Re: Moore on Skolem's Paradox

Source: http://sci.tech−archive.net/Archive/sci.logic/2005−09/msg00615.html

- *From*: David C. Ullrich <ullrich@xxxxxxxxxxxxxxx>
- *Date*: Sat, 24 Sep 2005 09:25:28 −0500

On 23 Sep 2005 11:30:46 −0700, "William of Ockham"
<d3uckner@xxxxxxxxxxxxxx> wrote:

>I have just found a paper by A.W. Moore, where it is argued that
>Skolem's Paradox really is a paradox after all. I include an extract
>below. I'm not saying I agree with his argument, I include it only to
>refute the arguments that inability to see that it is not a paradox is
>proof of the need to read a logic book. Moore is professor of logic at
>Cambridge University and has written and lectured extensively on set
>theory. I assume he has read all the necessary books. Perhaps he did
>not understand them? Very well, but then I am hardly likely to
>understand them either, and the exhortations are needless.
>
>Ockham
>
>PS I have contributed a short article to Wikipedia here

The "paradox" has to do with the existence of models of
set theory with certain "paradoxical" properties. We've
established that you do _not_ know exactly what a model
of set theory is. So why are you contributing articles
to Wikipedia on this topic?

Do you specify in the article that the author does
not know exactly what Skolem's theorem states?

>http://en.wikipedia.org/wiki/Skolem%27s_paradox
>
>with an account of Moore's version.
>
>And here is the extract:
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>−−−
>MOORE ON SKOLEM'S PARADOX
>−−−
>
>The article from which this extract is taken appeared as Moore, A.W.
>"Set Theory, Skolem's Paradox and the Tractatus", Analysis 1985, 45.
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>
>... The only possible conclusion [given the Lowenheim−Skolem Theorem]
>seems to be that notions such as countablility and uncountability are
>inherently relative. ... Our description of P(w) as uncountable, even
>though correct, must be understood relative to our own current point of
>view. From another point of view this very set may be countable. But I
>want to argue that such relativism, compelling though it is, is subject
>to the by now familiar predicament that any statement of it, if it is
>to be intelligible at all, will have to be understood within a
>framework that casts it as a straighforward error. It is this which I
>take to be Skolem's paradox.
>
>The crux of the matter is this. If there is an implicit relativization
>in our claim that P(w) is uncountable (the claim which is established
>by Cantor's argument), then it ought to be possible to make it explicit
>(just as it is possible to make explicit any relativization in the
>claim that a physical object is moving). But it is possible to do so
>this only insofar as it is possible to construe our discourse about
>sets as discourse about a particular collection of objects, the
>collection to which such claims must be relativized. And this in turn
>is not possible unless we endorse the fundamental error that there is a
>set which contains all the sets we intend to talk about. When it is
>claimed that P(w) is not unconditionally uncountable, we have no way of
>understanding this except as the demonstrably false claim that it is
>not uncountable at all.
>
>Admittedly, there are interpretations of the language of set theory
>under which all the "right" sentences come out true and in which w is
>correctly represented as such even though the set represented as its
>power set is countable. Any such interpretation can be thought of as a
>limited point of view; there are correlations to which we have access
>and which are not in its domain. But there are also further subsets of
>w to which we have access, as Cantor's argument testifies. What we
>ourselves take to be P(w) never appears to be anything but uncountable.
>The relativist, convinced that our own point of view is in turn
>limited, urges us to acknowledge the possibility that what we ourselves
>take to be P(w) is not − as viewed from some even higher vantage−point
>from which it may yet be countable. But how are we to make sense of
>this? Certainly not by trying to view P(w) from two different points of
>view at once; that would be incoherent. Nor by trying to view it simply
>from this point of view; thay would make the possibility
>unintelligible. But if it were possible to view it from an absolute
>standpoint, then relativism itself would lose its rationale and there
>could be no objection to saying that P(w) contained all of w's subsets
>and that it was unconditionally uncountable. So if we do deny the
>absolute uncountability of P(w), then what exactly are we denying and
>where, so to speak, are we denying it? (The mere fact that there are
>legitimate concepts of countability and uncountability which do involve
>relativisation to certain domains is beside the point. The relativist
>wants to insist that there are no absolute concepts of countability and
>uncountability − that it makes no sense to describe P(w) as

>unconditionally uncountable). We, in mounting a general investigation
>into what sets are like, can only aspire to know whether or not P(w) is
>countable, as it were here. It is not. But we can have no grasp on any
>distinction between what is true here and what is true simpliciter. So
>P(w) is uncountable simpliciter.
>
>Yet the very use of the word "here" appears to vindicate the
>relativist. There remains a real predicament. That which cannot
>legitimately be stated (relativism) appears, for all that, to impress
>itself upon us as soon as we step outside mathematical practice and
>reflect on what is revealed therein. This predicament is directly
>analagous to that which Wittgenstein faces in the Tractatus. There is
>no particular point of view in the world which can be spoken of as
>here: our point of view is a limit of the world. That is, there is no
>particular set in the hierarchy of sets which can be spoken of as the
>intended range of the quantifiers: they are intended to range over the
>whole hierarchy (though not even this can properly be said). And here
>an intriguing possibility arises. If we are prepared to extend the
>analogy with the Tractatus, then it will become apparent that, despite
>the fact that relativism defies any coherent statement, the debate
>between the relativist and the non−relativist is in a very deep sense
>irresoluble. For what the relativist means is quite correct; only it
>cannot be said, but makes itself manifest (5.62).

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David C. Ullrich
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- ***Follow−Ups***:
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  - ♦ ***Re: Moore on Skolem's Paradox***
    - ◊ *From:* William of Ockham

- ***References***:
  - ♦ ***Moore on Skolem's Paradox***
    - ◊ *From:* William of Ockham

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