# LETTER TO THE EDITOR

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## Abstract

## Full Text

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## MATHEMATICS

In my article (A. Guichardet, "On tensor products of $C^*$-algebras" ), published in DAN, vol. 160, no. 5, 1965, the following corrections must be made.

P. 986, lines 6, 7, and 8 should read

$$\|xy\|_* \leq \|x\|_*\|y\|_*, \qquad \|xx^*\|_* = \|x\|_*^2, \qquad \|x_1 \otimes x_2\|_* = \|x_1\| \cdot \|x_2\|. \tag{1}$$

P. 986, line 11: printed $A_1 \otimes A_2$, should read $A_1 \overset{*}{\otimes} A_2$.

**Remark 1.** It is now known that these norms do not always coincide (see ([2])).

P. 987, line 20: printed $A_1 \otimes A_2$, should read $A_1 \overset{\vee}{\otimes} A_2$.

P. 987, line 10 from the bottom should read

$$\|\nu'(y_1 \otimes y_2)\| \leq \|y_1\| \cdot \|y_2\| \quad \text{for} \quad y_i \in B_i. \tag{5}$$

P. 987, line 6 from the bottom should read

$$\|\omega(x_1 \otimes x_2)\| \leq \|x_1 + z_1\| \cdot \|x_2 + z_2\| \quad \text{for} \quad z_i \in I_i.$$

P. 987, line 22 should read: ···we have the kernel $I = I_1 \overset{\vee}{\otimes} A_2 + A_1 \overset{\vee}{\otimes} I_2 \ldots$

**Remark 2.** It is now known that if $A_1$ and $A_2$ are simple (i.e., without closed two-sided ideals), $A_1 \overset{\vee}{\otimes} A_2$ is not necessarily simple. In fact, in ([2]), p. 119, $C^*$-algebras $A_1$ and $A_2$ are constructed in a Hilbert space $H$ with the following properties: 1) $A_1$ and $A_2$ commute; 2) $A_i$ generates a factor $\mathfrak{A}_i$ of type $\mathrm{II}_1$; 3) the representation $\sum x_{1,i} \otimes x_{2,i} \to \sum x_{1,i}x_{2,i}$ of the algebra $A_1 \otimes A_2$ in $H$ does not have norm $\leq \| \ \|_*$. Then the analogous representation of the algebra $\mathfrak{A}_1 \otimes \mathfrak{A}_2$ in $H$ does not have norm $\leq \| \ \|_*$, hence the canonical homomorphism $\mathfrak{A}_1 \overset{\vee}{\otimes} \mathfrak{A}_2 \to \mathfrak{A}_1 \otimes \mathfrak{A}_2$ is not exact, $\mathfrak{A}_1 \overset{\vee}{\otimes} \mathfrak{A}_2$ is not simple; on the other hand, $\mathfrak{A}_1$ and $\mathfrak{A}_2$ are simple.

P. 988, line 8 from the bottom: printed $A_1 \overset{\vee}{\otimes} A$, should read $A_1 \overset{\vee}{\otimes} A_2$.

*A. Guichardet*

## CITED LITERATURE

[1] A. Guichardet, Ann. Sci. École Norm. Supér., 81, 189 (1964). [2] M. Takesaki, Tôhoku Math. J., 16, 111 (1964).

*Note: Figure translations are in progress. See original paper for figures.*