ERRATUM

THE REPRESENTATION OF LINEAR OPERATORS ON SPACES OF FINITELY ADDITIVE SET FUNCTIONS

by C. A. CHENEY and A. DE KORVIN

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The following changes should be made in the statement of Theorem 3.1 and its proof.

A set function $\Psi:\Sigma\to Y$ is said to be λ-*convex* if whenever A and B are in Σ with $A\cap B=\phi$, then

$$\Psi(A\cup B)=\frac{\lambda(A)}{\lambda(A\cup B)}\Psi(A)+\frac{\lambda(B)}{\lambda(A\cup B)}\Psi(B).$$

Then in Theorem 3.1 "finitely additive" should be replaced by "λ-convex." It is straightforward to verify that Ψ as defined in the proof is λ-convex.

The proof for the uniqueness of Ψ should be as follows:

Suppose $T(\mu)=\int\Psi_1\,d\mu=\int\Psi_2\,d\mu$ where Ψ_1 and Ψ_2 are λ-convex. Then

$$T(W_E)=\int\Psi_1\,dW_E=\lim\sum W_E(A)\Psi_1(A)=\lim\sum\frac{\lambda_E(A)}{\lambda(E)}\Psi_1(A)$$

where each limit is taken over partitions π of E and each sum taken over A in π. But by the λ-convexity of Ψ_1, the sum in the last limit is just $\Psi_1(E)$. Similarly, $T(W_E)=\Psi_2(E)$. Therefore, $\Psi_1(E)=\Psi_2(E)$.

A corresponding change should be made in Theorem 4.3: Ψ is λ-convex and uniqueness is proved in much the same way as above.

INDIANA STATE UNIVERSITY
TERRE HAUTE
INDIANA 47809