

“Cuts and Truths: Cut Elimination and Disquotation”

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Abstract

I discuss some results and open problems for the application of standard cut-elimination strategies to systems featuring rules that provide the equivalence (suitably regimented) of A and ‘ A ’ is true (and extensions thereof). Due to paradox, the systems need to be nonclassical. I will mostly focus on some sub-structural systems. The obvious problem is that the step from A to ‘ A ’ is true collapses the logical complexity of the formula.

There are several ways of overcoming the problem: I consider non-contractive systems where one can disregard the logical complexity of formulae, but new questions arise about the nature of quantifiers. Another option is to drop the structural rule of identity (aka reflexivity): an additional measure of the number of applications of the truth predicate can now be added, and the system enjoys both cut elimination and an intuitive semantics.