Finding Nonsense in a Nineteenth Century Logic (Abstract)

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Abstract

It is a truth universally acknowledged that Dodgson's *The Jabberwocky* is a triumph of nineteenth century logic. However, exactly how this poem is to be mapped onto a useful or even a useless logical system has been a matter of some debate. Alonzo Church is known to have gone mad studying the more technical aspects of the poem, resulting in the hideously baroque λ-calculus and its barrage of modern descendants.

We present a novel reinterpretation of the work, not as a brilliant anticipation of Gentzen's natural deduction as it is traditionally seen, but instead as a piece of utter nonsense. Applications to category theory are discussed.

Within the context of this new interpretation, we then turn our sights to its applications in modern computer systems. We present a new programming paradigm, *Programming as Nonsense*, and sketch a language called BRILLIG which allows nonsense expressions to be inserted into program code arbitararily, vastly inhibiting program understanding. The type system for this language is shown to be unsound in deeply unsettling ways. Finally, we connect this to the work of GERALD GAZDAR, because we like his name.