

Title	Correction to : "A note on Azumaya's theorem"
Author(s)	Sugano, Kozo
Citation	Osaka Journal of Mathematics. 5(1) P.153-P.153
Issue Date	1968
Text Version	publisher
URL	<a href="https://doi.org/10.18910/8482">https://doi.org/10.18910/8482</a>
DOI	10.18910/8482
rights	
Note	

*Osaka University Knowledge Archive : OUKA*

<https://ir.library.osaka-u.ac.jp/repo/ouka/all/>

Sugano, K.  
Osaka, J. Math.  
5 (1968), 153

*CORRECTION TO*  
**“A NOTE ON AZUMAYA’S THEOREM”**

Kozo SUGANO

This Journal, Vol. 4 (1967), 157–160

(Received February 28, 1968)

$e_\alpha\Lambda$  in the seventh line from bottom on Page 158 should be read  $e_\alpha r(N)$ . To complete the proof of Proposition 1, the following should be added to the end of the proof of Proposition 1.

Nextly we will show that if  $\Lambda$  is a left self cogenerator ring the left socle of  $\Lambda$  contains the right socle of  $\Lambda$ . Let  $S_l$  (resp.  $S_r$ ) denote the left (resp. right) socle of  $\Lambda$ . Let  $x \in \Lambda$  such that  $x\Lambda$  is a minimal right ideal, and  $I$  be a maximal right ideal of  $\Lambda$  which contains  $l(x)$ . Then  $\Lambda/I$  is isomorphic to some  $I_\beta = \Lambda y_\beta$ , and we have a homomorphism  $\Lambda x \rightarrow \Lambda y_\beta$  which maps  $x$  to  $y_\beta$ . Then the same argument as the proof of Lemma 3 shows that  $y_\beta\Lambda \subseteq x\Lambda$ . Since  $x\Lambda$  is minimal,  $y_\beta\Lambda = x\Lambda$ , and  $x = y_\beta z$  for some  $z \in \Lambda$ . Then  $\Lambda x$  is minimal, since it is a homomorphic image of  $\Lambda y_\beta$  which is a minimal left ideal. Hence  $x \in S_l$ , and we see  $S_r \subseteq S_l$ .

Since  $r(N) \supseteq S_l$ ,  $r(N) \supseteq S_r$ . Then  $\Lambda$  is an essential extension of  $r(N)$  as right ideal, since  $\Lambda$  is an essential extension of  $S_r$  by Lemma 3. Consequently  $e_\alpha\Lambda$  is an essential extension of  $e_\alpha r(N)$ , and we see  $e_\alpha\Lambda$  is an essential extension of  $x_\alpha\Lambda$ .

