

Re: Platonism

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examachine@gmail.com (Eray Ozkural exa) writes:

>In short, does your position in philosophy of mathematics have a name?

None that I am aware of.

>I found it quite interesting!

I wasn't expounding my philosophy.

*>> It is a mistake to assume that "exist" as used by mathematicians has
>> the same meaning as it has when we talk of the existence of ordinary
>> things. Likewise, mathematical usage of "model" is different from
>> ordinary usage.*

*>I actually like your point about "model". But I cannot say if I like
>the point about "exist". What is this sense used by *most*
>mathematicians then? Would you care to explain? [I don't say "all", I
>say "most" in the above discussion.]*

Often, mathematicians demonstrate existence by construction. Of course, that is the mathematical sense of "construction".

For the ordinary sense of "exists", I will note that something exists after it has been constructed, and only until it has been destroyed. But when mathematicians construct an object, they conclude that it exists for all time. In particular, it existed before this particular construction, and it cannot be destroyed.

This should illustrate why the mathematical sense of existence is different from the ordinary sense.

*>I am hoping you do not mean that in (most!) mathematics consistency is
>identical to existence. That would be quite silly, would not it?*

sci.math: Re: Platonism

Normally one applies the term "consistency" to systems of axioms, and "existence" to mathematical objects. An inconsistent system of axioms could still exist, even though inconsistent.

*>I think when I say a mathematical object, I usually mean a
>mathematical thought.*

That does not work. For that would make mathematical objects subjective, and would imply that two different mathematicians have two distinct numbers three.

It is important to mathematicians, that mathematical objects are objective.

*>The only answer I can find is that (in current mathematics)
>* They don't have to directly correspond to physical systems, they can
>talk about certain mental constructions with desirable properties such
>as abstractness which are not *directly* derived from sensory
>experience or empirical trials e.g. graph theory. A graph is an
>abstract concept. But it is wrong to say that graphs do not exist in
>the real world. They certainly do, especially when programmed on a
>computer!*

The graphs that exist in the real world are not the graphs that mathematicians concern themselves with.

*>But unfortunately there can be cases in mathematics that are not even
>*indirectly* derived from observations, that are solely the result of
>thought experiments and are indeed incompatible even with the basic
>features of our universe. I don't find this a desirable thing, because
>I find these to be misleading thought experiments. I suggest we put
>them aside until we can find a use for them.*

You only illustrate the extent to which you are confused about mathematics.

*>By the way, another view that I might regard good enough would be some
>kind of mathematical instrumentalism, that might say that "exist" is
>used only as a figure of speech in mathematics, which is precisely
>what I'm suggesting is the current practice.*

That's approximately my own view. But most mathematicians disagree.

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