

Gryllakis, C.; Grekas, S.**On products of Radon measures.** (English) Zbl 0936.28007

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Authors' abstract: "Let $X = [0, 1]^\Gamma$ with $\text{card } \Gamma \geq \mathfrak{c}$ (\mathfrak{c} denotes the continuum). We construct two Radon measures μ, ν on X such that there exist open subsets of $X \times X$ which are not measurable for the simple outer product measure. Moreover, these measures are strikingly similar to the Lebesgue product measure: for every finite $F \subseteq \Gamma$, the projections of μ and ν onto $[0, 1]^F$ are equivalent to the F -dimensional Lebesgue measure. We generalize this construction to any compact group of weight $\geq \mathfrak{c}$, by replacing the Lebesgue product measure with the Haar measure".

Reviewer: [P.Ressel \(Eichstätt\)](#)**MSC:****28C05** Integration theory via linear functionals (Radon measures, Daniell integrals, etc.), representing set functions and measures**28C10** Set functions and measures on topological groups or semigroups, Haar measures, invariant measuresCited in **2** Documents**Keywords:**[product measure problem](#); [Radon measure](#); [Haar measure](#)**Full Text:** [EuDML](#)