PROCEEDINGS OF THE
AMERICAN MATHEMATICAL SOCIETY
Volume 92, Number 4, December 1984

ERRATUM TO "RELATIVE BARR-RINEHART AND COTRIPLE COHOMOLOGY GROUPS ARE ISOMORPHIC"

D. H. VAN OSDOL

The assertion in the title is not a theorem, even though the theorem in the body of the paper is. Professors A. M. Cegarra, E. R. Aznar and A. R. Garzon of Granada have provided counterexamples. The mistake is fundamental and was made clear in a discussion with Professor M. Barr. Let BR denote the Barr-Rinehart groups, H the cotriple groups. Then for $\phi: T \to R$ in $\mathscr{C}/R$, $H^n(R, M) \simeq \mathrm{BR}^n(R, M)$, whereas $H^n_\phi(T, M) \not\simeq \mathrm{BR}^n_\phi(T, M)$. Hence $H^n(R, -)$ vanishes on $\mathscr{Q}$-injectives, but $H^n_\phi(T, -)$, in general, does not. In this regard, one should be aware of the missing ϕ in the display following (2.1.1) on p. 419 of the Barr-Rinehart paper [**2**]. The Barr-Rinehart groups in general coincide with the cotriple groups only on the terminal object of $\mathscr{C}/R$.

REFERENCES

1. D. H. Van Osdol, *Relative Barr-Rinehart and cotriple cohomology groups are isomorphic*, Proc. Amer. Math. Soc. **90** (1984), 40–42.

2. M. Barr and G. Rinehart, *Cohomology as the derived functor of derivations*, Trans. Amer. Math. Soc. **122** (1966), 416–426.

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF NEW HAMPSHIRE, DURHAM, NEW HAMPSHIRE 03824