Re: Implementable Set Theory and Consistency of ZFC

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- *From*: MoeBlee <jazzmobe@xxxxxxxxxxx>
- *Date*: Wed, 31 Oct 2007 11:45:10 −0700

On Oct 31, 6:12 am, Han de Bruijn <Han.deBru...@xxxxxxxxxxxxxx> wrote:

> Jesse F. Hughes wrote:
>
>> Han de Bruijn <Han.deBru...@xxxxxxxxxxxxxx> writes:
>>
>>> So, even if I don't make use of (5−8), a proof of A from
>>> (1−4) is a
>>> proof from (1−8) ?
>>
>> Of course.
>>
>>> So, even if I say "there exists a Foo", then such a statement is
>>> a
>>> valid premise for proving that the integral of 1/t from 1 to x
>>> is
>>> ln(x) ? Weird ..
>>
>> The statement can be proved in the theory consisting of the usual
>> axioms for real analysis and "there exists a Foo", yes. Do you think
>> that every theorem of ZFC uses every axiom of ZFC in its proof?
>
> It seens we have a different picture in our mind about the meaning of an
> implication A => B , as has been pinpointed by Ullrich as well. This is
> what I say about in in my article:
>
>> Another philosophical note is in place, when we are saying that we "make
>> with

> > an axiom" and denote this as an implication A => B. In common
> > mathematics,
> > the implication => just means what is de ned by a truth table in propositional
> > logic. But there is another form of mathematics, called constructivism.
> > Within
> > constructivist mathematics, an implication has a more "operational" meaning,
> > like: given A, we can construct B from A. So if we say "make with an
> > axiom",
> > then it is expressed herewith that we adhere to the constructivist meaning of
> > an implication. End of philosophical note.
>
> I think that you and Ullrich adhere to the common "material implication"
> of mathematical logic, where there is no place for axioms that "cause" a
> theorem (so to speak). In the latter sense there is no room for premises
> like "there exists a Foo". The axiom of Infinity is of the latter kind.

Then please specify an exact constructivist logic. Because, for
example, I am not aware that intuitionistic logic (even with its
semantics for '−>') contradicts monotonicity of deduction (if someone
informs me that intuitionisitc logic does contradict monotonicity of
deduction, then I'll look into that). So, if your logic is not
intutionistic, please specify your system of logic.

MoeBlee

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