

Re: [PO] Re: Proving a negative is hard

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From: Mitch Harris (harrisq_at_tcs.inf.tu-dresden.de)

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Peter Olcott wrote:

>

> *No one has even attempted to show that there is more than
> one case. Some people have claimed that there is more than
> one case, yet never provided any supporting reasoning.*

I think some people have described other cases in general terms. I will do so again. In creating a Diag TM (a LoopIfHalts program), you can add on extraneous do-nothing operations (compute some arbitrary digits of pi, solve some linear equations, whatever). Or you could even modify the real action of what happens after calling Halt: if the return is true, then instead of "while(true) ;" you could call Diag again with the same parameters (and deduce that this would cause an infinite loop). There might be other ways of creating a Diag TM, but my imagination is a bit lacking. The burden of proof for you would be to show that it is not my imagination that is limited but reality.

> *If there was only one case that shows the undecidability of
> the Halting Problem, (it sure looks like there is only one case,
> no one has ever provided evidence otherwise), and I refute
> this single case,*

–all– these cases, possibly treated as an equivalence class.

> *then I have refuted the proof of the undecidability
> of the Halting Problem.*

Yes, but you still will not have shown anything about the claim itself. There might be other ways of proving it.

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Mitch Harris
(remove q to reply)