

Lawvere 2-theories

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A fundamental result in category universal algebra is the correspondence between Lawvere theories and finitary monads on **Set**. Power showed how to generalize this to the enriched context, to obtain a correspondence between *Lawvere V-theories* and finitary V-monads on (a suitable monoidal category) V. Nishizawa and Power described a further generalization to deal with finitary V-monads on any locally finitely presentable V-category K. In each case the theories involve limits more general than the usual finite products. I will outline the general theory, before looking in detail at what happens in the special case $V=\mathbf{Cat}$ of 2-theories and 2-monads, where various lax and pseudo issues arise.

*Joint work with John Power.