

- ▶ COLIN S. MCLARTY, *Single-sorting, and first order axioms for the category of categories as foundation..*

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The category of categories as a foundation for mathematics (CCAF) can be formalized as a single-sorted first order theory. Yet in some ways a multi-sorted version is more natural, and it has been suggested that the theory itself somehow depends on a background of model theory or second order logic. We will explore the conceptual issues and argue for two related conclusions. A multi-sorted formulation is natural. But the different sorts should not be taken as having any different “mode of being” from one another. And in particular categories and functors are not to be understood as “second order” in any sense. The CCAF axioms are not only formally first order but are properly understood as being so, both in that all the entities are posited at one logical level, and in that CCAF has an effectively enumerable consequence relation.