

Re: Well Ordering the Reals

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-11/msg03194.html>

- *From:* Virgil <ITSnetNOTcom#virgil@xxxxxxxxxxx>
 - *Date:* Mon, 21 Nov 2005 14:30:16 -0700
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In article <MPG.1debfc2c8aac108b98a73c@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>, Tony Orlow <aeo6@xxxxxxxxxxx> wrote:

> Virgil said:
>> In article <MPG.1debd23d3457fa4098a736@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>, >> Tony Orlow <aeo6@xxxxxxxxxxx> wrote:
>>
>>> William Hughes said:
>>
>>>> Suppose we start at 1 and the size of the set is a natural
>>>> number within the set, when we start at 0, the set size is 1
>>>> more that a natural number within the set. In both cases the
>>>> set size is finite.
>>>
>>> Yes, there is essentially no difference, except that with the
>>> current construction of the axiom of infinity, we are led
>>> logically to believe that the set size is larger than all
>>> elements of the set, so when the set includes all finite numbers,
>>> we say the size is larger than all finites, and is infinite.
>>
>>
>> Right on!
>>
>>> That's a logical leap, when you consider that at each point the
>>> set size is 1 more than the largest element, so your set size
>>> larger than all finites exceeds the largest by 1, and should also
>>> be considered finite, as opposed to the standard consideration
>>> that calls it infinite.
>>
>> Given $N = \{1,2,3,\dots\}$, let $S_n = \{1,2,3,\dots,n\} = \{x \text{ in } N: 1 \leq x \leq n\}$.
>>
>>> For all n in N there is m in $N \setminus S_n$, so for all n in N , $\text{size}(N) >$
>>> $\text{size}(S_n) = n$.
> No, here is your mistake. $\text{size}(N) \geq \text{size}(S_n) = n$. The size is a
> member of the set.

But if for all n , $\text{size}(N) \geq \text{size}(S_{(n+1)}) > \text{size}(S_n)$

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and there exists any n for which $\text{size}(N) = \text{size}(S_n)$
then for that n , $\text{size}(N) < \text{size}(S_{(n+1)})$

Failure to accept this would be only one more proof of TO's quantifier dyslexia.

>> Thus the size of N cannot be a member of N . And the finiteness of
>> members of N is no restriction on the size of N .

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• *References:*

- ◆ **Re: Well Ordering the Reals**
 ◇ From: Tony Orlow
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Daryl McCullough
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Tony Orlow
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: MoeBlee
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Robert Low
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Tony Orlow
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 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Virgil
 - ◆ **Re: Well Ordering the Reals**
 ◇ From: Tony Orlow
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