Re: Cantor's definition of set

Source: http://sci.tech−archive.net/Archive/sci.logic/2007−10/msg00982.html

- *From*: John Jones <jonescardiff@xxxxxxx>
- *Date*: Sat, 27 Oct 2007 16:16:26 −0700

On Oct 27, 11:05?pm, G. Frege <nomail@invalid> wrote:

> On Sat, 27 Oct 2007 14:32:47 +0200, Jan Burse <janbu...@xxxxxxxxxxx>
> wrote:
>
>> Sets are nameless.
>
> No, not really. (Depends on the very system considered.)
>
> Actually, set abstracts (say "{x : x =/= x}") are terms, i.e. names
> (again depending on the very system considered, of course).
>
>> This follows from the axiom of "extensionality".
>> This axiom exactly says that sets do not have names.
>
> But wait a second... if I get you right, then not even people "have"
> names. After all a name is not some mark on the foreheads of people...
>
> But names are USED to refer to certain people. In the same way we use
> certain names (for example set abstracts) to refer to (certain) sets.
>
> For example, in ZFC we may use the name "{x : x =/= x}" to refer to the
> empty set.
>
>> Because the axiom says that sets are already equivalent when they
>> have the same elements in it.

> No. The axioms doesn't say that they are "equivalent", but IDENTICAL
> − if we formulate our set theory in a framework of FOPL _with identity_.
>
> A = B
>
> HERE means that A and B are _identical_; not just "equivalent".
>
> > So there is no room for a name.
>
> Of course there is. Actually, there are variants where the symbol "0" is
> a primitive, and we have an axiom
>
> ~Ex(x e 0).
>
> If we read "~Ex(x e y)" to mean: y is empty. The axiom states that 0 is
> empty. With other words (given extensionality) 0 is _the_ empty set. And
> this in turn means: "0" denotes the empty set in this theory.
>
> No room for a name? Huh?!
>
> F.
>
> −−
>
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Quite right again georgy. You said:

> But wait a second... if I get you right, then not even people "have"
> names. After all a name is not some mark on the foreheads of people... But names are USED
> to refer to certain people. In the same way we use
> certain names (for example set abstracts) to refer to (certain) sets.

Certainly. But have I not said this already − that a set is defined by
its name? In other words, a set has no properties of its own. THAT is
why he said a set has no name. He construed having no properties as
not having a name.

Q.: if something, like a set, has no properties, how can it have a
name?

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