

Re: Epistemology 201: The Science of Science

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-03/4662.html>

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In sci.math Tony Orlow (aeo6) <aeo6@cornell.edu> wrote:

: Allan C Cybulskie said:

:>

:> <stephen@nomail.com> wrote in message

:> news:d09vvs\$2dm3\$1@msunews.cl.msu.edu...

:> > In sci.math Allan C Cybulskie <allan.c.cybulskie@yahoo.ca> wrote:

:> > : I don't want to reply to all the posts right now, but really need to

:> reply

:> > : to this part of this here ...

:> >

:> > : Here is the definition (also helpfully left above) that you gave for

:> "proper

:> > : subset":

:> >

:> > :>>If A is a proper subset of B then B contains

:> > :> EXACTLY THE SAME elements as A plus some more

:> >

:> > : If that is the definition of proper subset, then what it says is that B

:> must

:> > : have a larger number of elements than A since it has exactly the same

:> > : elements (thus, the same number of elements) as A PLUS SOME MORE, as you

:> > : said. Yes, it says nothing about bijection but note that for the

:> infinite

:> > : sets we have been talking about the bijection approach says that a

:> proper

:> > : subset has the same number of elements as the superset. THAT is a

:> > : contradiction between the two definitions.

:> >

:> > No it is not. The answer to "the number of elements" is a number.

:> > I already showed you several examples of numbers where $x+a=x$, even

:> > when a is non zero. There is no contradiction.

:>

:> And I dealt with that by pointing out the mathematical trick that it relies

:> on. For example, here's another claim of the same sort:

:>

:> infinity + 1 = infinity + 2 is in fact a balanced equation. But if I try to

:> subtract out the infinities on both sides, I get $1 = 2$, which is clearly

:> ludicrous. The reason this is a trick is that we call this a balanced

:> equation because infinity + 1 and infinity + 2 both get treated like
:> infinity, but then we try to get rid of the infinity which is the only thing
:> that made them balanced we end up with a balanced equation.
:>
:> Your argument was exactly like that. You rely on infinity + anything
:> remaining infinity, but that does not mean that the relative number of
:> elements cannot be said to be larger based on the definition of the set
:> itself.
:>
:>
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:>
: I agree fully. The added 1 is insignificant in terms of the relative
: increase to infinity, but is a unit of increase nonetheless. To say
: $\text{infinity}+1=\text{infinity}$ is essentially useless. One member is the difference
: between the infinite sets of natural and counting numbers, and is
: significant enough to warrant a separate name for the set.

Apparently your position has changed since a month ago.

<http://groups-beta.google.com/group/comp.ai.philosophy/msg/27aab7dc782bfae3?dmode=source>

"Infinity+1 is $(1+0)*\text{infinity}$. Like the zero is nothing compared to the one, the one is nothing compared to the infinity. It is therefore impossible to distinguish between infinity and infinity+1."

Stephen