Re: Godel's comments about the "true reason" for incompleteness

Source: http://sci.tech−archive.net/Archive/sci.logic/2008−03/msg01394.html

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- *From*: MoeBlee <jazzmobe@xxxxxxxxxxx>
- *Date*: Wed, 19 Mar 2008 10:16:20 −0700 (PDT)

On Mar 19, 12:09 am, "R. Srinivasan" <sradh...@xxxxxxxxxx> wrote:

> Unwillingness
> on the part of your peers to discuss NAFL is obvious

Comments like that make you obnoxious. Lots of people on the threads have discussed NAFL with you. Indeed many of them have been quite generous with their time and patience.

> A new logic like NAFL is self−evidently noteworthy

Oh, yes, surely self−evidently.

>> Right. Because people are not impressed with your work, it must be that they are mass−produced clones. God forbid you countenance that each individual is not impressed with your work based on that individual having come to that conclusion himself.

> You don't understand my work.

Because you don't properly explain it or because it's not coherent.

> I do.

People tend to have some form of understanding of their own thoughts.

>> What are you talking about? Do you contend that the proof is not formalizable in PRA or Robinsion arithmetic or PA or even Z set theory

− all first order theories.

The proof is formalizable with "coding".

No coding (other than from outside the object theory) needed to do it in Z set theory.

I have clearly said that I am questioning the legitimacy of the coding and you have failed to understand that.

You've not shown anything not "legitimate".

Take the assertion that "From a contradiction, an arbitrary propostion follows", or , say,

P&~P −−> Q,   (*)

Let us take P to be fixed in (*), and consider this propositon for arbitrary Q. Obviously there is an implied quantification over Q,

If 'Q' is a sentence letter, then it is not quantified over in the language. (Of course, the meta−language may quantify over sentence letters of the object language).

If 'Q' is a meta−variable in the meta−language, then it is not quantified over in the meta−language (if the meta−language is first order).

I object to this assertion that there can be a variable in a language that is not quantified over.

Object all you like.

> All variables range over some domain and
> that *is* quantification.

Nope, there is quantification in the syntactical sense of a quantifier and a variable followed by a formula. And there is the semantic sense of the variables being interpreted.

> This is the kind of confused thinking that
> you are loudly accusing me of.

There's nothing confused about it at all. It is precise.

> EIther Q is a constant (a fixed
> propostion, which must be specified by construction) or else it is
> quantified over.

False dichotomy.

> If Q is a variable in the metalanguage, it is
> quantified over in the metalanguage.
> E..g when you say that P&P−>Q in
> the metalanguage, you are also asserting that this proposition holds
> for an arbitrary P and arbitrary Q. That is quantification.

Sure. In the meta−language. Just as I said. But then the variables 'Q' and 'P' are not (ordinarily) variables of the object language.

> The point
> is that the object (first−order) language does not contain any such
> variables because actually propostions in the first−order language are
> obtained after substitution of P and Q by specific formulas.

One may approach it that way. But ordinarily, we refer to the recursive definition of 'formula'.

> > IF we admit it thus then it's a problem. But we DON'T. The assertion
> > that all sentences follow from a contradiction is not made in the
> > object language but rather in the meta−language.
>
> Ah, so you do agree that there is quantification in the metalanguage.

Fine. Let us take it from there.

Of course I agree. I already mentioned it.

But with Godel's coding, I am alleging
that you are doing that tacitly and objectionably. And I have stated
my objection precisely. Here it is again.

Godel translated a proposition of the form P&~P−>Q into a proposition
in the *object* language of arithmetic, say, PA.

What specific formula of the meta−language and its specific
translation into the language of PA are your referring to?

Call this proposition
S. Note that S is a specific propositon involving only numbers.

What does "involving only numbers" mean?

By your own assertion above you do not admit P&~P−>Q in the object
language of arithmetic. So if you scan all proofs of PA, you will not
find a proof of P&~P−−>Q (a proof must end with the propositon
proven). You will not find a refutation of P&~P −−> Q either in the
list of PA−proofs. For if you did, then P&~P&~Q must hold in every
model of PA, for some specific (number−theoretic) propostions P and Q
and we know that is not possible.

No, the reason we don't have a refutation in PA is that '(P&~P) −> Q'
is not in the language of PA. It's in the meta−language.

Now Godel translated the meta−theoretical propostion P&~P−>Q into a
specific number−theoretic propostion S in the language of PA. Note
that S is not a variable; it is a constant and we have a construction
for S.

So I take it 'S' is a defined constant in the meta−language.

Since we just now argued that P&~P−−>Q is not either provable
or refutable in PA,

Because it's not even in the language of PA.

> it follows that S must also be undecidable in PA.

No, because S is in the language of PA. 'S' is a defined constant of the meta−language. But S is a formula of the object language PA.

> But this means that there must exist a model of PA in which S is false, and such a model cannot exist, for the same reason argued earlier. This is a contradiction.

Wow! What a completely amateurish confusion you have! You're competely mixed up in use/mention and meta−language/object language. If a formula is not in the language of theory, then it's not a theorem of the theory, but that doesn't mean there are models for the language in which the formula is false. Only formulas of the LANGUAGE have values of 'true' or 'false' in models for the language. You're blatantly conflated S with '(P&~P) −> Q'. They're in different languages. That '(P&~P) −> Q' is not a theorem of PA doesn't entail that S is not a theorem of PA, even though S is a "translation of '(P&~P) −> Q' .

> In fact my understanding is that PA proves S. If the meta−theoretical sentence P&~P−>Q does translate to S and if this coding is accepted as legitimate, this is tantamount to the claim that PA proves P&~P−−>Q,

NO! And that's the exact contrapositive of what I just mentioned. PA does not prove '(P&~P) −> Q' because '(P&~P) −> Q' is NOT IN THE LANGUAGE of PA, but S IS in the langauge of PA, so PA may very well prove S while OF COURSE it does not prove '(P&~P) −> Q' .

MoeBlee
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