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Virtual Genetic Evolution

Posted by [michael](#) on Sunday August 25, @02:06AM

from the still-vulnerable-to-dandruff-shampoo dept. Sleeperservice writes "This story at New Scientist describes how, using cell simulation in computers, evolution can be simulated. How long until we can work out what the DNA sequence for a Dragon should be I wonder?"



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The Fine Print: The following comments are owned by whoever posted them. We are not responsible for them in any way.

How long before we get virtual humans? (Score:3, Insightful)

by [stredwolf](#) on Sunday August 25, @02:10AM ([#4135633](#))

([User #532 Info](#) | <http://stalag99.keenspace.com> | Last Journal: [Wednesday August 07, @03:44PM](#))

They're speeding up evolution via a cell simulator. How long will it be before we get true AI by teaching a virtual human that was just freshly evolved? :)

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- [Re:How long before we get virtual humans?](#) by [khuber](#) (Score:2) Sunday August 25, @02:50AM
 - [Re:How long before we get virtual humans?](#) by [powerlinekid](#) (Score:3) Sunday August 25, @03:12AM
 - [Re:How long before we get virtual humans?](#) by [khuber](#) (Score:1) Sunday August 25. @03:28AM

The article claims they've created creatures with very primitive mobility and senses. Going from there to sentience, wants, needs, emotions, reproduction etc. will be very difficult to simulate in an environment where chaos does not exist.

OTOH, sounds like they've found a really clever compression scheme.

[[Reply to This](#) | [Parent](#)]

- [Re:Not the craziest thing I've ever heard of.](#) by Raiford (Score:1) Sunday August 25, @01:20PM
- [Re:Not the craziest thing I've ever heard of.](#) by Tablizer (Score:2) Sunday August 25, @02:05PM
- **2 replies beneath your current threshold.**

Bleh. (Score:1)

by josh crawley on Sunday August 25, @02:19AM ([#4135653](#))

([User #537561 Info](#))

So what? This is just a comp sci experiment in cellular growth. All it is is JUST BITS. What I was interested in was the much earlier slashdot article that mentioned an evolving FPGA. After N iterations, it was re-creating itself in techniques mostly unknown to electrical engineers.

Point in fact: the evolving chips aren't a big step. To an EE, you test for all possibilities and capture all errors (look at firmware in cars). An evolving chip probably has errors here and there (so EE's aren't going to be put out of business). What the chip DID show is there are new and more potent techniques for chip creation. Bigger repertoire and more testing.

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Dragon (Score:1, Informative)

by Anonymous Coward on Sunday August 25, @02:24AM ([#4135661](#))

<http://www.draconian.com/body/body.htm>

http://www.colba.net/~tempest1/From_tail_to_snout/

[[Reply to This](#) | [Parent](#)]

- [Re:Dragon](#) by PyroMosh (Score:1) Sunday August 25, @03:01AM
- [Re:Dragon](#) by AstroMage (Score:1) Sunday August 25, @09:08AM

It Makes you Think (Score:2)

by BlackGriffen on Sunday August 25, @02:30AM ([#4135672](#))

([User #521856 Info](#))

What if we are just a simulation running on some computer? I guess that's all just Through the Looking Glass again. "Are we the dreamer, or merely a part of another's dream?"

BlackGriffen

[[Reply to This](#) | [Parent](#)]

Possibly - but pretty hard to prove it (Score:4, Informative)

by Anonymous Coward on Sunday August 25, @03:09AM ([#4135751](#))

[The Simulation Argument](#) [simulation-argument.com]

Are You Living In a Computer Simulation?

Nick Bostrom (2002)

Forthcoming in Philosophical Quarterly.

ABSTRACT. This paper argues that at least one of the following propositions is true: (1) the human species is very likely to go extinct before reaching a "posthuman" stage; (2) any posthuman civilization is extremely unlikely to run a significant number of simulations of their evolutionary history (or variations thereof); (3) we are almost

simulations of their evolutionary history (or variations thereof), (3) we are almost certainly living in a computer simulation. It follows that the belief that there is a significant chance that we will one day become posthumans who run ancestor-simulations is false, unless we are currently living in a simulation. A number of other consequences of this result are also discussed.

