$C(T)^*$ is $l^1(\Gamma)$ for some infinite set Γ. For any Banach space X, X^* is flat if X is flat. If X^* is an $L^1(\mu)$-space, then X being flat is equivalent to X^* being flat, which is equivalent to X^* not being $l^1(\Gamma)$ for any Γ. An $L^1(\mu)$ space is completely flat if and only if it is $L^1[0, 1]$. If X is isomorphic to a flat space, then X has an *infinite supported tree* and neither X nor X^* has the Radon-Nikodým property. The use of "completely flat" has strong motivation, because of the following surprising facts: Let s be a spanning girth curve and p be a point of s. Then there is a unique supporting hyperplane H of $S(X)$ at p; p is an interior point of a subset G of $H \cap S(X)$ whose closed affine span is H; for each q in G, $\sup\{\|q - r\|: r \in G\} = 2$; and G is the set of all $(p - q)/\|p - q\|$ for $q \neq p$ and $q \in s$.

ROBERT C. JAMES

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The theory of unitary group representations, by George W. Mackey, Chicago Lectures in Math., Univ. of Chicago Press, Chicago, Ill.,1976, x + 372 pp., $4.95.

It is probably impossible to write a comprehensive book on the theory of unitary representations. The subject, which logically begins in a modest way with complex representations of finite groups, proceeds to general compact groups, and goes on to treat a variety of noncompact groups, is simply too vast. By this time, as a result of the enormous activity in representation theory which began in the late forties and continues unabated, in fact exponentially, to this day, its sometimes alarming and ubiquitous role in a diversity of fields is well established. What is not well established is any agreement about what part or parts of the theory are the most important or how the subject should be organized or presented. At the same time there are disagreements about what open questions should be pursued and the future development of the theory. This naturally causes difficulties for anyone trying to write about representations. The reviewer sometimes envisages the appearance of a new book entitled, *What everyone ought to know about representations* and hordes of representers eagerly rushing out to acquire it, and later returning, disillusioned or angry with what they have found. Authors should also keep in mind that it is probably more difficult for an outsider to learn a substantial segment of representation theory than it is to write about it sensibly. This particular point is admirably put in the forward to Lang's recent book on $SL(2, R)$ in which he states, "It is not easy to get into representation theory, especially for someone interested in number theory, for a number of reasons. First, the general theorems on higher dimensional groups require massive doses of Lie theory. Second, one needs a good background in standard and not so standard analysis on a fairly broad scale. Third, the experts have been writing for each other for so long that the literature is somewhat labyrinthine." This statement is also significant in view of its tacit bias: the general theorems of the subject are either about representations of Lie groups or require some form of Lie theory in their understanding, a point with which the reviewer has considerable sympathy, but surely an indefensible one. The theory of unitary