1049-43-168   **Matthias L Neufang*** (`mneufang@math.carleton.ca`), School of Mathematics and Statistics, Carleton University, Ottawa, Ontario K1S 5B6, Canada. *On Farhadi–Ghahramani's multiplier problem.*

In 1979, Duncan and Hosseiniun asked if, for a locally compact group G, the natural involution on $L_1(G)$ extends to an involution on its bidual (with the left Arens product). In 2007, Farhadi and Ghahramani partially answered this question - in the negative - and in particular showed that the answer is negative for all (infinite) groups with the following multiplier property: (*) every w^*-continuous surjective right $L_1(G)$-module map on $L_1(G)^{***}$ is implemented by an element from $L_1(G)^{****}$ through the canonical action. They thus asked whether any group satisfies (*). We show that this is not the case for infinite countable discrete abelian groups. Note, however, that it might hold for (infinite countable discrete) groups without infinite amenable subgroups which provide the main motivation for Farhadi–Ghahramani's approach, Duncan–Hosseiniun's question being still open for this class of groups. (Received March 02, 2009)