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- o [Another bit of evidence](#) by Anonymous Coward (Score:2) Sunday August 25, @07:12AM
- o [Re:Possibly - but pretty hard to prove it](#) by RajivSLK (Score:1) Sunday August 25, @02:34PM
- o **1 reply beneath your current threshold.**
- [Re:It Makes you Think](#) by Lars T. (Score:2) Sunday August 25, @10:40AM

Is this new?? (Score:2)

by [Orthanc_duo](#) ([orthanc_duo@\[\]mail.com](mailto:orthanc_duo@[]mail.com) [**'hot' in gap**]) on Sunday August 25, @02:33AM ([#4135678](#))

([User #452395 Info](#) | <http://orome.sourceforge.net/>)

The article reads like all they have done is code a bog standard Genetic Algorithm for moving boxes. Have I read the article wrong or have they discovered nothing new??

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- [Re:Is this new??](#) by john_roth (Score:2) Sunday August 25, @07:29AM
- [Nevertheless...](#) by Lispy (Score:1) Sunday August 25, @01:02PM

I don't buy this for a second (Score:1)

by Goldberg's Pants on Sunday August 25, @02:38AM ([#4135687](#))

([User #139800 Info](#))

A computer can't possibly take into consideration all the myriad of influences on evolution. I'm sure it can postulate POSSIBLE evolutionary paths, but there is so much about evolution that is unpredictable that, to use a medium like a computer, something which is eminently predictable, just cannot consider every possible evolutionary change.

[[Reply to This](#) | [Parent](#)]

- [Re:I don't buy this for a second](#) by kaiynne (Score:1) Sunday August 25, @05:21AM
 - o [Re:I don't buy this for a second](#) by kaiynne (Score:1) Sunday August 25, @07:20PM
 - o **1 reply beneath your current threshold.**
- [Re:I don't buy this for a second](#) by blue trane (Score:1) Sunday August 25, @08:03AM
- **1 reply beneath your current threshold.**

Until they can deal with ACGT... (Score:1)

by Eneff on Sunday August 25, @02:40AM ([#4135689](#))

([User #96967 Info](#) | <http://not.up.net/>)

I don't even think we can have the "dragon" discussion.

We know we have these 4 building blocks, and we can kind of tell what certain groups do by trial and error, but we've been essentially reverse engineering the software without truly understanding the logic gates underneath.

Until you can tell me what adenine, cytosine, guanine and thymine actually *do*, that we can create adapting computers is merely interesting rather than the next step in conscious evolution.

[[Reply to This](#) | [Parent](#)]

- [Re:Until they can deal with ACGT...](#) by Daniel Dvorkin (Score:3) Sunday August 25, @04:39AM
- [Re:Until they can deal with ACGT...](#) by Eneff (Score:1) Sunday August 25, @01:55PM
 - o **1 reply beneath your current threshold.**
- **2 replies beneath your current threshold.**

How to evolve a dragon... (Score:1)by Ziviyr on Sunday August 25, @02:41AM ([#4135690](#))[\(User #95582 Info | http://www.xav.to/ | Last Journal: Tuesday May 07, @03:15AM\)](#)

The hard part is figuring out an environment where mice and roaches won't be happy enough that they need to create kerosene glands and wings and scales and horns and crap. :-)

[[Reply to This](#) | [Parent](#)]

- [Not to mention...](#) by Mulletproof (Score:2) Sunday August 25, @12:03PM
 - [Re:Not to mention...](#) by Ziviyr (Score:1) Monday August 26, @01:27PM

Heathens (Score:1, Funny)by [Dr. Eric Peters](#) (peterse@princeton.edu) on Sunday August 25, @02:42AM ([#4135692](#))[\(User #586095 Info | http://www.princeton.edu/\)](#)

How can you possibly believe in that evolutionary tripe? God created the Heavens and the Earth and mankind. The idea that we evolved from monkeys is offensive to even consider. This article in now way proves that evolution is possible because it was created with a specific goal of evolution in mind.

Besides, how can you can believe in evolution when it violates basic laws of the universe? There are so many arguments against evolution that it's ridiculous.

Even those that ignore the written record of humanity cannot ignore the scientific facts making it impossible.

Evolutionists claim that universe the earth is billions of years old, but how is that possible when the rotation of the earth slows by 30 seconds every century? If the earth were billions of years old the speed at which it would have been rotating four years ago would have been so fast that it could not have held together.

There's also the second law of thermodynamics to look at. It states that the universe is constantly heading toward disorder. Evolution violates that law, so which one is right?

