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CORRECTION TO "ON FACTORS OF $C([0,1])$ WITH NONSEPARABLE DUAL"

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BY

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I am indebted to Professor T. Ito for pointing out that the statement of Proposition 2 is incorrect. Let us introduce the following notation; if Y is a linear space of real-valued functions defined on some set Ω, and θ is a real-valued function defined on Ω, let $\theta \cdot Y = \{\theta \cdot y;\ y \in Y\}$. As noted by Professor Ito, the correct statement of Proposition 2 is as follows:

Let Ω be a compact Hausdorff space, let $C(\Omega)^*$ be identified with the space of all regular scalar-valued Borel measures on Ω, and let Z be a subspace of $C(\Omega)^*$ isometric to L^1. Then there exists a regular Borel probablity measure μ on Ω, a Borel measurable function θ such that $|\theta| \equiv 1$, and a σ algebra $\mathcal{S}$ of the Borel subsets of Ω such that $(\Omega, \mathcal{S}, \mu \mid \mathcal{S})$ is a purely non-atomic measure space and $Z = \theta \cdot L^1(\mu \mid \mathcal{S})$.

The function θ was omitted from the original statement of Proposition 2. The proof on page 370 does indeed yield the above (essentially known) result; the "μ" produced there is a signed measure with the property that $d\mu = \theta d\tilde{\mu}$ for a certain Borel probability measure $\hat{\mu}$, where θ is as above.

The proof of the results may be modified with very little change to give a correct proof of the main result, Theorem 1. I shall simply indicate the necessary changes.

Page 364 — again insert the function θ (as above) in the description of Z.

Page 365 — line 8 from the top: insert the words "θ a Borel measurable real-valued function defined on Ω with $|\theta| \equiv 1$," after "measure on Ω,".

Page 365 — line 15 from the top: insert an additional line as follows: "(v) $\theta \mid K_1^0$ is continuous relative to K_1^0".

Page 365 — line 19 from the top: insert the phrase ", hence $\theta \cdot A$ is a subspace of $C(K)$ isometric to $C(\Delta)$" after "$C(\Delta)$".

Page 365 — line 9 from the bottom: replace by

$$\text{“}\varphi = \sum_{i=1}^{n} c_i X_{K_i^0} \cdot \theta\text{”.}$$

Page 365 — line 8 from the bottom: replace "A" by "$\theta \cdot A$".

Page 365 — line 4 from the bottom: replace the three occurrences of "f" by "θf"; also replace "F_t^n" by "F_i^n".

Page 366 — line 1 from the top: replace "$L^1(\mu \mid \mathcal{S})$" by "$\theta \cdot L^1(\mu \mid \mathcal{S})$".

Page 366 — line 8 from the top: insert an additional line as follows: "(c) $\theta \mid K$ is continuous relative to K.".

Page 366 — line 9 from the top: insert "Lusin's theorem and" after "By"; insert "$\theta \mid K$ continuous and" after "with".

Page 367 — line 8 from the top: insert the following additional line: "(vi′) $\theta \mid (\tilde{K}_1^1 \cup \tilde{K}_2^1)$ is continuous relative to $\tilde{K}_1^1 \cup \tilde{K}_2^1$.".

Page 367 – line 5 from the bottom: insert at the end, "$\theta \mid K_j$ is continuous relative to K_j (necessary only when $n = 0$),".

Page 369 — restate Proposition 2 as above.

Page 370 — line 11 from the bottom: replace by the following: "let μ be the measure on Ω such that $d\mu = |f_1^0| \, d\nu$ and $\tilde{\mu}$ the signed measure on Ω such that $d\tilde{\mu} = f_1^0 d\nu$; let θ be defined by $\theta(t) = 1$ if $f_1^0(t) = 0$ and $\theta(t) = f_1^0(t)/|f_1^0(t)|$ otherwise".

Page 370 — lines 10 and 8 from the bottom: replace "μ" by "$\tilde{\mu}$".

Page 370 — lines 7, 6, and 3 from the bottom: replace "$L^1(\mu \mid \mathcal{S})$" by "$\theta \cdot L^1(\mu \mid \mathcal{S})$".

Page 375, line 7 from the bottom: insert ", a Borel measurable function θ with $|\theta| \equiv 1$" after "K".

Page 375 — line 6 from the bottom: replace "$L^1(\mu \mid \mathcal{S})$" by "$\theta \cdot L^1(\mu \mid \mathcal{S})$".

Page 375 — line 5 from the bottom: replace "(iv)" by "(v)".

Page 376 — line 2 from the top: replace both occurrences of "A" by "$\theta \cdot A$".

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