A Diagrammatic Notation for F;

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Abstract

Category Theory, String Theory, Knot Theory, Graph Theory, Proof Nets, Feynman Diagrams, and Penrose's tensor contraction notation: all too often has been demonstrated the value of graphical and diagrammatic reasoning in advanced mathematics. By replacing incomprehensible piles of linear syntax with equally incomprehensible piles of funny squiggles and wildly pointing arrows, formal diagrams have enhanced the visual appeal of written work while maintaining, or in some cases improving on the status quo of outsider-repelling intimidation.

1 Introduction

The vast majority of research in formal systems is performed on a two-dimensional page (with the exception of the burgeoning field of Virtual Real Analysis, which requires special goggles and red-green differential operators) and yet this spatiality is often wasted by intrinsically one-dimensional notation. We aim to fix this problem by introducing a clear and precise two-dimensional notation for the foundations of mathematics and logic. In the sequel, we try to avoid any use of linear ordered multi-sets of character-based information units (i.e., ordinary running text) except when strictly necessary.

2 Syntax

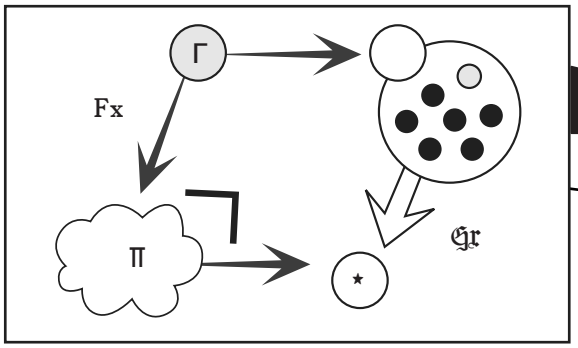


Fig 1. Neither a pullback nor a pushout be

3 Type Theory

Our typing rules are a healthy part of a sound, complete breakfast.

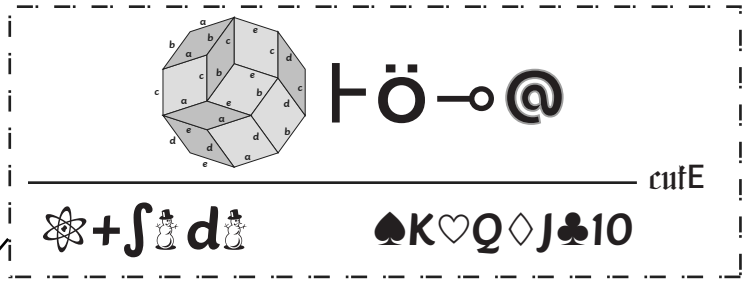
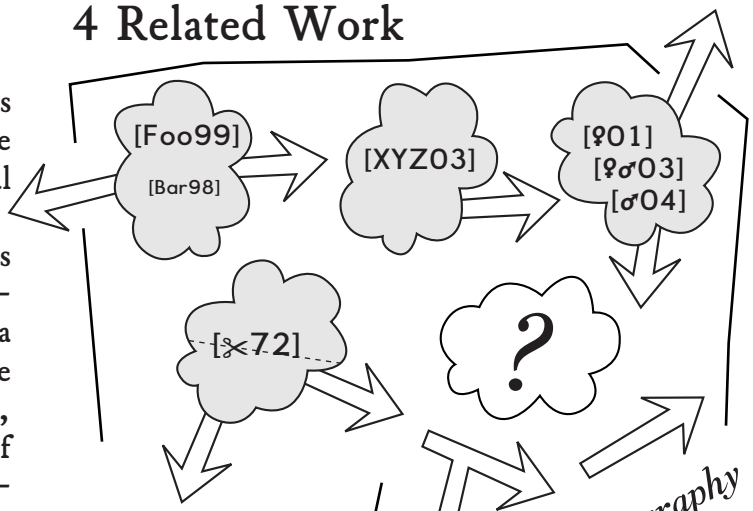


Fig 2. 100 per cent RDA of heavy metal umlauts

4 Related Work



5 Conclusion

Fig 3. Cryptobibliography

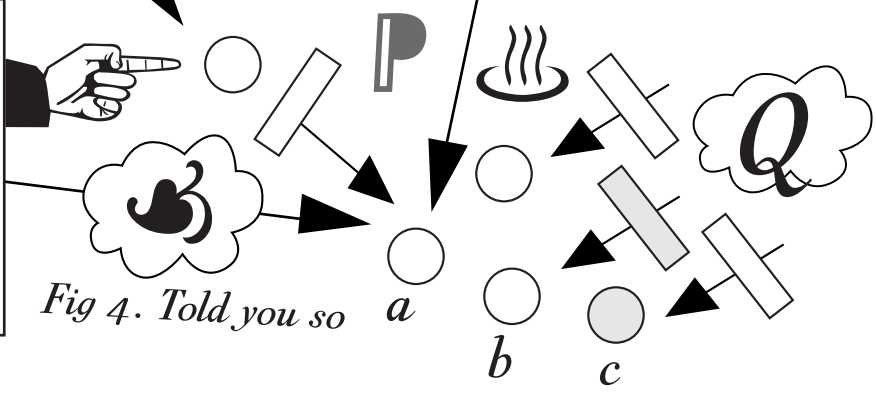


Fig 4. Told you so