CORRECTION TO: “ON AUTOMORPHISMS OF SEPARABLE ALGEBRAS”

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ERRATA

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ON AUTOMORPHISMS OF SEPARABLE ALGEBRAS

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Volume 23 (1967), 25-34

A. Magid has pointed out to us that Lemma 1.8 of [1] is not correct. In [2], Hochschild proves that in any simple algebra over a field every element is a sum of units. It is an elementary exercise to verify that in a finite direct sum of simple algebras every element is a sum of units if and only if at most one of the simple algebra summands is the field $\mathbb{Z}/(2)$ of two elements. We thus have the following correction of Lemma 1.8.

**Lemma 1.8'.** Let $A$ be a separable algebra over the semi-local ring $K$, then every element in $A$ is a sum of units if and only if every element in $A/\text{Rad}(A)$ is a sum of units.

The proof of Lemma 1.8' is the same as the proof of Lemma 1.8 which appears in [1]. Let $\mathbb{Z}_{(2)}$ be the localization of the integers at the prime $(2)$, then the ring of integers $A$ over $\mathbb{Z}_{(2)}$ in $Q(\sqrt{17})$ is a separable $\mathbb{Z}_{(2)}$-algebra with no idempotents but 0 and 1 but $A/\text{Rad}(A) \cong \mathbb{Z}/(2) \oplus \mathbb{Z}/(2)$ so $A$ is not generated by its units. These facts may be found on page 234-36 of [3]. It is therefore necessary to modify the definition of regular ring given in paragraph 2 on page 30 of [1] in order that Theorem 2.1 $R$ be correct. If $A$ is a separable, finitely generated, projective $R$-algebra and the center of $A$ is $K$ then an $R$-subalgebra $B$ of $A$ is called regular in case $B$ is separable over $R$, the only idempotents in the center of $B\otimes_{B\otimes_{K}K}$ $K$ are 0 and 1, and every element in $B$ is a sum of units in $B$.

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