

Re: Metamathematically True or False?

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- *From:* "george" <greeneg@xxxxxxxxxx>
 - *Date:* 8 Jan 2006 21:30:20 -0800
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Rupert wrote:

- > george wrote:
- >> Sure,
- >> if you concede the existence of a first-order language of
- >> arithmetic.
- >>
- >
- > Existence of the language seems to me to be a pretty uncontentious sort
- > of proposition.

Well, it isn't. Once you have some unambiguous way of specifying the language, yes, the existence ceases to be contentious, but otherwise, you have to have a name for it, and you have to DEFEND your decision to CALL the language by that name.

- > Perhaps you're talking about existence of the standard
- > semantics for that language?

No, not even perhaps.
Please, don't do that.

- >> If you define a theory (as is standardly and wrongly done)
- >> as just any old consequence-closed class of sentences, then,
- >> yes, you can get a whole lot of basically worthless junk.
- >> Those definitions of those
- >> classes are problematic for the simple reason that it is
- >> too hard to say that you ever know what class you are talking
- >> about; you don't know which sentences are in the class and which
- >> are not.
- >>
- >
- > Why not?

Because if the resulting class is not recursively axiomatizable, and the resulting set has the property that neither it nor its complement is recursively enumerable, then, by definition, you get a lot of relatively short sentences with the property that you cannot determine, even after a relatively a long amount of time,

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whether they are or aren't in the set, THAT'S why. "True first-order arithmetic" is the classic example of such a theory.

My point being that rational parlance would NOT call THAT collection of sentences (the truths of the standard model) a "theory" in any case (DESPITE the fact that it is closed under consequence).

- > But what's that got to
- > do with it? Who mentioned truth?

As you wind up saying along another subthread,
truth was in AK's definition of sig