

ERRATA TO "GENERAL PRODUCT MEASURES"

BY

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Theorem 5.9 is false and the proof we gave of Theorem 7.7 used 5.9. Fortunately a proof of 7.7, known earlier to us, makes no use of 5.9. For the record we also note that the conclusion about B in Theorem 7.2.4 is also false but this was not used anywhere in the paper.

The proof of Theorem 7.7 can be repaired by replacing Part 2 thereof (p. 282) by the following.

PART 2. If $\mathfrak{F} \subset \mathfrak{B}$ and $\sigma\mathfrak{F} = S$ then there is such a countable subfamily \mathfrak{G} of \mathfrak{F} that $\psi(S \sim \sigma\mathfrak{G}) = 0$.

Proof. The desired conclusion is found in Step 2 below.

Let $V_u = \text{tpr } u$ whenever $u \in \text{fnt} \cap \text{sb } t$ and $F_p = EA$ (for some $B \in \mathfrak{F}$ and $u \subset t$, $\text{dmn } u = \text{dmn } p$, $A \in V_u$ and $\text{cyl } AS \subset B$) whenever $p \in \text{fnt} \cap \text{sb } m$. Now we take

STEP 1. If $p \in \text{fnt} \cap \text{sb } m$ then there is such a countable subfamily \mathfrak{G} of \mathfrak{F} that

$$\psi(\text{cyl } \sigma F_p S \sim \sigma\mathfrak{G}) = 0.$$

Proof. Suppose $\mu = \text{prm } p$, $u \subset t$, $\text{dmn } u = \text{dmn } p$, $\mathfrak{B}' = \text{tpr } u$, $\mathfrak{F}' = F_p$, $S' = \text{spc } p$ and $\mathfrak{H}' = \bigcup B \in \mathfrak{H} \text{ sng prj } BS'$. Clearly $\mathfrak{F}' \subset \mathfrak{B}'$ and $\sigma\mathfrak{F}' \in \mathfrak{B}'$. Noting that $\mu \in \text{Clin } \mathfrak{B}'$ and $\mathfrak{H}' \subset \text{dmn}' \mu$ we can and do select such a function w on \mathfrak{H}' that, for each $A \in \mathfrak{H}'$, $wA \in \text{cbl} \cap \text{sb } \mathfrak{F}'$ and

$$\mu((\sigma\mathfrak{F}' \sim wA) \cap A) = 0.$$

We let $\mathfrak{G}' = \bigcup A \in \mathfrak{H}' wA$ and check that $\mathfrak{G}' \in \text{cbl} \cap \text{sb } \mathfrak{F}'$ and

$$\begin{aligned} 0 &\leq \mu((\sigma\mathfrak{F}' \sim \sigma\mathfrak{G}') \cap \sigma\mathfrak{H}') \\ &= \mu(\bigcup A \in \mathfrak{H}' (\sigma\mathfrak{F}' \sim \sigma\mathfrak{G}') \cap A) \\ &\leq \mu(\bigcup A \in \mathfrak{H}' (\sigma\mathfrak{F}' \sim wA) \cap A) \\ &\leq \sum A \in \mathfrak{H}' \mu((\sigma\mathfrak{F}' \sim wA) \cap A) = 0. \end{aligned}$$

Hence taking \mathfrak{G} to be such a countable subfamily of \mathfrak{F} that each member A of \mathfrak{G}' is related to some member B of \mathfrak{G} by having $\text{cyl } AS \subset B$ we have $\text{cyl } \sigma\mathfrak{G}' S \subset \sigma\mathfrak{G}$ and infer

$$\phi((\text{cyl } \sigma\mathfrak{F}' S \sim \sigma\mathfrak{G}) \cap \sigma\mathfrak{H}) = 0$$

and

$$\begin{aligned}
 0 &\leq .\psi(\text{cyl } \sigma\mathfrak{F}'S \sim \sigma\mathfrak{G}) \\
 &= .\phi((\text{cyl } \sigma\mathfrak{F}'S \sim \sigma\mathfrak{G}) \cap T) \\
 &\leq .\phi((\text{cyl } \sigma\mathfrak{F}'S \sim \sigma\mathfrak{G}) \cap \sigma\mathfrak{H}) + .\phi(T \sim \sigma\mathfrak{H}) \\
 &= 0 + 0 = 0
 \end{aligned}$$

to complete our proof.

STEP 2. There is such a countable subfamily \mathfrak{G} of \mathfrak{F} that $.\psi(S \sim \sigma\mathfrak{G}) = 0$.

Proof. Let $P = \text{fnt} \cap \text{sb } m$, note that $P \in \text{cbl}$, and using Step 1 secure a function f on P for which $.fp \in \text{cbl} \cap \text{sb } \mathfrak{F}$ and $.\psi(\text{cyl } \sigma F_p S \sim \sigma .fp) = 0$ whenever $p \in P$. Taking $\mathfrak{G} = \bigcup_{p \in P} .fp$ we have

$$\begin{aligned}
 S &= \bigcup_{p \in P} \text{cyl } \sigma F_p S, \\
 S \sim \sigma\mathfrak{G} &\subset \bigcup_{p \in P} (\text{cyl } \sigma F_p S \sim .fp)
 \end{aligned}$$

and consequently

$$0 \leq .\psi(S \sim \sigma\mathfrak{G}) \leq \sum_{p \in P} .\psi(\text{cyl } \sigma F_p S \sim .fp) = 0$$

which completes the proof.

REFERENCES

1. E. O. Elliott and A. P. Morse, *General product measures*, Trans. Amer. Math. Soc. **110** (1964), 245–282.

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