RICHARD WOOD, Dalhousie University *Variation and Enrichment*

The parametrized 2-category constructions Fib /S, for S with finite limits, and W-cat, for W a bicategory, are further unified by considering, for fixed W, the 2-category of pseudo-functors $H: A \to W$ which are locally discrete fibrations. This 2-category is biequivalently described as a 2-category whose objects are lax-functors $W^c o \to \text{mat}$, where mat is the bicategory whose objects are sets and whose hom-categories are given by $\text{mat}(X, A) = \text{set}^{AxX}$. The biequivalence is a direct generalization of the Grothendieck biequivalence between fibrations and CAT-valued pseudo-functors and is mediated by pulling back a universal local discrete fibration $\text{mat}_* \to \text{mat}$. Further, the 2-category is also biequivalent to the classical (W) - cat, where (W) is the bicategory whose objects are those of W with $(W)(w, x) = \text{set}^{W(w,x)^o p}$. We will show how to recover the usual variable and

enriched categories within this framework. Work with JRB Cockett and SB Niefield.