

n -CYCLIC ELEMENTS: CORRECTION

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In the article [3], Theorem 4.9 and the remarks immediately preceding it should be deleted. A counter example, outlined below, was communicated to me by Eldon Dyer. The proof of the theorem depended on the remarks which in turn were based on a generalization of a theorem of Hurewicz [2; 83, Theorem VI-4]. My proof of this generalization was at fault.

The statement of and counterexample to Theorem 4.9 are as follows:

STATEMENT. *Let $\text{ind } X < \infty$. Then $\text{ind } X \leq (\text{cd } X) + 2$.*

COUNTEREXAMPLE. (Dyer). *Let $X = P_2$, the Pontrjagin space of order 2 (See [1]); let $Z_2 = \text{integers mod } 2$, and let $Q = \text{rationals}$. Then $\text{ind } X = \text{cov } X = \text{cd } (X; Z_2) = 2$ and $\text{cd } (X; Q) = 1$. Since $\text{cd } (X \times Y; F) = \text{cd } (X; F) + \text{cd } (Y; F)$ for compact Hausdorff X and Y and F a field, we have $\text{cd } (X^n, Z_2) = 2n$ and $\text{cd } (X^n; Q) = n$. But $\text{ind } X^n = \text{cov } X^n \leq 2n$ and $\text{cd } (X^n; Z_2) \leq \text{cov } X^n$. Therefore $\text{cd } (X^n; Q) + n = \text{ind } X^n$.*

REFERENCES

1. K. BORSUK, *Concerning the Cartesian product of Cantor-manifolds*, *Fundamenta Mathematicae*, vol. 38(1951), pp. 55-72.
2. W. HUREWICZ AND H. WALLMAN, *Dimension Theory*, Princeton, 1948.
3. A. B. SIMON, *n-cyclic elements*, this Journal, vol. 24(1957), pp. 1-7.

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