

**On two tricks to make Category Theory fit in less mental space:
missing diagrams and skeletons of proofs**

When I started studying Category Theory two things in the texts gave me the impression that CT was incredibly powerful: one was the suggestion, implicit in the use of the definite article “the” in expressions like “*the* functor that takes each object B to $A \times B$ ”, that once we define how a functor acts on objects its action on morphisms is “obvious” in some sense; the other one is the idea that almost all reasoning in CT is diagrammatical, and that as soon as we are past the beginner stage the diagrams become “obvious” too: they are omitted from the books and articles for reasons of space, but drawing the “missing diagrams” is something that is almost automatic.

In this talk I will present some techniques for drawing the “missing diagrams” in a more or less canonical way, and for starting from a “skeleton” of a categorical concept or proof and reconstructing the rest from that.