Erratum

Erratum to: Nonlinear maximal monotone extensions of symmetric operators

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As pointed out to the author by Sascha Trostorff, the maximal monotone relation $\Theta = \{0\} \times \mathfrak{h}$ satisfies the hypotheses in Lemma 3.3 despite $M_\lambda^\Theta = \Theta + (\lambda - \lambda_\circ) G_\circ^* G_\lambda$ violates condition (3.4). Such an example shows that the latter has not been written correctly; the right formulation is:

$$\mathcal{D}(M_\lambda) \text{ is } \lambda\text{-independent and } M_\lambda = M_\mu + (\lambda - \mu) G_\mu^* G_\lambda. \quad (3.4)$$

This requires to slightly modify the second part of the proof of Lemma 3.1 as follows:

By (3.4), one has

$$\forall \lambda, \mu \in Z, \forall \xi \in \mathfrak{h}, \quad M_\lambda^{-1}(\xi) = M_\mu^{-1}(\xi + (\mu - \lambda) G_\mu^* G_\lambda M_\lambda^{-1}(\xi))$$

and so, by (3.2),

$$\begin{aligned} & R_\mu \circ (1 - (\lambda - \mu) R_\lambda) \\ &= R_\mu^\circ (1 - (\lambda - \mu) R_\lambda^\circ) - (\lambda - \mu) R_\mu^\circ G_\lambda M_\lambda^{-1} \circ G_\lambda^* \\ &\quad + G_\mu M_\mu^{-1} \circ (G_\mu^* - (\lambda - \mu)(G_\mu^* R_\lambda^\circ + G_\mu^* G_\lambda M_\lambda^{-1} \circ G_\lambda^*)) \\ &= R_\lambda^\circ - (G_\mu - G_\lambda) M_\lambda^{-1} \circ G_\lambda^* + G_\mu M_\mu^{-1} \circ (1 + (\mu - \lambda) G_\mu^* G_\lambda M_\lambda^{-1}) \circ G_\lambda^* \\ &= R_\lambda^\circ + G_\lambda M_\lambda^{-1} \circ G_\lambda^* = R_\lambda. \end{aligned}$$

□

Lemma 3.3 as well as all the other results remain unchanged.

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