ON CHARACTERIZING INJECTIVE SHEAVES: CORRIGENDUM

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B. Banaschewski [1] has produced a counterexample to [2, Theorem 6]. As noted in [1, Remark 1], our error occurs in the final paragraph of the purported proof of [2, Theorem 6], for P need not be a subpresheaf of I. Accordingly, it remains an open problem to find an analogue of [2, Proposition 1] in the context of Boolean spaces. We hope that attacks on this problem will be facilitated by the (valid) initial three paragraphs of the argument given for [2, Theorem 6].

The following alterations to [2] are in order. Example 5, being a corollary of Theorem 6, remains doubtful, although the special case noted on pp. 1034–1035 is not affected. In Corollary 7, the assertion that j preserves injectives remains doubtful, although the proof for divisibility of j(M)(G) is valid. In Remark 8, the assertions in (a) and (b) are unaffected, although the reference to Theorem 6 in (a) should be deleted. Finally, the doubtful status of Corollary 7 affects only the existence of the spectral sequence in the first paragraph of Remark 8 (c); by considering sequences of stalks instead of the doubtful spectral sequence, we have indeed proved for a finite group G that j is exact if and only if G is trivial. The conjecture stated at the end of [2] remains open.

References

- 1. B. Banaschewski, Injective sheaves of abelian groups: a counterexample, Can. J. Math., to appear.
- David E. Dobbs, On characterizing injective sheaves, Can. J. Math. 29 (1977), 1031– 1039.

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