Another problem with evolution is that certain nucleic acids cannot form without the help of certain proteins, but those proteins cannot form without certain nucleic acids. That makes it impossible to occur naturally.

Face it, there are many, many more facts that I could go on about that disprove the possibility of evolution bringing about the human race. Humans are so complex biologically that we simply could not have come about through chance happenings in just 5000 years (roughly the age of the earth). Evolutionists simply spread lies.

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- [Re:Heathens](#) by whm (Score:3) Sunday August 25, @03:55AM
 - [Chickens and Eggs ... Re:Heathens](#) by kris_lang (Score:3) Sunday August 25, @07:08AM
 - [Re:Chickens and Eggs ... Re:Heathens](#) by mesocyclone (Score:2) Sunday August 25, @04:07PM
 - [Re:Chickens and Eggs ... Re:Heathens](#) by blue trane (Score:1) Monday August 26, @12:14AM
 - [Re:Heathens](#) by countach (Score:2) Sunday August 25, @08:56AM
 - [Read your own links, please](#) by djmcmath (Score:1) Sunday August 25, @04:16PM
 - [Re:Heathens](#) by Danny Rathjens (Score:1) Sunday August 25, @07:25PM

Re:Heathens (Score:4, Informative)by junkgrep on Sunday August 25, @04:02AM ([#4135836](#))[\(User #266550 Info\)](#)

Whether or not this is a joke or not, we need a moderation that roughly sums up this: "these exact arguments, and the common rebuttals of them, have been posted on slashdot a million times before, and the discussions that inevitably come from them are both predictable and pointless."

I mean seriously, "Dr." Putting aside ENTIRELY the issue of who's right in this case, you are either extremely ignorant of the wealth of debate on these subjects, or are just being grossly dishonest in simply glossing over it all in order to win cheap converts that you hope wont read or think any further.

If you have any experience with creationist/evolution debates, you would know that all of these arguements have very good rebutals. Regardless of your opinion of these rebutals, the least you could do is address THEM, adding something new and intelligent to the actual living debate, instead of posting the same dumb starting challenges that almost everyone, even most creationists, agree are dishonest and misleading, and at the very least have hashed through a million times before. Or you could link to the *hundreds* of sites on the web that respond to things like the rotation question, or the question on entropy, and then criticize THEM.

Instead, all you've done here is copy and paste (out of a recent reading of some tract, if not litterally via computer) some of the most well known creationist arguements. You are not surprising anyone with them. They are not new, damning charges against the theory of evolution: most of them were exposed a CENTURY ago, and well refuted even back then. All anyone does by posting them yet again is make modern creationism look stupid. Anyone who can state that evolution violates the second law is completely clueless about the second law (do endothermic chemical reactions violate the second law, going from simple atoms to complex molecules)? There are creationists out there who are at least willing to be honest and reasonable about their critiques: I suggest you join their ranks instead of preaching Hovind.

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- [Re:Heathens](#) by palad1 (Score:1) Sunday August 25, @08:25AM
- [Re:Heathens](#) by ar1550 (Score:1) Sunday August 25, @11:54AM
- [Re:Heathens](#) by WillWare (Score:2) Sunday August 25, @12:48PM
- [Re:Heathens](#) by Kashif Shaikh (Score:1) Sunday August 25, @02:58PM
 - [Re:Heathens](#) by Just Jim (Score:1) Sunday August 25, @10:24PM
 - [Re:Heathens](#) by junkgrep (Score:2) Sunday August 25, @10:53PM
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- [Re:Heathens](#) by meiocyte (Score:1) Sunday August 25, @09:08PM
- [Re:Jackass](#) by LobsterMagnet (Score:1) Sunday August 25, @04:21AM
 - [Re:Jackass](#) by Fished (Score:1) Sunday August 25, @10:27AM
 - [Re:Jackass](#) by LobsterMagnet (Score:1) Sunday August 25, @06:36PM
 - [Re:Jackass](#) by Fished (Score:1) Sunday August 25, @07:10PM
 - [Re:Jackass](#) by Slurm-V (Score:1) Monday August 26, @12:22AM
 - [Re:Jackass](#) by Fished (Score:1) Monday August 26, @09:21AM
 - [Re:Jackass](#) by Slurm-V (Score:1) Monday August 26, @09:36PM
 - [Re:Jackass](#) by ShavenYak (Score:1) Monday August 26, @11:28AM
 - [Re:Jackass](#) by Fished (Score:1) Monday August 26, @12:10PM
- [Re:Heathens](#) by EatYourGreens (Score:3) Sunday August 25, @05:03AM
 - [Re:Heathens](#) by photonic (Score:1) Sunday August 25, @07:47AM
 - [A reasonable atheist](#) by EatYourGreens (Score:1) Sunday August 25, @06:14PM
 - [Re:Heathens](#) by joshki (Score:2) Sunday August 25, @09:13AM
 - [Re:Heathens](#) by TamMan2000 (Score:1) Sunday August 25, @11:20AM
 - [Re:Heathens](#) by joshki (Score:2) Sunday August 25, @04:24PM
 - [Re:Heathens](#) by TamMan2000 (Score:1) Sunday August 25, @07:00PM
 - [Re:Heathens](#) by joshki (Score:2) Sunday August 25, @09:22PM
 - [Re:joshki, it does NOT follow](#) by joshki (Score:1) Sunday August 25, @06:13PM
 - **1 reply beneath your current threshold.**

