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ERRATUM to the paper

Some Remarks on the Hildebrandt-Graves Theorem

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As was pointed out to us by Professor Gunther Reiszig from the University of Dresden (Germany) by means of a simple counterexample, the main result (Theorem 2) in our paper [1] is not correct. The theorem is true, however, if the assumption (a) is replaced by the stronger assumption

(a) $\Phi(\lambda_0, x_0) = 0$, the operator $\Phi(\cdot, x_0)$ is continuous at λ_0, and the operator $\Phi(\lambda, \cdot)$ is demi-continuous on $X \setminus X^0$ as an operator from X into Y.

Here by the demi-continuity of an operator $\Psi : X \to Y$ we mean, as usual, that Ψ maps any strongly convergent sequence in X into a weakly convergent sequence in Y. The proof remains almost unchanged. The Lipschitz condition

$$\|T(\lambda, x_1) - T(\lambda, x_2)\| \le k\|x_1 - x_2\| \quad \big(\|x_1 - x_0\|, \|x_2 - x_0\| \le r;\ \rho(\lambda, \lambda_0) \le \delta\big)$$

(with any Lipschitz constant $k \in (0,1)$) is proved first on the intersection of X^0 with a ball $B(x_0, r) \subseteq X$ of sufficiently small radius $r > 0$, and afterwards on the whole ball $B(x_0, r)$; the latter is possible since X^0 is dense in X and $\Phi(\lambda, \cdot)$ is demicontinuous from X into Y. The remaining part of the proof goes through as it is.

The authors express their deep gratitude to Professor Reiszig for having read our article so carefully and having brought to our attention the gap in the proof.

References

[1] Vignoli, A. and P. P. Zabrejko: *Some remarks on the Hildebrandt-Graves theorem.* Z. Anal. Anw. 14 (1995), 89 - 93.

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