there. Fortunately, these errors do not affect the subsequent sections.

Let $\mathfrak{M}$ be a left-pure, left-invariant subspace of L^2, and let P, $P_{(+)}$, and $P_{(-)}$ be projections of L^2 onto $\mathfrak{M}$, $\mathfrak{M}_{(+)}$, and $\mathfrak{M}_{(-)}$, respectively. Then there exist mutually orthogonal projections q_1 and q_2 in L^∞ such that $\mathfrak{M} = R_{q_1}\mathfrak{M} \oplus R_{q_2}\mathfrak{M} \oplus R_{1-q_1-q_2}\mathfrak{M}$, $R_{q_1}\mathfrak{M} = \sum_{\gamma\in\Gamma} \oplus L_\gamma(P - P_{(-)})L^2$, $R_{q_2}\mathfrak{M} = \sum_{\gamma\in\Gamma_{+0}} \oplus L_\gamma(P_{(+)} - P)L^2$ and $(R_{1-q_1-q_2}\mathfrak{M})_{(+)} = (R_{1-q_1-q_2}\mathfrak{M})_{(-)} = R_{1-q_1-q_2}\mathfrak{M}$. Thus, Theorem 3.7 is true if $\mathfrak{M}_i$ is a left-pure, left-invariant subspace of L^2 such that $\mathfrak{M}_i = \sum_{\gamma\in\Gamma_+} \oplus L_\gamma(\mathfrak{M}_i \ominus (\mathfrak{M}_i)_{(-)})$.

Next we suppose that $\{\alpha_\gamma\}_{\gamma\in\Gamma}$ fixes the center $\mathfrak{Z}(M)$ of M elementwise for every $\gamma \in \Gamma$. If $\mathfrak{M}$ is a left-pure, left-invariant subspace such that $\mathfrak{M} = R_{q_1}\mathfrak{M}$, then Theorem 3.8 is valid. And, if $\mathfrak{M}$ satisfies $\mathfrak{M} = R_{q_2}\mathfrak{M}$, then Proposition 3.10 is true. However, Proposition 3.9 is not valid if $\mathfrak{M} = R_{1-q_1-q_2}\mathfrak{M}$, because $\mathfrak{M} = (\mathfrak{M})_{(+)} = \mathfrak{M}_{(-)}$.

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