by [Ben Jackson](#) (ben@ben.com) on Sunday August 25, @05:38AM ([#4135965](#))
([User #30284 Info](#) | <http://www.ben.com/>)

Simulated environments are just too complex.

And genetic algorithms, knowing nothing of your problem domain, tend to find solutions that capitalize on facets of your environment that you hadn't even considered. Two examples from my experience:

I had a population of simulated organisms competing in a shared 2d grid for food, which appeared in a pile at a random location when the old food was depleted. While the organism had basic looking/moving operations to rely on, invariably some would discover that with enough organisms, the food moves enough that you can survive by just looking around until the food is in your line of sight, and then jumping on it. My arbitrary decision to place the food randomly formed the basis for an *entire species* of organisms (which didn't fare too well when some got smarter).

These same organisms used a stack to do their thinking. Looking and eating produced values, which could be used for simple branching. Out of sheer laziness, I designed the stack to allow infinite pops off an empty stack which would return false, and infinite pushes on a full stack which would discard the values. One memorable run produced a dominant species which relied on this stack behavior to implement COUNTING! It intentionally (well, purposefully) left crud on the stack in a main loop, relying on the filled-stack behavior to detect a certain number of iterations. The stacksize and the arena size happened to be comparable, and this is how it determined when to turn.

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- o [Re:GIGO](#) by foxcub (Score:1) Sunday August 25, @12:37PM
- o [Re:GIGO](#) by wormbin (Score:3) Sunday August 25, @12:50PM

The day is not far (Score:1)

by tamizhan on Sunday August 25, @02:56AM ([#4135723](#))
([User #603759 Info](#) | <http://www.tamizhan.com/>)

The day is not far when bots will replace the slashdot editors .. A simple program will do .. :
bash microsoft once a day. : praise linux thrice a day. : arrange fights frequently between kde
and gnome, mozilla and IE, mysql and postgres ...blah.. : put the latest linux.2.5.1.0.1.0 release
on the front page and wait for the trolls about how this is news. blah blah ... and just imagine
no more spelling/grammatical mistakes ! (no, this is not a troll :))

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- [Re:The day is not far](#) by Scaba (Score:3) Sunday August 25, @04:11AM
 - o [Indeed](#) by tamizhan (Score:1) Sunday August 25, @04:25AM
 - o [1 reply](#) beneath your current threshold.
- [2 replies](#) beneath your current threshold.

DNA Sequence for a Dragon (Score:2)

by AntiNorm on Sunday August 25, @02:58AM ([#4135729](#))
([User #155641 Info](#) | <http://www.antinorm.com/>)

How long until we can work out what the DNA sequence for a Dragon should be I wonder?

If you consider that we already have what is by **far** the world's largest Beowulf Cluster (tm) working on this problem -- every living organism in the world -- perhaps not so long.

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- [Msg from B-34024](#) by ciurana (Score:2) Sunday August 25, @03:33AM
 - o [1 reply](#) beneath your current threshold.
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Playing God (Score:1)

bv OverlordQ on Sunday August 25, @02:59AM ([#4135730](#))

([User #264228 Info](#) | <http://thedarkcitadel.com/> | Last Journal: [Sunday August 25, @03:07AM](#))

Do we really want to know where we're heading down the evolutionary highway?

