Re: The Law of the Excluded Middle again (long)

Source: http://sci.tech−archive.net/Archive/sci.math/2007−12/msg00767.html

* *From*: Angus Rodgers <twirlip@xxxxxxxxxxx>
* *Date*: Tue, 04 Dec 2007 04:33:36 +0000

On Mon, 3 Dec 2007 20:09:02 −0800 (PST), Randy Poe
<poespam−trap@xxxxxxxxx> wrote:

> On Dec 3, 6:32 pm, Angus Rodgers <twir...@xxxxxxxxxxx> wrote:
>
>> On Mon, 3 Dec 2007 14:12:38 −0800 (PST), Randy Poe
>> <poespam−t...@xxxxxxxxx> wrote:
>>
>>> Why do you think we can't say "either x>1 or x<=1"
>>> in a proof? If x is a real number, there aren't
>>> any other possibilities.
>>
>> We are apparently in heated agreement! Nothing at all bothers
>> me about such a statement occurring in a proof! But apparently,
>> according to constructivists such as Keith Ramsay and galathaea,
>> it /ought/ to bother me; and, as both those people are better
>> mathematicians than I am, it bothers me that they think that it
>> should bother me, when it doesn't.
>
> Somehow I think you're seriously mangling something
> perfectly reasonable other people are saying.

Oh dear! That's always possible, I suppose. And given that it's now after 4 a.m. over here, and I'm dog−tired, I am very probably going to mangle something reasonable you've said! Please accept my apologies in advance.

Am I right in inferring that you think I have made constructivism seem unreasonable? (I certainly wouldn't claim to have done so using rational argument, and I don't think I have done so using devious misrepresentation either.)

>> But apparently I should instead think of a hypothetical situation

> > in which someone (not necessarily a single individual, but some kind of generalised subject) has actually constructed some numbers x, y and z. In such a situation, it is not possible to say with certainty either that x > 1 or that x <= 1, because either of these statements would require a proof, which simply might not be available (to the person or "subject" in question).

> Yes, it is possible to say that. For every real number, either x > 1, or x <= 1. There are no real numbers which fail to meet one of these conditions. That requires no proof. It is in fact a restatement of the trichotomy axiom.
>
> So you are directly contradicting what you said above. I asked you what problem you had with the statement "either x > 1 or x <= 1". You said you had no problem with it. A short paragraph later, you say you can't accept it as true without "proof". That constitutes a problem.

Perhaps, but it is a problem very easily solved by the simple devices of repetition and underlining (in a monospaced font):

> On Dec 3, 6:32 pm, Angus Rodgers <twir...@xxxxxxxxxxx> wrote:

> > But apparently I should instead think [...]

^^^^^^^^^^ ^^^^^^

The whole paragraph was a paraphrase of what I have been told by certain other people.

It was not an expression of my own views, which, so far as I can tell, coincide with yours.

You can check this. You quoted the whole paragraph above, and I have retained your quotation.

Re−reading it, I can see that it was ambiguous. The second sentence might well not have been understood to be qualified by the opening phrase (underlined above). I apologise for the ambiguity; but I think you should also apologise for not seeing that it could be read either way, and cutting me some slack.

This is hard work! :−)

> So again I ask you, what problem do you have with it?

And I say again, none.
--
Angus Rodgers
(twirlip@ eats spam; reply to angusrod@)
Contains mild peril
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