

Errata to “Lindelöf indestructibility, topological games and selection principles”

(Fund. Math. 210 (2010), 1–46)

by

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Abstract. In [Fund. Math. 210 (2010), 1–46] we claimed the truth of two statements, one now known to be false and a second lacking a proof. In this “Errata” we report these matters in the interest of setting the record straight on the status of these claims.

In Theorem 40 of [4] we claimed that if a space has a strong form of the Hurewicz property, then in the generic extension by uncountably many Cohen reals that ground model space still has the Hurewicz property. This is false. For the theorem would imply that any ground-model Sierpiński set would in the generic extension still be a Hurewicz space. Sierpiński sets are Hurewicz spaces but do not have the Rothberger property $S_1(\mathcal{O}, \mathcal{O})$. In Theorem 5.2 of [1] the authors prove that the Hurewicz property of a ground model space is preserved in a generic extension by Cohen reals, if, and only if, the ground model space also has the Rothberger property. A discussion of the error in the argument in Theorem 40 of [4] can be found on page 11 of [1]. As a consequence also the statement of [4, Corollary 41] is false. The statement of Corollary 48, the proof of which is incorrect through a use of the false Theorem 40, *is true*. A correct proof is given in Theorem 6.5 of [1].

In the discussion in [4] of Example 2, Moore’s L-space, we claimed without proof that the square of Moore’s space is no longer Lindelöf. To our knowledge it is still not known if the example in [2] has non-Lindelöf square. Tsaban and Zdomsky [5] have proven (Theorem 3.4) that some finite power of Moore’s L-space is no longer a Lindelöf space. In [3], Peng adjusts Moore’s construction to obtain a Rothberger example of an L-space with non-Lindelöf square.

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References

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