

# From extension of groups to realization-obstruction of graded algebras and back

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**Abstract:** We survey the theory of group extensions- the obstruction for realizing outer actions in the third cohomology, and the torsor role of the second cohomology. We pass to the parallel world of strongly graded algebras, establishing a generalization of the well-known 7-term exact sequence. Finally, we “forget” the addition once again in order to fill in the gap between the two theories.