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Life Imitating Star Trek (Score:1)

by Cyno01 on Sunday August 25, @03:02AM ([#4135738](#))

([User #573917 Info](#) | <http://dovetest.tripod.com/>)

Does anyone remember that one voyager where they did the opposite of this, they ran into this nomadic saurian species and they took their dna and went to the holodeck and de-evolved them and they ended up being the decendants of earth hadrosaurus.

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Karl Sims' work (Score:4, Interesting)

by scratchor on Sunday August 25, @03:23AM ([#4135770](#))

([User #31393 Info](#) | <http://www.crossbar.be/scratch>)

On the same subject, be sure to check out Karl Sims work. He did some research on the virtual evolution of 'blockie' creatures, using genetic algorithms. Check the link for some cool movies of swimming, hopping, following creatures.

- ["Evolved Virtual Creatures"](#) [genarts.com] (with [paper](#) [genarts.com])

In a following paper, he lets the creatures compete in virtual tournaments, simulating natural selection as such. Movies of competing creatures are also available at the above link. For the paper check out the following link.

- ["Evolving 3D Morphology and Behavior by Competition"](#) [genarts.com]

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I have a dragon (Score:3, Funny)

by austad on Sunday August 25, @03:28AM ([#4135783](#))

([User #22163 Info](#))

I figure out the DNA sequence for a dragon long ago, and used an elephant to implant the engineered egg into. I wanted a nice cute little dragon, but damn, the thing is huge.

I was planning on crossing the dragon DNA with a pig, to make it both smaller and smarter, but wouldn't you know, it won't work. Everyone's heard the song "You can't cross Dragon and Pig DNA". Apparently, you have to [get the dragon drunk to make the pig look more attractive](#).

[msnbc.com]

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The sheer Arrogance of slashdot posters (Score:3, Insightful)

by siewsk on Sunday August 25, @03:47AM ([#4135810](#))

([User #603269 Info](#))

The sheer arrogance of the slashdot poster is unbelievable. Just listen to this:

This story at New Scientist describes how, using cell simulation in computers, evolution can be simulated. How long until we can work out what the DNA sequence for a Dragon should be I wonder?

Come on! The simulation is about as close to reality as the economist assumptions of the rational consumers. You don't know how many corners they can cut in their simulation. It's just a simulation and it is as good as the assumptions made by the people who created the simulation. Real life is messy and difficult to predict. It will be hundreds of years before they

get the simulation even close to the true working of a real cell.

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- [Re:The sheer Arrogance of slashdot posters](#) by blue trane (Score:1) Sunday August 25, @08:10AM
- [Re:The sheer Arrogance of slashdot posters](#) by kubrick (Score:2) Sunday August 25, @09:42AM
- [Re:The sheer Arrogance of slashdot posters](#) by Deimosuva (Score:1) Sunday August 25, @04:41PM
- [Re:The sheer Arrogance of slashdot posters](#) by stonecypher (Score:1) Monday August 26, @07:27PM
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even better. (Score:2)

by [DarkHelmet](#) (elwakil@nOsPAM.usc.edu) on Sunday August 25, @04:02AM ([#4135837](#))
([User #120004 Info](#) | <http://www.seventhcycle.net/>)

Even better, how long will it take to make a virtual geek woman?

I want the specifications so I can sell them on slashdot for 50 mod points a pop.

[[Reply to This](#) | [Parent](#)]

Evolution simulation? Hardly. (Score:2)

by Kaz Riprock on Sunday August 25, @04:24AM ([#4135860](#))
([User #590115 Info](#))

First to answer the question in the post about dragons: This simulation is not going to lead to that without some sort of random addition of mutation to the system (which isn't described in the article). The "cell types" that are used by the program to create the "genomes" are only what we understand on a very low resolution level. We don't have any equal representation for "fire-breath" and we certainly wouldn't have any clue what the high-resolution DNA sequence/genetic expression profile for that cell-type would be even if it were included in the simulation as described.

This simulation is on par (maybe a *little* more in-depth than) the [GOLEM project](#) [brandeis.edu] that's been running out of Brandeis for quite a while now (you can download your own evolution simulation). Basic blocks which when recombined with each other "develop" into more complex things that can be rated on their ability to function in a certain role and be recombined to hopefully produce something even more efficient.

More impressive forced-evolution science is the DNA shuffling work of labs and companies like [Maxygen](#) [maxygen.com]. This is truly evolution in a tube and deals directly with the genetic sequence as opposed to higher-level vague cell-type simulations.

