Suppose that $G$ is a connected Lie group and that $K$ is a maximal compact subgroup of $G$. There is a smooth family of Lie groups $\{G_t\}_{t \in \mathbb{R}}$ such that $G_t = G$ when $t \neq 0$, and such that $G_0$ is the semidirect product group associated to the adjoint action of $K$ on the quotient of the Lie algebra of $G$ by the Lie algebra of $K$. The group $G_0$ is called a contraction of $G$, and in a 1975 paper Mackey proposed that, when $G$ is semisimple, the unitary representation theories of $G$ and $G_0$ ought to be analogous to one another.

Mackey’s proposed analogy is very closely related to the Connes-Kasparov conjecture in $C^*$-algebra $K$-theory. I shall briefly review this fact, and then examine the analogy from the related, but different, point of view of Harish-Chandra modules and Hecke algebras. (Received September 18, 2007)