1041-46-231 **Nigel Higson*** (higson@math.psu.edu), Department of Mathematics, Penn State University, University Park, PA 16802. *The Connes-Kasparov isomorphism, Mackey's analogy, and parameters for representations.*

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 such that $G_t = G$ when t is nonzero, while G_0 is the semidirect product group associated to the adjoint action of K on the quotient of the Lie algebras of G and K. In a 1975 paper Mackey proposed that, when G is semisimple, the 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 review this, and then examine Mackey's analogy for complex semisimple groups from the point of view of Hecke algebras and spherical functions. (Received August 11, 2008)