But the great thing about science is that there's room enough in it for pretty much any research.

[[Reply to This](#) | [Parent](#)]

Could we use this to better estimate.... (Score:3, Interesting)

by [mraymer](#) (mraymer@@@centurytel...net) on Sunday August 25, @04:33AM ([#4135877](#))
([User #516227 Info](#) | <http://www.gaminghorizon.com/>)

...the chances of life evolving on non-Earth like planets? For example, could someone run a simulation to see if organisms could thrive on a planet all Earth life forms would perish on?

I've always been interested in this, because if this is possible, it would seriously increase the chances of life being elsewhere, since the odds of an "Earth-like" planet are supposedly not that great.

[[Reply to This](#) | [Parent](#)]

- [Re:Could we use this to better estimate....](#) by Lars T. (Score:2) Sunday August 25, @10:09AM
- [Re:Could we use this to better estimate....](#) by young-earth (Score:1) Sunday August 25,

@01:48PM

- o [Re:Could we use this to better estimate....](#) by Joel Ironstone (Score:2) Sunday August 25, @02:58PM
- o [Re:Could we use this to better estimate....](#) by oogoody (Score:1) Sunday August 25, @06:09PM
- [Re:Could we use this to better estimate....](#) by Debillitatus (Score:2) Sunday August 25, @07:20PM

Dragons? Sort of! (Score:1)

by DjMd on Sunday August 25, @08:18AM ([#4136156](#))

([User #541962 Info](#) | <http://slashdot.org/>)

"How long until we can work out what the DNA sequence for a Dragon should be I wonder?"

Well the article says they are 'breeding' the most effective pusher... So it should be not long before Dragons are developed...

I mean, how much more effective can it be to drag than push?

Drag-on my virtual brothers!

Does anyone read the actual articles anymore?

[[Reply to This](#) | [Parent](#)]

Virtual Humans? I don't think so. (Score:1)

by [Fished](#) (slashdot1@wingedpigs.com) on Sunday August 25, @10:03AM ([#4136383](#))

([User #574624 Info](#) | <http://www.extremehope.org/>)

I don't think virtual humans are too likely.

I am the father of two one-year-old identical twins. Although they look exactly alike and share many gross, physical characteristics (size, athletic ability, etc.) in many respects they play very differently. Madeline is much more bookish, likes to sit and "hang out", and is generally a thinker. Rebecca is an adventurer, likes to wrestle with her brother, jump on the bed, and dance to Jazz music. No, I'm not making any of this up or projecting it - others have observed the same trends.

Even before they were born, these trends were observable. Rebecca would respond (in the womb) to high energy, big band music. Madeline would respond best to classical - she particularly liked Bach. I ran the experiment again and again - Swing and Rebecca would Kick, Bach and Madeline would kick. (Yes, you can tell which is which if you get an ultrasound.)

Although my girls are genetically identical, they have been very different as long as we can determine, and these differences do not seem to be easily attributable to environmental factors (What is really so different about one side of a uterus from another? And, believe me, when you have twins there is not a lot of time for individual attention. Mostly, you are dealing with both of them in the same way at the same time.)

The point is that, although genetics are obviously important, there seems to be more to a human being than just his genetic code and experiences. For lack of a better word, I will call that his "soul." This sounds like cool research, but based on my experiences I think that the most we will get is a smarter computer.

I realize this is all anecdotal - I don't know any way you could make something this fuzzy reproducible - but anecdotal evidence is generally quite convincing to the one telling the anecdote :)

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- [Re:Virtual Humans? I don't think so.](#) by de Selby (Score:1) Sunday August 25, @05:29PM
 - o [Re:Virtual Humans? I don't think so.](#) by Fished (Score:1) Monday August 26, @09:14AM

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Uses for Artificially generated animals (Score:1)

by hugesmile on Sunday August 25, @10:13AM ([#4136402](#))
([User #587771 Info](#))

This is interesting - out of HP labs comes artificially generated animals.

Do you think HP is trying to build themselves a new CEO? "So far, none of the virtual creatures has grown the equivalent of a brain." Hmm.. looks like Carly should be nervous!

