

Re: Is one-to-one mapping valid for comparing infinite-sized sets?

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  - *Date:* Mon, 27 Oct 2008 00:48:04 +0100
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"Klaus Cammin" <[netzklau@xxxxxxxx](mailto:netzklau@xxxxxxxx)> schrieb im Newsbeitrag  
<news:6mgqq3Fgj09IU1@xxxxxxxxxxxxxxxxxxxxxxxx>

Salviati schrieb:

Why should those mathematicians be wrong who denied the LUB?

Who are they?

To be found via Wikipedia.

If they deny the LUB, they're silly. They could have a continuum, but they don't want it. They won't get another.

Well, Cantor's paradise looks nice on the first glimpse, and you are correct in that there is no quadrature of the circle as is no perpetuum mobile. Nonetheless Dedekind as well as Cantor, Hilbert, Zermelo, etc. did not create a sound and fertile basis but they furnished an unnecessary illusion with perhaps detrimental consequences in physics.

No. As in case of Cantor's DA2, a correct result is no compelling evidence for correct reasoning.

Great.  
Please explain, how one can yield correct results with incorrect reasoning.

Ask teachers. This happens not rarely.

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Is proof a matter of taste for you? Funny. I tell you, the strongest proofs are those, which everybody must accept even against prior objections.

Be aware that I refuse to discuss with someone who insults me.

Someone who claims, that Cantor's math was flawed because of his alleged mental problems, should not expect a too friendly addressing.

I rather see his insanity a consequence of feeling possibly wrong.

Right, since we're talking about infinite decimal expansions (reals), no limit belongs to the rational numbers.

That's why I met mathematicians who admitted that they do not understand what makes the reals different from the rationals.

I guess you got it wrong. They wanted to explain to you, that regarding the characterization of reals as infinite decimals, there's no difference.

No. Even Ebbinghaus made a pertaining confession.

Telling apart periodic reals from those without that property is the next step.

This would not work for different systems of numbers. Cantor understood the difference better. He also understood that infinity is an abyss. Such rather deep insight might have driven him insane.

Each single of them is uncountable.

No real is uncountable. Only all reals are uncountable.

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I know the text. I consider it wrong.

Funny: you and WM keep mixing up elements and their sets.

The genuine continuum cannot be resolved into single elements.  
I do not see much justification for calling it a set.

What you called outer-mathematical must not be excluded  
from mathematics if one respects genuine rigorosity.

That's a good one.

No joke.

The point is, even the best understanding was sacrificed  
to seeming rigorosity after Cantor managed to cheat.

Yes, sometimes the course of science declares previous statements as  
invalid. Otherwise we would still believe today, that earth is the center  
of the universe. But how can you expect, that your prejudice, that Cantor  
cheated, will invalidate his mathematical proofs?

I tend to guess that Cantor was just overly naive and ambitious, and he  
mainly cheated himself. History of mathematics shows many wrong mathematical  
proofs, not just evidence for the existence of god.  
When Cantor assumed trichotomy, he could not show something else than  
trichotomy. So his proofs were in some sense circular and wrong from the  
very beginning.

I am arguing, real numbers are something  
quite different

Agreed, hence my advice: throw away the old rationals.

If so, why to distinguish between rationals and reals?

You mean, irrationals and rationals, don't you?

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No.

Reals are both, and that's because YOU agreed to our definition of reals as infinite decimals.

If you (FIRST) don't distinguish between rationals and irrational numbers, you are able to detect, what they have in common. It's also nice having a unifying theory for them. The differences are still there, getting visible after some technical work.

Why do you not even try to understand me?

I do not intend spoiling mathematics for nothing.

Your bias (expressed by "spoiling") prevents you from detecting the benefits of the new theory.

A paradise can be an illusion.

Modern definition might be able to hide unresolved questions.

You seem to be too blocked to see the advantage.

I am seeing them quite clearly.

The "unresolved questions" were the very obstacle.

What I refer to is still unsolvable with set theory.

Salviati:

.... in ultima conclusione, gli attributi di eguale maggiore e minore non aver luogo ne gl'infiniti, ma solo nelle quantità terminate.

$\mathbb{R} \gg \mathbb{R}^+ \parallel \mathbb{R}$

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