CORRECTION: RESULTS ON PRIME NEAR-RINGS WITH \((\sigma, \tau)\)-DERIVATION

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In the proof of Theorem 7 on pp.7 in [1], Brauer’s Trick method is used wrongly, in which case the corrected should read as follows:

**Theorem 7.** Let \( N \) be a 2–torsion free prime left near-ring, \( D \) be a nonzero \((\sigma, \tau)\)-derivation of \( N \) such that \( \sigma D = D \sigma, \tau D = D \tau \). If \( [D(N), D(N)]_{\sigma, \tau} = 0 \) then \( N \) is commutative ring.

**Proof.** It is correctly shown in [1, Theorem 6] that \( D^2(x) = 0 \) or \( D(x) \in Z \), for all \( x \in N \). Choosing \( x \) such that \( D(x) \in Z \). If \( D(x) = 0 \) then \( D^2(x) = 0 \), so we get \( D(x) \in Z \setminus \{0\} \). It follows \( D(y+z) \sigma(D(x+x)) = \tau(D(x+x))D(y+z) \), for all \( y, z \in N \), by the hypothesis. That is \( (D(y+z) + D(z)) \sigma(D(x)) = \tau(D(x+x))D(y) + \tau(D(x+x))D(z) \). Using \( D(x) \in Z \) and the hypothesis, we can arrive at \( \sigma(D(x))D(y) + \sigma(D(x))D(z) + \sigma(D(x))D(y) + \sigma(D(x))D(z) = D(y) \sigma(D(x+x)) + D(z) \sigma(D(x+x)) \). Computing this equation, we have \( \sigma(D(x))D(z, y) = 0 \), for all \( y, z \in N \). Since \( D(x) \in Z \setminus \{0\} \) and \( N \) is prime near-ring, we conclude that \( D(z, y) = 0 \), for all \( y, z \in N \). By [1, Lemma 3 (i)], \( (z, y) = 0 \), for all \( y, z \in N \). Thus \( (N, +) \) is abelian.

Now, we have \( [D(D(x)y), D(z)]_{\sigma, \tau} = 0 \), for all \( y, z \in N \). We calculate this equation using [1, Lemma 2], \( D(x) \in Z \) and \( (N, +) \) is abelian, we have

\[
\tau(D(x))D(y), D(z)]_{\sigma, \tau} = \tau(D(z))D^2(x)y_D(z) - D^2(x)\sigma(y)D(z).
\]

Since the left term of this equation is zero by the hypothesis and \( \sigma \) is an automorphism of \( N \), we conclude that \( \tau(D(z))D^2(x)y_D(z) = 0 \), for all \( y, z \in N \). Replacing \( y \) by \( yt, t \in N \) in this equation and using this, we obtain that \( D^2(x)y_D(z), t = 0 \), for all \( y, z, t \in N \). By the primeness of \( N \), we infer \( D^2(x) = 0 \) or \( D(N) \subset Z \), for all \( x \in N \). In the first case, \( D^2 = 0 \), and so \( D = 0 \) by [1, Lemma 4], contrary to our original hypothesis. Hence \( D^2(x) = 0 \) does not in fact occur. Thus we get \( D(N) \subset Z \), then \( N \) is commutative ring by [1, Theorem 2]. This completes the proof. \( \Box \)

The above proof, stemming from the authors’ oversight in editing and proofreading, is immaterial for the other results, proofs and discussions of the article.

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