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This work was done a long time ago (Score:2, Interesting)

by AffineTransform on Sunday August 25, @12:08PM ([#4136704](#))
([User #172672 Info](#))

Dr. Dan Ashlock at Iowa State University has been evolving robots that push blocks around a 2-D world for some time now. Check out the BotWorld link on [his research page](#) [iastate.edu] for info. On a side note, I did a research project for one of his courses during Spring 2002, where I evolved robots for [Robocode](#) [ibm.com] that were effective in destroying human-programmed robots.

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Paradigm Competition (Score:2)

by Tablizer on Sunday August 25, @01:53PM ([#4136960](#))
([User #95088 Info](#) | <http://www.geocities.com/tablizer>)

Are Creationists going to build a **God simulation** in order to compete? :-)

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I have discovered the sequence of dragon DNA... (Score:1)

by jhanson on Sunday August 25, @03:00PM ([#4137165](#))
([User #463867 Info](#))

unfortunately, it is too long to fit inside this comment box.

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Look at the numbers first (Score:2)

by [mesocyclone](#) ([slashdot@tinyvital . c om](mailto:slashdot@tinyvital.com)) on Sunday August 25, @04:36PM ([#4137444](#))
([User #80188 Info](#) | <http://www.tinyvital.com/personal.html> | Last Journal: [Saturday June 01, @01:23PM](#))

Genetic algorithms are interesting and useful in some cases. But attempting to recreate evolution in a useful amount of time using these techniques.

Let's see.... assume we start with single celled organisms in the ocean.

We have 3 billion years - that's 9×10^{16} seconds.

And how many organisms... well, assume the biological part of the ocean is a foot deep and that the ocean covers 2/3rds of the earth's surface... that is about 1×10^{15} cubic meters or 10^{21} cubic centimeters. And lets say there are a billion cells per CC (not unreasonable)...

That's 10^{24} cells for about 10^{16} seconds or 10^{40} cell-seconds. Lets assume an evolutionary event (cell fission, DNA absorption, whatever) takes place once an hour per cell. That's about 3×10^{37} evolutionary events. And that's just to get to the first multicellular creature!

I think it would take a lot faster computers to get 10^{37} events in a genetic algorithm!

Of course, one can guide and tweak and limit... but I don't think a dragon is going to be forthcoming!!

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Virtual Genetics? (Score:2)

by michaelb on Sunday August 25, @10:50PM ([#4138005](#))

by micnaeisimms on Sunday August 25, @ 10:59PM ([#4139095](#))
([User #141209 Info](#) | <http://www.tuxgames.com>)

Been going for years
[Creature Labs](http://creaturelabs.com) [creaturelabs.com]
[And for Linux...](http://linuxgamepublishing.com) [linuxgamepublishing.com]
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Genetic Programming (Score:1)

by A55M0NKEY on Monday August 26, @10:17AM ([#4140714](#))
([User #554964 Info](#))

I wrote this program for shits and giggles that takes the alphabet of [a-zA-Z0-9] + ""~;[]{}->
Things I found:

- 1) at first all my high scoring programs were very short.
- 2) once adding points for length, all my working programs (populations circa 1000) started with the '#' character.

So I did a \$prog =~ s/^#/g; before eval (\$prog); from now on and all the # cheaters died. Then I tried to teach it to add. I set three variables that would be visible in scope to the programs I was evalling. my (\$input_a, \$input_b, \$output) = (3, 5, 0); Then I scored the programs higher if the program changed the values of any of the three variables. I added code to increase the score of a program further if the values of any of the three variables depended on the initial values of the inputs (by changing the initial values and re-evalling)

Things I found:

- 1) a grep of my perl program beasts for input_a and friends found zilch.
- 2) my perl beasts were still very short

So I added score for length, and I started doing some genetic engineering by splicing in '\$input_a' '\$input_b', and '\$output' at the '#' crosspoints randomly for every child program.

Things I found:

- 1) Many perl beasts grepped for \$input_a and pals
- 2) None of my beasts changed the values of any of output, and inputs a and b

Then I got bored and had a sickpack of beer and soon didn't care anymore. But something's moving in my basement and I don't have any pets....

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- [Accidental HTML](#) by A55M0NKEY (Score:1) Monday August 26, @10:19AM
- [Top half of post here](#): by A55M0NKEY (Score:1) Monday August 26, @10:33AM

Re:Dragons (Score:1)

by khuber on Sunday August 25, @03:45AM ([#4135808](#))
([User #5664 Info](#))

Or how about very small dragons you could keep in your pocket?

-Kevin

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Chocolate chip.

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