

Re: Neural netss (was Re: death of the mind.)

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From: Rick Craik (rick_at_@icebergideas..com)

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Date: Tue, 7 Sep 2004 11:32:54 -0400

"Eray Ozkural exa" <erayo@bilkent.edu.tr> wrote in message
news:fa69ae35.0409041945.6bfa124@posting.google.com...
> *"Rick Craik"* <rick@@icebergideas..com> wrote in message
news:<G0m_c.29402\$7i2.1321016@news20.bellglobal.com>...
> > *As I see it, you can't really do something like "write a program"*
> > *which will run on the NN [...]*
> >
> > *I think Eray is going on about virtual machines, not a virtual NN.*
> > *At this point it remains to be seen what the virtual machine is*
> > *comprised of, he's not imposing structure on it.*
>
> *Perhaps, yes. What is a virtual canon best represented by? It depends*
> *on the requirements of our cognitive system. I think very flexible*
> *models are needed indeed, because even in easy problems we seem to*
> *wield the power of Turing-complete computations.*

Conway's Game of Life (2D, Life 2233) is a virtual machine, and hasn't it been shown to be Turing-complete? Although in its original form, it's unwieldy, there is some flexibility available already. For example, a wrap-a-round universe can contain computations, a programmable setting exactly like defining the properties of a NN. Dan's point above amounts to training versus "write a program" at this stage for a NN versus automata.

Surely we can investigate avenues of altering the Life automata VM that approach the likes of a NN. Cognitive requirements might guide us a way, perhaps not, but at least we might have a venue for comparative models.

>
> *In my mind, there ought to be programming language-like things that*
> *drive these virtual machines.*

In my mind, there is always the problem of what is data and what is a program. Can we say a NN is data driven and a VM is program driven? [Hmm, seems like nurture vs. nature.] Perhaps there is a point when altering Life automata, we find a data

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driven nature.

Regards,
Rick

> *I think like Minsky and a little like*
> *Fodor, I suppose. There could be countless programming languages in*
> *the brain.*
>
> *Regards,*
>
> --
> *Eray*