1035-22-1149 **Nigel Higson*** (higson@math.psu.edu), Department of Mathematics, Penn State University, University Park, PA 16802. *Contractions of semisimple groups and the Mackey analogy.*

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)