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ERRATUM TO "THE TOPOLOGICAL COMPLEMENTATION THEOREM À LA ZORN"

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There is a gap in the proof of [1]. In the notation of that paper if M is open in $M' = M \cup \{q\}$ and $p \in B_s(a)$ for some $a \in X$, then $p \in B_{s'}(a) = B_s(a)$, but $B_{s'}(p) = B_s(p) \cup \{q\} \not\subset B_{s'}(a)$ so $B_{s'}(p)$ is not well defined. Consequently, we cannot conclude that $M = Y$. Strengthening the hypothesis by assuming, in addition, that for each member $(A,s) \in \mathcal{Q}$, A contains a (fixed) maximal T_0 subspace would eliminate the problem. This would yield the result of Gaifman (Steiner) that if every T_0 topology has a (principal) complement, then every topology has a (principal) complement.

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References

1. P. S. Schnare, *The topological theorem à la Zorn*, Proc. Amer. Math. Soc. **35** (1972), 285–286.

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