

## Re: Release of RosAsm V.2.025a

---

*Source:* <http://coding.derkeiler.com/Archive/Assembler/alt.lang.asm/2005-10/msg00068.html>

---

- *From:* "Beth" <BethStone21@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
  - *Date:* Mon, 03 Oct 2005 01:21:23 GMT
- 

Herbert wrote:

> Beth wrote:  
>> Herbert wrote:  
>>> If you have an closed system  
>>> with a finite number of states (N), then it is trivial to solve  
the  
>>> halting problem for such a system: simulate N steps, then either  
the  
>>> system has halted or it never will halt.  
>  
>> By definition, the whole multiverse is a closed system...as if its  
>> definition is "everything" then there cannot be anything that's not  
a  
>> member of it...if closed by definition of there being no "outside"  
to  
>  
> My brain is to small to understand a "multiverse".

Its every facet, yes, most certainly...

But, for those who've not encountered it, the abstract concept of a "multiverse" is that one theory (not proved) suggests that black holes / white holes possibly "pinch off" parts of the universe which then expand and exist independently without reference to the other "universes" (because black holes and white holes are "one way trip" affairs)...with the possibility that our universe is "pinched off" from another, the Big Bang was the corresponding "white hole" to the "black hole" in the "parent" universe and so on...

It's very much a fringe theory which might be entirely wrong ("do black / white holes even exist?" ain't even satisfactorily answered and this theory would obviously be total crap, if the answer is "no" or the answer isn't the one that's expected by current ideas)...and observations that they might have sighted a black hole that actually does eject matter (not the "one way trip" and so not really "pinching off") throws spanners in many theories...

My point in mentioning "multiverses" is just to completely emphasise my underlying point that I mean EVERYTHING...absolutely everything...I am

\_BY DEFINITION\_ defining the greatest possible entity, so that there is \_NOTHING\_ outside of it...if there's "multimultiverses" then I mean that if that truly accounts for everything...heck, if there's a Heaven and a hell then those are thrown in too...if there are infinite dimensions, then that counts as part of "everything" equally...whatever is the "most biggest thing" then when I say "everything", I really mean everything and I include that too...

And what you say about it being impossible for anything "outside" of this "everything" to simulate "everything" because, by definition, there is no "outside"?

Well, thank you...you did, in fact, completely understand my point...even if you didn't realise it...that's \_EXACTLY\_ what I meant...

Whatever "everything" may or may not be, it has no "outside" \_BY DEFINITION\_...hence, having no "outside" then it is a "closed system" unto itself...well done...that was the point I was trying to get at and you picked it up...

Now, the next point is that mathematics is independent and universal...would you agree to that? Doesn't matter where in this "everything" you might be located, "1 + 1" must always equal "2" because it's entirely logical, not in the slightest bit physical...and is independent of all physical considerations that no matter what the physical environment of your location in this "multiverse" may be, "1 + 1 = 2" always stands as correct and valid (if you're an alien on a different planet then you might use different notation and base 7 mathematics but the concept is universal and remains so regardless of location or any other variable that might be different in the alien's part of the "multiverse")...

Hence, if the "multiverse" is by definition a "closed system" and mathematics is entirely universal then, through logic alone, the mathematical \_theorem\_ of the Halting Problem cannot ever, under any circumstances whatsoever, be proved false...

It's a "round the houses" way of making T.M.'s point that theorems are \_NOT\_ theories and differ on that important fundamental point that they are based solely in logic and, therefore, cannot ever be disproved (without disproving logic itself to be wrong...and, boy, if that were true then screw "disassemblers"...that would be the least of our worries and problems, in this insane multiverse that you've just defined as self-consistently impossible to exist...a variation of the anthropic argument can disprove that in a way anyone can understand: To be right, you depend on mathematics being wrong and, by consequence, that it is impossible for anything to exist...as we do exist to ponder this question then you blatantly cannot be correct...you cannot dispute that logic surely? ;)...

I had to take the long route and explicitly go through all the logic

aloud to make basically the same point T.M.'s made...just because T.M. said it and you still dispute the validity of his logic...so I'm taking you by the hand through logic you can understand (you did yourself correctly pick up the "there is no outside" point, which I was driving at...if there is no "outside" then "everything" as a whole that excludes nothing is, in fact, a "closed system"...carry that logic through and you've proved to yourself that a theorem – like the Halting Problem – has to be valid...and, as mentioned, the only way to show that it isn't requires a few impossibles like a demonstration that logic is inherently wrong or that the universe doesn't actually exist...both things I'm sure most would agree are ludicrous straws to be clutching to ;)...

- > If you simulate a
- > target system, then the simulator has to be outside of the simulated
- > target. If nothing is outside of the multiverse, then there can't be
- > a simulator which can simulate the multiverse.

Exactly...

That's why "Deep Thought" is just a literary device and a complete nonsense (but, hey, it was "surrealist comedy", not actually science ;)...

And it also touches on Godel...no system can actually comprehend itself without reference to something external to it...there is nothing external to "everything", by definition, so mathematics is inherently limited and cannot ever account for everything and prove itself...

At least, that's the "simple version"...Godel actually proved it properly :)...

But that's roughly the gist of the "Incompleteness Theorem"...no closed system can comprehend itself (without reference to something external or, in other words, the system isn't actually "closed"...but in the case of "everything" then there is no "external" by definition and, hence, that's what Godel is saying: The "everything" will also be "incomplete"...and as mathematics is universal then, by extension, maths actually proves itself incomplete and that it will FOREVER be "incomplete"...it is an impossible puzzle to solve)...

Now those who never understood Phil's signature will finally get the geeky mathematical joke therein ;)...

- >> the system then it is finite within those bounds (even if those bounds
- >> are infinite)...
- >
- > Even a closed system can have an infinite number of states. That's why
- > we are speaking about DIGITAL computers and not an ANALOG world.

It's perfectly possible to have a "digital infinity" as it is to have an

analogue one...

Let me get you started: 1, 2, 3, 4, 5, 6, 7, ...

The "digital" discreteness of the whole numbers does not in any way prevent this sequence being infinite...but then we're going into strange realms of "finite infinities" and "infinite infinities", which is a headache best avoided...

[ That's why I said "(even if those bounds are infinite)" to qualify things...it's a "finite infinity", not an "infinite infinity"...don't ask...but you can look it up, if you like ;) ]

What's "analogue" about the world anyway?

No such thing as "distance" below the Planck length...no such thing as "time" below the Planck time...they are the smallest "big world" quanta that exist...below that, you're dealing with a new set of rules that abandons what you understand of the physical "big world"...is light (or any other elementary particle besides the photon too) a wave or a particle? Both, neither, either...it has "duality"...you've got to stop thinking in "physical" terms like that at this point...the arrow does hit the tortoise...

Beth :)

- 
- Prev by Date: [\*\*\*Re: Release of RosAsm V.2.025a\*\*\*](#)
  - Next by Date: [\*\*\*Re: Release of RosAsm V.2.025a\*\*\*](#)
  - Previous by thread: [\*\*\*Re: Release of RosAsm V.2.025a\*\*\*](#)
  - Next by thread: [\*\*\*Re: Release of RosAsm V.2.025a\*\*\*](#)
  - Index(es):
    - ◆ [\*\*\*Date\*\*\*](#)
    - ◆ [\*\*\*Thread\*\*\*](#)