Correction to the paper "Prime and Principal Ideals in the Algebra N^+ "

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By

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It has been pointed out to us by M. V. Renteln that our reference to I. I. Privalow [II, Theorem 8.7, Randeigenschaften analytischer Funktionen, Berlin 1956] is not applicable in the proof of Proposition 2 on p. 389. There it was used to conclude that if φ is a holomorphic mapping of the unit disc U into itself, then $f(\varphi(z))$ is in N^+ for every f in N^+ . Privalow used the stronger assumption that φ is a conformal map of U onto U .

The result however is true and follows from the following characterization of N^+ : $f \in N^+$ if and only if $f: U \rightarrow \mathbb{C}$ is holomorphic and $\psi(\log^+ |f|) \leq F$ on U for some nonnegative harmonic function F on U and some nonnegative strongly convex function ψ on $\mathbb{R}$. This characterization of N^+ is a consequence of Theorems 3.1.2 and 3.3.5 of [1]. Consequently, since $F \circ \varphi$ is harmonic if $\varphi: U \rightarrow U$ is holomorphic, $f \circ \varphi \in N^+$ whenever $f \in N^+$.

Reference

[1] W. RUDIN, Function Theory in Polydiscs. New York 1969.

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