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We thus obtain explicit examples of functions  $\theta$  satisfying (A.23) which are not Fourier-Stieltjes transforms.

Note that, if every  $c_n$  is real and nonzero, an (unbounded)  $\psi$  can be chosen so as to make  $\text{Ran } \theta = \{-1, 1\}$ ; this yields explicit examples of  $\pm 1$ -valued functions  $\theta$  which are not Fourier-Stieltjes transforms. (These are, of course, also obtainable by starting with functions  $\text{sgn } \hat{h}$ , where  $h \in C(G)$ ,  $\hat{h}$  is real-valued and  $\hat{h} \notin l^1(\Gamma)$ .)

## BIBLIOGRAPHY

- [1] BRAINERD, B. and R. E. EDWARDS, Linear operators which commute with translations. Part 1: Representation theorems. *J. Australian Math. Soc.* 6 (1966), 289-327.
- [2] EDWARDS, R. E., *Functional Analysis: Theory and Applications*. Holt, Rinehart and Winston, New York (1965).
- [3] EDWARDS, R. E. and E. HEWITT, Pointwise limits for sequences of convolution operators. *Acta Math.* 113 (1965), 181-218.
- [4] FIGA-TALAMANCA, A. and G. I. GAUDRY, Multipliers and sets of uniqueness of  $L^p$ . *Michigan Math. J.* 17 (1970), 179-191.
- [5] GAUDRY, G. I., Bad behaviour and inclusion results for multipliers of type  $(p, q)$ . *Pacific J. Math.* 35 (1970), 83-94.
- [6] GEL'FAND, I. M. and G. E. SHILOV, *Generalized Functions, Volume 1*. Academic Press, New York (1964).
- [7] HEWITT, E. and K. A. ROSS, *Abstract Harmonic Analysis, Vols. I, II*. Springer-Verlag, Berlin (1963, 1970).
- [8] HEWITT, E. and H. S. ZUCKERMAN, On a theorem of P. J. Cohen and H. Davenport. *Proc. Amer. Math. Soc.* 14 (1963), 847-855.
- [9] PRICE, J. F., Some strict inclusions between spaces of  $L^p$ -multipliers. To appear in *Trans. Amer. Math. Soc.* 152 (1970).
- [10] RUDIN, W., *Fourier Analysis on Groups*. Interscience, New York (1962).
- [11] ZYGMUND, A., *Trigonometric Series, Vols. I & II*. Cambridge University Press (1959).
- [12] HOLLAND, Samuel S., Jr. A Hilbert space proof of the Banach-Steinhaus theorem. *Amer. Math. Monthly* 76 (1969), 40-41.
- [13] HALMOS, P. *A Hilbert space problem book*. Van Nostrand, Princeton, N.J. (1967).
- [14] HÖRMANDER, L., Estimates for translation invariant operators in  $L^p$  spaces. *Acta Math.* 104 (1960), 93-140.
- [15] BOURBAKI, N., *Espaces Vectoriels Topologiques, Ch. I, II*. Hermann et Cie, Paris (1953).
- [16] BROOKS, J. K. and J. MIKUSIŃSKI, On some theorems in functional analysis. *Bull. Acad. Pol. Sci. (3) XVIII* (1970), 151-155.
- [17] DUNKL, C. F. and D. E. RAMIREZ,  $L^p$  Multipliers on Compact Groups. To appear.