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ERRATUM TO "IDEALS AND CENTRALIZING MAPPINGS
IN PRIME RINGS"

JOSEPH H. MAYNE

In the proof of the Theorem we want the automorphism T to induce an automorphism on the ideal U , but this may not be the case, as pointed out by Hisao Tominaga (let R be the polynomial ring over the integers in indeterminates x_i , $i = 0, \pm 1, \pm 2, \dots$, and let U be the ideal of R generated by x_1, x_2, \dots . If T is defined by $T(x_i) = x_{i+1}$, then $T(U) \subsetneq U$).

To handle this case, let

$$K = \dots + T^{-2}(U) + T^{-1}(U) + U + T(U) + T^2(U) + \dots$$

K is a nonzero ideal and T induces an automorphism on K . Now we need to show that $[x, T(x)]$ is in the center Z of R for every x in K . For x in K ,

$$x = T^{k(1)}(x_{k(1)}) + T^{k(2)}(x_{k(2)}) + \dots + T^{k(n)}(x_{k(n)})$$

where each $x_{k(i)}$ is in U . Let

$$m = \text{absolute value} [\min\{0, k(1), k(2), \dots, k(n)\}].$$

Then $T^m(x) = y$ is in U since U is invariant under T . Hence $T^m[x, T(x)] = [T^m(x), T^{m+1}(x)] = [y, T(y)]$ is in Z because T is centralizing on U . Since T is an automorphism, $[x, T(x)]$ is in Z for every x in K . Apply the result of *Centralizing automorphisms of prime rings* [Canad. Math. Bull. **19** (1976), 113–115] to K .

In the Corollary the same problem may occur and can be remedied in the automorphism case by a similar argument using the fact that the Jordan ideal is invariant under T . For derivations such that the associative ideal I is not invariant, use $K = I + D(I) + D^2(I) + \dots$, which is a nonzero ideal contained in U and invariant under D .

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