

1115-22-264 **Nigel Higson*** (higson@math.psu.edu), Department of Mathematics, Penn State University, University Park, PA 16802. *Contractions of tempered irreducible representations*. Preliminary report.

In the 1970's George Mackey suggested that the degeneration of a real reductive group G to its Cartan motion group ought to lead to a "correspondence" between "most" of the irreducible unitary representations of G and those of its motion group. Mackey's suggestion doesn't seem to have received much careful scrutiny until quite recently, when a connection with index theory revived interest in it from within noncommutative geometry. Rather remarkably, Mackey's approach, suitably modified, leads to *exact bijections* at the level of tempered or admissible (but not unitary) irreducible representations. I'll describe how this comes about, but not why; a conceptual explanation is not yet available. (Received September 20, 2015)