Re: Godel's theorem is invalid?

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- *From*: "sradhakr" <sradhakr@xxxxxxxxxx>
- *Date*: 10 Nov 2005 23:03:00 −0800

george wrote:
> sradhakr wrote:
> > This is the classical viewpoint, which has been disputed.
>
> Never coherently.
>
> > For example,
> > I believe that Neil Tennant has asserted in his book ("The taming of
> > the true"?) that all truths are knowable.
>
> Then his definition of truth simply does not match the classical one.
>
I am not saying that I agree with Tennant's arguments (which are based on Dummett's version of intuitionism, which I don't really agree with).

> > The issue here is whether one
> > can meaningfully talk of "truths" that are *in principle* unknowable.
>
> I don't know that anyone has ever alleged the existence of
> such a truth. Truths that are in principle unprovable in PA or
> ZFC are always going to be provable in some stronger system.

So how do you know that the "stronger system" is consistent? E.g. let us take FLT, which Wiles has proved in a stronger system than PA (something intermediate between PA and ZF). Has he established the truth of FLT, i.e., can we be certain that counter−examples to FLT will never be found? Certainly not. If FLT is undecidable in PA (which is something that we cannot prove with certainty) then we can never ever know whether it is true or false. As far as my logic NAFL is concerned, your alleged "stronger system" doesn't exist and it is a requirement of the consistency of PA that PA−undecidable propositions (which lead to nonstandard models of PA) do not exist.

> So if knowledge is being linked to provability then there simply
> ARE NO truths that are "in principle unknowable". The first thing
> you have to do to motivate THIS argument is find someone foolish
> enough to allege that some particular mathematical thing is
> "in principle unknowable". We can then thereAFTER dispute whether

> there is any sense in which that "thing" could ALSO be a "truth".

See my argument above.

>
> > Please see my argument below.
> > >
> > > Imagine that you have some formula Phi(n). For example, n might
> > > be the statement "2*n is a number that can be expressed as the
> > > sum of two prime numbers". You can check to see that Phi(0) is
> > > true, you can check to see that Phi(1) is true. For any n, you
> > > can check whether Phi(n) is true.
> > >
> > Let us take this real slow. What exactly do you mean by the assertion
> > that
> > >
> > "For any n, you can check whether Phi(n) is true"?
> >
> I mean that if you give me an n, I can check it, and it
> doesn't matter what n you give me. And I won't need
> infinite resources to check it, either. Some finite amount
> of resources r(n) will ALWAYS suffice. r(.) might not
> be recursive, though.

Nope. If "I give you an n" and you check the truth of Phi(n), that is
just one instance of the above assertion, which therefore has not been
established. I can repeat this any number of times, and the above
assertion still has not established, It has been established "after" I
have given you "all" possible values of n, this is what I am saying is
not a meaningful assertion.

>
>
> > What you obviously mean here is that you can check Phi(n) for
> > infinitely many *instances* of n, taken one at a time
> >
> Right.
> >
> > and exhaust the class N of natural numbers.
> >
> Wrong. I am not claiming the ability to exhaust anything.
> I am just saying that the "I can handle any 1" challenge
> applies (exhaustively) throughout n. This does NOT mean
> that *I* can exhaust anything.
No, the above assertion is estabilshed as true only "after" N has been
exhausted.
>
> > This is precisely what I am saying is meaningless.
> >
> Well, I'm sorry, you CAN'T SAY that.
> The components have meanings. They combine

> properly. I can in fact DO exactly this, so you can't claim
> that the words that describe what I'm doing are meaningless;
> I'm refuting claim *BY DOING* it.

No, you are not.

>
> > Every time you check Phi(n) for a given instance, there
> > are infinitely many instances remaining to be checked; so you really
> > cannot exhaust N this way.
>
> Of course I can't, and I conceded that, and that has
> NOT ONE IOTA OF IMPACT on the TRUTH or the MEANING
> of what I originally said.

Nope. What you originally said, namely that "if I give you an n", you
can check the truth of Phi(n), is established only "after" I have
"given you" infinitely many values of n, one at a time, and exhausted
N.

