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# A colimit decomposition for homotopy algebras in Cat

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Badzioch showed that in the category of simplicial sets each homotopy algebra of a Lawvere theory is weakly equivalent to a strict algebra. In seeking to extend this result to other contexts Rosicky observed a key point to be that each homotopy colimit in simplicial sets admits a decomposition into a homotopy sifted colimit of finite coproducts, and asked the author whether a similar decomposition holds in the 2-category of categories Cat. Our purpose in the present paper is to show that this is the case.

Comments: Some notation changed; small amount of exposition added in intro

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