

MONADICITY OF RESTRICTION FUNCTORS AND SPANS OF GROUPOIDS

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A few years ago Paul Balmer observed that if H is a subgroup of a finite group G , then the restriction functor from (linear) G -representations to H -representations is monadic, so that one can recover the category of H -representations as the category of modules over a certain nice monoid inside of G -representations. This remains true for the derived and stable categories, which is quite remarkable because modules do not usually behave well within a triangulated or homotopy category. More recently Paul Balmer, Beren Sanders and myself have shown that this feature of restriction functors is quite general and can be found in many equivariant domains of mathematics, including equivariant stable homotopy, geometry and KK -theory. After presenting the above phenomenon, I will offer an explanation for it in terms of a 2-categorical version of Mackey and Green functors and their link to derivators (this is joint work in progress with Balmer).