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Internal object actions

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Abstract: We describe the place, among other known categorical constructions, of the internal object actions involved in the categorical notion of semidirect product, and introduce a new notion of representable action providing a common categorical description for the automorphism group of a group, for the algebra of derivations of a Lie algebra, and for the actor of a crossed module.

Keywords: monoidal category, monoidal functor, monoid, action, action of an object, semi-abelian category, semidirect product, groups, Lie algebras, crossed modules, actors

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