

MODULES AND INFINITARY LOGICS

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Dedicated to Rüdiger Göbel for this 70th birthday

ABSTRACT. Withdrawn, see details in the introduction.

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§ 0. INTRODUCTION

Baldwin this year (2026) raised some issues. The original issue was an error in a proof in §4 used in the main theorem of section 2. However, the author point out that the proof give a weaker result which is sufficient in §2. Baldwin have further comments on the theorem from §2 (that is, elimination of quantifiers up to Boolean combination of positive existential formulas after adding enough individual constants), and the author has been revising.

But Baldwin have an real objection with the proof of that theorem.

In his words,

*I think I understand why I failed to understand you+r argument.
It stems from my wanting to understand what happens in small
models. I understand this is not relevant to (e.g.) determining
stability. But your argument had some treatment of small models
that I could never grasp.*

We have not come to agreement, so this remained in limbo.

Then the author has a 'bright idea'- eliminating the extra individual constants but having more formulas (still defining sub-groups), and make a new version.

Then Rishi Banerjee wrote a proof avoiding Baldwin objection and found a counterexample to the 'bright idea" by an example in which no formulas defining a subgroups cannot suffice; (see in the arXiv).

Later the author has in typing (so has not been checked) a different theorem: no individual constants but the formulas define affine (instead of subgroups) and the elimination does not depend on the model.

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