Boffins invent automatic net-hookup roboffinry machines

Exponential + feedback runaway droidscience epoch coming

By Lewis Page

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Perturbing news from the world of robotics and automation broke today, with scientists on both sides of the Atlantic revealing that they have developed machines which can replace scientists. The prospect of a runaway self-sustaining science and technology revolution/singularity/human-obsolescence style affair now seems imminent.

First up is a new sciento-algorithm developed at Cornell Uni in the States, which appears to work much faster than normal fleshy brains. Given results from simple physics experiments - pendulums, double pendulums, falling apples - the software swiftly deduced from scratch the law of conservation of momentum, Newton's second law of motion, and kinetic-energy equations.

Apparently the Cornell brainware does require a fair bit of processing power, but it gets results fast. With 32 parallel processors it was able to produce theories which originally required a hefty slice of Sir Isaac Newton's working life to achieve "in a few minutes", according to the Cornell profs.

Meanwhile a rival British robo-boffin (roboffin?), developed at Aberystwyth and Cambridge universities and codenamed "Adam", likes to tinker with the DNA of living organisms. According to those who produced it:

Using artificial intelligence, Adam hypothesised that certain genes in baker's yeast code for specific enzymes which catalyse biochemical reactions in yeast. The robot then devised experiments to test these predictions, ran the experiments using laboratory robotics, interpreted the results and repeated the cycle.

Scientists seem bent on using machines like Adam to achieve a radical, Industrial Revolution style revving-up of scientific and technological change. Professor Ross King of Aberystwyth Uni elaborates:

"One way to make science more efficient is through automation. Automation was the driving force behind much of the 19th and 20th century progress, and this is likely to continue."

Or in other words, just as the steam-powered satanic mills of the 19th century churned out cloth at a furiously greater rate than peasants with spinning-wheels and looms could, so automated labs packed with unsleeping droid-boffins will be able to discover and invent stuff at a terrific, unprecedented rate - easily outmatching slowpoke human-staffed research.

Naturally this will produce mountains of knowledge and data, far more than weedy human brains can be expected to process and integrate. This will mean that all the roboffins will need to be hooked up to the internet and start to communicate and collaborate with each other directly.
"Skynet began to learn at a geometric rate"

Senior Brit boffinry chief Professor Douglas Kell seems to envision a setup of this sort. Speaking of the experimental experiments carried out by "Adam", he said:

"Computers play a fundamental role in the scientific process, which is becoming increasingly automated ... This has led to more scientific data, increasingly available on the web, which in turn requires an increased use of computers to analyse these data. Robot scientists could provide a useful tool for managing such data and knowledge, making scientific procedures easier and more efficient. This kind of learning will become even more important as we move further towards integrative and predictive biology in the era of Web 2.0 and the Semantic Web."

The worldwide roboffinry interweb hive-mind would work day and night, developing results with inhuman speed, automatically peer-reviewing them in a trice using spare processing capability, and then publishing them to itself within milliseconds. There'd be no time out for sleep, eating, practical jokes involving particle accelerators, accepting Nobel prizes etc. Presumably, now that scientists have built a machine which can replace scientists, we will soon have a machine which can replace such machines, so the whole thing should be self-sustaining.

It almost goes without saying that the self-replicating inhuman semantic-web-propelled autoscience globohookup would soon start to learn at an exponential rate, become self-aware and wipe out or enslave humanity. Alternatively, it ought fairly rapidly to reach a point at which we couldn't even understand what it was telling us: and it would therefore modify or improve us so that we could, possibly by dispensing with unnecessary accoutrements and keeping our artificially enlarged, rewired genetically-enhanced brains alive in bubbling vats of nutrient fluid.

Assuming that these pitfalls can somehow be avoided, though, it could all be pretty groovy. Hopefully the machines will crack abundant energy, antigravity, human immortality and interstellar travel before they work out the planetbuster bomb or whatever.

We would just like to note one further, rather sinister aspect of this. The team who developed "Adam" are now working on a new, better robotic seeker after knowledge called "Eve". Are they just messing with our heads? Or its this a coded attempt by the last human scientist left on the project to warn us before it's too late?*

Anyway, for those who haven't got the message that their primitive human brains are now obsolete, there's an intro here (http://sciencenow.sciencemag.org/cgi/content/full/2009/402/1) with links on to the relevant papers. ®

Bootnote

*You know. Apples, forbidden knowledge, chucking-out time at the Garden of Eden style of thing.

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