

Re: tommy1729 set axioms

Source: <http://sci.tech-archive.net/Archive/sci.math/2008-07/msg01568.html>

- *From:* lwalke3@xxxxxxxxxx
 - *Date:* Wed, 16 Jul 2008 16:48:38 -0700 (PDT)
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On Jul 16, 6:44 am, amy666 <tommy1...@xxxxxxxxxxxx> wrote:

On Tue, 15 Jul 2008 18:41:19 EDT, amy666
How you choose to define "NOT []" is
irrelevant to that. Your theory proves that
a certain statement is true and it also proves
the same statement is false. That means the
theory is inconsistent, by definition.

you have a point there...
but in this case it seems false and true are actually the same.
its like $5 + 0$ contains 0 although it equals $5 + 0 - 0$.

It appears that there is some confusion
regarding the use of the word "NOT."

Here tommy1729 seems to feel that the
"NOT" is a unary operator similar to the
negation operator in Z (where Z denotes
the ring of integers). This is evident
from his example of how $0 = -0$.

But the others are using "NOT" as a
logical operator, as in NOT P (or $\sim P$),
the negation of a property P.

I suppose that there is nothing wrong
with defining a NOT operator on sets,
so that if x is a set, then NOT(x) is
also a set. Indeed, Han de Bruijn does
exactly that in his own set theory
(introduced on sci.math months ago),
where NOT(x) is actually the set
complement of x (relative to some
universal set U). Indeed, perhaps
in tommy1729's set theory, we could
have NOT(${}[]$) = ${}[]$.

The confusion appears to be that even though there can exist an integer n such that $n = -n$, there _can't_ exist a property P such that $P \leftrightarrow \sim P$ -- at least, not in a consistent theory. So, as much as I like to defend tommy1729 in his pursuit of a new set theory, his line:

but in this case it seems false and true are actually the same.

is indefensible. "False" and "true" can only be the same in an inconsistent theory, and there is no comparison between " $0 = -0$ " and " $P \leftrightarrow \sim P$."

Of course, the reason for this subthread is that tommy1729 wants the axiom " $\forall x (x = [x])$," which is incompatible with set theory but, as galathaea points out, could make sense in a mereology theory similar to the ones zuhair posted at sci.logic earlier this year.

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