

Parameters and fibrations

John MacDonald*

This is a report on work in progress. We begin with a direct description of A -parameterized monads (or comonads) on an object X of a 2-category K with products. These are seen to be monads (or comonads) on the objects of a 2-category K_A , which itself can be described as a co-Kleisli category for the product comonad. A result on the preservation of cartesian arrows by right adjoints is shown. Regarding K_A as a subcategory of the slice category K/A , we give conditions under which a parameterized comonad on an object of $K = \mathcal{C}at$ has its co-Kleisli object a fibration. We show how this is a consequence of a result giving conditions for the co-Kleisli object of a fibration in a 2-category to be a fibration.

*Joint work with Robin Cockett.