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Stephen D Smith* (smiths@uic.edu), IL. *Yet another approach to the Alperin Weight Conjecture*. Preliminary report.

Alperin (1985) conjectured that the global count of p -modular irreducibles of G should be locally determined as the sum of the count of “weights” of p -local subgroups of G . Knörr and Robinson (1989) gave a formulation for a particular p -block B —now involving an *alternating* sum over blocks B_c for certain local subgroups G_c . The resemblance of this alternating sum to an Euler characteristic then led to formulations in topological language; for example, by Linckelmann, Symonds, and Boltje.

One result of Knörr-Robinson can be interpreted as giving an analogue of Webb’s decomposition of group cohomology $H^*(G)_p$; namely a decomposition of the G -conjugation *module* cohomology $H^n(G, B)_p$ for $n > 0$, via terms $H^n(G_c, B_c)_p$, reducing the Alperin Conjecture to proving the decomposition at $n = 0$. Indeed one can embed this in the framework of ample and sharp decompositions from the topological literature—notably the context of Bredon cohomology and higher limits of Grodal.

This viewpoint of reducing the conjecture to of $H^0(G, B)_p$ focuses attention on the “lower defect groups” of Brauer. Which motivates renewed efforts along that (much-studied and difficult) avenue toward the Conjecture. (Received August 06, 2013)