Re: A simple question?

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- *From*: "MoeBlee" <jazzmobe@xxxxxxxxxxx>
- *Date*: 6 Nov 2006 12:59:20 −0800

David Marcus wrote:

> MoeBlee wrote:
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>> David Marcus wrote:
>>
>>> MoeBlee wrote:
>>>
>>>> I don't see why not. There's no modality of
>>>> "can" in the formal theory.
>>>> "can" is a loose way of speaking, which is
>>>> okay, but I don't know of
>>>> anything in IN the theory to distinguish 'can'
>>>> from 'is'.
>>>
>>> I think we can give a formal meaning (and I think Enderton
>>> would agree
>>> with this): If we say "S is a well ordered set", then we really
>>> mean
>>> "(S,R) is an ordered pair where S is a set, R is an ordering on
>>> S, and R
>>> is a well ordering".
>>
>> You left 'R' free in that formulation. But, other than 'S', there is
>> no free variable in 'S is a well ordered set'.
>
> Well, just because you don't see it, doesn't mean it isn't (implicitly)
> there. If S can be free, then why can't the (invisible) R?
>
> Of course, any unbound variables will be bound by putting "for all"
> around the entire statement.

'S' is implicity bound by a universal quantifier. But it doesn't work
for 'R' that way. Or, tell me what formulation you have in mind where
'R' is bound by a universal quantifier to translate, specifically, "S

is a well ordered set".

>> So for your formulation
>> to work, it has to be, "There EXISTS an R such that <S R> is a well ordered set" or "There EXISTS and R such that <S R> is structure in which R is a well ordering of S."

> I'd do "For all S, for all R, if <S,R> is a well ordered set, then ..."
>
> How is it different from saying "G is an abelian group"?

First, just as a personal matter, I just don't like "<S R> is a well ordered set." Yes, <S R> is a set, but, to me, what is well ordered is S, not <S R> (well, actually, quite literally, <S R> is well ordered since it is {{S} {S R}}, which is a finite set, hence it has a well ordering; but that is not what we have in mind). So, I say S is well ordered by R and S is a well ordered set and <S R> is a well order structure.

Second, I don't see the relevence of your analogy. We were talking about formalizing "S is a well ordered set" not some other larger statement "If S is a well ordered set, then [...]"

>> I can take it as "If there exists an R such that R is a well ordering of S, then S is never similar to one of its R−segments", which is pretty much the way Suppes would put it.

> How would you write that more formally?

That was a mistake. I made a correcting post in which I said what I actually meant, and it does work to the advantage of your point of view, I admit.

> AS ER [<S,R> is a well ordering −> <S,R> is not similar to one of its initial segments]
>
> Seems to me I can make this true by picking R so <S,R> is not a well ordering. I think Halmos means
>
> AS AR [<S,R> is a well ordering −> <S,R> is not similar to one of its initial segments]

Yeah, that existential version is my goofup. I didn't really mean that. And, yes, I agree that the above is correct, as I mentioned in my correcting post.

MoeBlee

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