>
> > So I don't accept that you can meaningfully
> > make the above assertion,
>
> Whether you accept it or not is irrelevant;
> neither the meaning nor the satisfaction of the assertion
> depends on your acceptance.
>
> > unless and until what you say below is false:
> >
> > >Yet there may be no known way to check whether "forall n, Phi(n)" is true.
>
> Classically there is simply NO inferential connection between
> these two things. All the instances, for all n, even if we COULD
> exhaust
> them, could all come up true, and "forall n, Phi(n)" could STILL come
> up
> FALSE, because the "forall" INside the object language ranges over
> MORE things than the "for all" out in the meta−language did.

This presumes the existence of nonstandard models and the infinitary
reasoning (e.g. infinite sets) needed to establish their existence.
>
> > In other words, I dispute your assertion that "If one continues
> > checking the truth of Phi(n), for each instance of n, taken one at a
> > time, one will never ever find a counter−example" is meaningful;
>
> Please; if it is false, that IS meaningful, it is just false,
> and it is false IN VIRTUE OF its meaning, so you can't say
> it doesn't have a meaning. The only possible way you could
> be right in asserting that it is meaningless via THIS objection

> is IF IT IS TRUE, but the fact that we are CONFIRMING ITS TRUTH
> in this case means that it MUST have a meaning IN THIS CASE AS WELL.
>
> So Shut Up.
>
> > it is
> > an infinite process that can never be completed *in principle*;
>
> NO, it is NOT a process AT ALL, because we ARE NOT alleging
> any TIME or any degree of difficulty in ANY of this. ALL the true
> instances are true ALREADY, REGARDLESS of whether anybody
> has "confirmed" or checked ANY of them YET. All the valid
> proofs of all the instances exist ALREADY. No further process
> IS REQUIRED. This boneheaded invocation of physicalist metaphors
> is just that. We live in a place without time or place. DEAL WITH
> THAT.
>
No, what I am saying is not "physicalist". Instead it conforms with the idea that mathematical truth consists of axiomatic declarations in the human mind, as in my logic NAFL. What YOU are saying amounts to Platonism, i.e., infinitely many natural numbers already "exist" in a Platonic world, in which "all" instances of Phi(n) will turn up true, regardless of our ability to establish such a truth. THAT is what I reject. Deal with it, or delve into my stuff and refute what I am saying. If you can take a serious look at my work on NAFL, you would do me an enormous favour, for you obviously know a lot more about "formalization" than I do.

> > what
> > you are really saying is that we have some means of checking (proving)
> > the truth of Phi(n) for an *arbitrary* (unspecified) n,
>
> NO, I am NOT saying that. I am CONTRASTING this with that.
>
> > which would
> > obviously prove "For all n Phi(n)".
>
> Obviously, but that's NOT WHAT WE'RE SAYING.
>
> > Of course, classical logicians (you
> > included) will not agree with me, but what I have said above actually
> > holds in my proposed logic NAFL
>
> Please. It CAN'T POSSIBLY hold.
> It's not soomething you get to have an opinion about.
> We are already talking about OUR logic.
> Our logic actually has the property that infinitely many
> instances of something can be individually provable.
> If yours doesn't then good for you, but even there,
> you can't deny that the concept is MEANINGFUL.
>

> > and follows from its postulates.
>
> I doubt that, frankly.
>
Well, then. Take a look at
http://arxiv.org/abs/math.LO/0506475
and let me know the shortcomings in my work. I am obviously very enthusiastic about my work, but unlike you folks I am not emotionally bonded to it. If my work turns out to be flawed, and you point it out, I would be grateful to you and be the first to abandon my line of thinking.

Regards, RS

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- ***Follow−Ups***:
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* Charlie−Boo
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* Daryl McCullough

- ***References***:
  - ♦ ***Godel's theorem is invalid?***
    - ◊ *From:* LordBeotian
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* sradhakr
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* Daryl McCullough
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* sradhakr
  - ♦ ***Re: Godel's theorem is invalid?***
    - ◊ *From:* george

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