

Correction to Our Paper: On Compact Generalized Jordan Triple Systems of the Second Kind

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The aim of this paper is to correct the errors in our previous paper [1]. There in Lemma 2.7, we have misquoted a result of Kamiya [2]. Consequently the proof of Proposition 2.10 [1] is not correct. But, by using the same result of Kamiya, we can prove the following Proposition A which is stronger than Proposition 2.10.

Now let us define the trace form γ_B for a GJTS (U, B) (not necessarily of the 2nd kind) as in [1]. Then the first equality in Lemma 2.7, $\gamma_B((xyz), w) = \gamma_B(z, (yxw))$, is valid for an arbitrary GJTS (U, B) (cf.[2]). This fact will be used in the course of the proof of Proposition A. In order to prove the second equality $\gamma_B(z, (yxw)) = \gamma_B(x, (wzy))$ in Lemma 2.7, we need the equality $S_{S_{x,y}(z), w} = L_{w,z}S_{x,y} + S_{x,y}L_{z,w}$ ([2]). But this equality is valid under the assumption that the GJTS (U, B) is of the 2nd kind satisfying the condition (A). That second equality is used in proving Theorem 2.8 [1].

PROPOSITION A. *Any non-degenerate GJTS satisfies the condition (A).*

The proof of this proposition is obtained just from that of Proposition 2.10 [1] by making the modification given in the following (4).

Thus we should make the following corrections on our paper [1]:

- (1) page 111, $\uparrow 1$, "of the 2nd kind" should read "of the 2nd kind satisfying the condition (A)".
- (2) page 112, $\downarrow 6$, "Lemma 2.7" should read "Lemma 2.7 and Proposition 2.5".
- (3) page 112, $\uparrow 5$, "GJTS of the 2nd kind" should read "GJTS".
- (4) page 113, $\downarrow 2$ – $\downarrow 5$,

"Since γ_B is non-degenerate, \dots , we get $\gamma_B(a, x) = \dots = 0$." should read "Since $\gamma_B((axy), z) = \gamma_B(y, (xaz))$, it follows from non-degeneracy of γ_B that $L_{ax} = 0$ for each $x \in U$, and hence $\gamma_B(a, x) = \text{Tr } R_{xa}$. We claim that $R_{xa}^2 = 0$. In fact, by using the equality (1.1), we have $R_{xa}^2(y) = (yxL_{ax}(a)) + L_{a(xy)}(a) - L_{ax}((yxa))$. The right hand side of this equality is zero, since $L_{ax} = 0$ for each $x \in U$. Thus we have $\gamma_B(a, x) = 0$ for every $x \in U$."

References

- [1] H. ASANO and S. KANEYUKI, On compact generalized Jordan triple systems of the second kind, Tokyo J. Math., **11** (1988), 105–118.
- [2] N. KAMIYA, A structure theory of Freudenthal-Kantor triple systems, J. of Algebra, **110** (1987), 108–123.

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