

Pacific Journal of Mathematics

**CORRECTION TO "TERMINATING PROLONGATION
PROCEDURES"**

HAROLD H. JOHNSON

Correction to

“ON TERMINATING PROLONGATION PROCEDURES”

BY H. H. JOHNSON

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M. Kuranishi has kindly brought to our attention an error in Theorem 1 on page 579. Condition (2) of that theorem should be corrected to read:

$$“(2) \quad dB_{\varphi;ij;k_1\dots k_t} \equiv 0 \text{ modulo } (\omega^i, \theta^\alpha) \text{ for all } t.”$$

The above equation does not follow from the original hypotheses as the author indicated.

Since the interest in Theorem 1 is in its applicability as a criterion for involutiveness, it may be helpful to mention the following conditions under which (2) holds, assuming condition (1).

Condition 1. The θ^α and ω^i span dx^1, \dots, dx^n .

Condition 2. $\omega^i = dy^i, i = 1, \dots, p$ and $dB_{\varphi;ij} \equiv 0$ modulo (ω^i) .

Under Condition 1, there are no π^λ , hence no additional variables are introduced by the prolongation process.

Under Condition 2, $B_{\varphi;ij}$ is a function of y^1, \dots, y^p alone. Consequently $dB_{\varphi;ij} = (\partial B_{\varphi;ij}/\partial y^k)\omega^k$, hence $B_{\varphi;ij;k} = (\partial B_{\varphi;ij}/\partial y^k)$ is also a function of y^1, \dots, y^p alone. In the same way every $B_{\varphi;ij;k_1\dots k_t}$ is a function of y^1, \dots, y^p alone.

Condition 1 is satisfied in Theorem 2 on page 581. Condition 2 is satisfied in the system (S') on page 220 studied in the paper, H. H. Johnson: “On the pseudo-group structure of analytic functions on an algebra,” Proc. Amer. Math. Soc. 12 (1961), 218-224. Princeton University.

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