

Re: set of a set etc.

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-07/msg03275.html>

- *From:* "Mark Nudelman" <markn@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 20 Jul 2005 12:21:33 -0700
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Stephen J. Herschkorn wrote:

> Jasper wrote:

>

>> The description is what I would call formal, not conceptual. "My cat"

>> and the set of my cat {My cat} are different conceptually. My cat

>> likes milk. The "set of my cat" does not, yet the two denotations

>> are closely related. What is the conceptual relationship between the

>> two?

> Your cat is a member of the set of your cat. The set of your cat is

> not a member of your cat.

>

> Sets are collections. A collection is distinct from the objects

> therein (usually). Put a ring in a box. The box contains the ring;

> the box and the ring are not the same thing.

Just to confuse matters, W.V.O. Quine in "Set Theory and Its Logic" defines the law of extensionality and notes that a consequence of it is that there is only one memberless object. That is, since extensionality says that two things are identical if they have the same members, and individuals do not have members, all individuals are identical to the empty set and to each other. To avoid this, he could treat an individual as a different sort of object than a set, but instead he defines " $x \in y$ " as meaning " $x = y$ " when y is an individual. A consequence of this is that individuals are identical to their unit sets, that is, $x = \{x\}$ but ONLY when x is an individual. Of course, he retains $x \neq \{x\}$ when x is a set. He takes some pains to show why this is harmless, but it does seem rather odd.

--Mark

- *Follow-Ups:*

- ◆ *Re: set of a set etc.*

- ◇ *From:* Jasper

- *References:*

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- ◆ **set of a set etc.**
 - ◇ *From:* Jasper
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Jean-Claude Arbaut
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Jasper
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 - ◇ *From:* Jean-Claude Arbaut
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Jasper
- ◆ **Re: set of a set etc.**
 - ◇ *From:* G . Frege
- ◆ **Re: set of a set etc.**
 - ◇ *From:* William Elliot
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Jasper
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Dave Seaman
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Jasper
- ◆ **Re: set of a set etc.**
 - ◇ *From:* Stephen J. Herschkorn

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