

Re: Countable models of ZFC

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On Sep 26, 5:35 am, Rupert <rupertmccal...@xxxxxxxxxxx> wrote:

I'm sorry you had so much trouble understanding it. It seems pretty straightforward to me. Given a set M,

Well, WHICH are we being given?? A SET?? OR A MODEL??

the standard membership relation
on M is $\{(x,y):x, y \text{ in } M \text{ and } x \text{ in } y\}$.

Up to this point, M is a set.

So a model (M,

And THERE is the problem.
Now, SUDDENLY, M is a model INSTEAD OF a set.
Or rather, M is the domain of a model.

If M is both a set AND the domain of a model
then IN ADDITION to the model (M,whatever),
THERE MUST EXIST ALSO
the model OF SOME SET THEORY in which M is a set,
and that model must have a domain of which M is a member.
THAT MODEL ALSO has a membership relation,
and THAT MODEL ALSO might be standard OR NONstandard.
IF THAT model was nonstandard then merely restricting its membership
relation to some submodel IS NOT going to guarantee that that submodel
(in this case, (M,E)) is standard. SOME nonstandard models DO have
nonstandard submodels.

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