

Re: A little knowledge is a dangerous thing – THE HALTING PROOF

Source: <http://sci.tech-archive.net/Archive/sci.logic/2005-05/msg00079.html>

- *From:* "Charlie-Boo" <chvol@xxxxxxx>
 - *Date:* 5 May 2005 18:15:31 -0700
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george wrote:

> Bhupinder Singh Anand wrote:

>

>> A closer look at the arguments will show that,
>> formally, the possibility that there is always a
>> non-algorithmic, but effective, way, of assigning
>> a natural number to any given real number cannot
>> be ruled out.

>

> That is flatly ridiculous. It is ruled out immediately
> by the BRUTE FACT that there IS NO formal definition of
> "effective"! The CLOSEST THING to a formal definition of
> "effective" is "algorithmic", i.e., TM-computable.
> The Church-Turing thesis is that this closeness is absolute,
> that, no PRIOR formal definition of "effective" being
> extant, we are FREE TO STIPULATE the formal definition of both
> "effective" AND "algorithmic" as "TM-computable".

But note exactly what he is saying. The key word is "non-algorithmic", and also perhaps "given". I can see at least 3 possibilities:

1. There is a way ("effective") that is not an algorithm. Your statement that there is no formal definition of effective, I think, makes his point easier to make: How can you say there is no "non-algorithm" that works if you can't even say what an algorithm is?

But that is a little like "belling the cat". The bell in this case is a non-algorithm that is effective. Or perhaps he is saying "It might exist, but, not being an algorithm, we'll never be able to describe it."

2. There is a different way for each number, but no single way for all numbers.

3. If he means "given" as in "we just have to do one, whichever one is given", then sure. The first one you give me I will call 1, the next one I will call 2, etc. Or the fact that it is "given" means it has already been described finitely.

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I think Bhup is trying to use Turing's argument to his advantage. It tells us that no algorithm will do, but doesn't tell us there's nothing besides algorithms! But maybe he can explain a little better than I can with my guesses.

C-B

• *Follow-Ups:*

- ◆ *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
◇ From: george
- ◆ *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
◇ From: Bhupinder Singh Anand

• *References:*

- ◆ *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
◇ From: george

- Prev by Date: *Re: BEHOLD..... PROOF THAT *CARDINALITY IS BONKERS**
- Next by Date: *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
- Previous by thread: *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
- Next by thread: *Re: A little knowledge is a dangerous thing – THE HALTING PROOF*
- Index(es):
 - ◆ *Date*
 - ◆ *Thread*