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ERRATUM TO "A GENERALIZATION OF THE RUDIN-CARLESON THEOREM"

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Professor R. B. Burckel of Kansas State University called my attention to the fact that the proof in [1, p. 342] of the statement:

"We claim that there exists a continuous function $p: X \to (0, \infty)$ such that

$$|a_0(x)| < p(x) \leqslant \phi(x) + \varepsilon' \quad \text{for all } x \in F,$$

and such that

$$p(x) \leqslant \phi(x) + \varepsilon' \quad \text{for all } x \in X."$$

is not valid in full generality. However, the statement itself holds in the general form. A proof is in [2]. Since that proof is quite cumbersome, it should be of interest to show how the proof in [1] can easily be repaired. This modified proof is valid also in the case when F is not a G_δ-set.

Replace the paragraph on p. 342 of [1] from line 14 from bottom to line 5 from bottom by the following:

"We define an upper semicontinuous function $\bar{\phi}$ on X by

$$\bar{\phi}(x) = \begin{cases} |a_0(x)| & \text{for } x \in F, \\ 0 & \text{for } x \in X \setminus F. \end{cases}$$

Then the inequality $\bar{\phi}(x) < \phi(x) + \varepsilon'$ holds for all $x \in X$. Since X is paracompact, it follows from [3, Theorem 4.3, Chapter VIII] that there exists a continuous function p: $X \to \mathbf{R}$ such that $\bar{\phi}(x) < p(x) < \phi(x) + \varepsilon'$ for all $x \in X$. This implies that $0 < p(x) \leqslant \phi(x) + \varepsilon'$, for all $x \in X$ and furthermore that $|a_0(x)| < p(x)$ for all $x \in F$."

REFERENCES

1. P. Hag, *A generalization of the Rudin-Carleson theorem*, Proc. Amer. Math. Soc. **43** (1974), 341–344. MR **49** #3519.

2. ———, *Restrictions of convex subsets of* $C(X)$, Ph.D. dissertation, Univ. of Michigan, Ann Arbor, Mich., 1972.

3. J. Dugundji, *Topology*, Allyn and Bacon, Boston, 1966. MR **33** #1824.

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