Artificial Intelligence Will Help Us to See and Understand

To put human progress in perspective, it is worth remembering that all of our achievements up to the industrial revolution were eclipsed in the first 200 years immediately after. Similarly, the information revolution eclipsed this progress in just 20 years. This is the nature of exponential progress – machines breed better and more powerful machines, but in a much shorter time. This powers further discovery and leads to more information and understanding. Human knowledge is now estimated to double every two years.

It's also worth noting that art, science, mathematics, technology, engineering and medicine became concentrated in silos around the time of the reformation. This both accelerated the disciplines whilst holding back the benefits to be gained from their linking. Today they are coming back together as a much-required force for innovation and understanding at a time when we are being progressively overtaken by vast amounts of data. This in turn demands complex combinations of modelling and visualisation to engender understanding, establish confidence and aid decision-making.

Whilst visualisation is the fastest way for us to assimilate and understand complex situations, we remain limited in our ability to comprehend dynamic multi-dimensional situations beyond level 4 or 5. This dictates the use of additional machine support and more senses than sight alone. In real world environments most animate objects respond in some way that can be interpreted to be 'intelligent'. So the question is; could Artificial Intelligence (AI) provide further and significant enhancements to the world of visualisation? Certainly the world of computer games and virtual worlds would suggest so!

Today we are constantly surprised by AI systems and the answers they contrive, and on many occasions we lack the facility to fully understand. But that does not preclude us from using the results! We have gradually realised that the solution of many industrial, scientific and governmental problems will continue to defy human abilities.

So far our partnership with machines has proved profitable, and what lies before us is an even richer future, where the combination of AI with Artificial Life (AL) will almost certainly see the

Our Brains are Full to Capacity

There has been much in the popular press recently about mankind's brain power having reached its peak and that it is physically impossible for us to become any smarter.

Simon Laughlin, professor of neurobiology at Cambridge University, is quoted as saying, "We have demonstrated that brains must consume energy to function and that these requirements are sufficiently demanding to limit our performance and determine design.

"Far-reaching powers of deduction demand a lot of energy because for the brain to search out new relationships it must constantly correlate information from different sources. Such energy demands mean there is a limit to the information we can process."

So if you're having difficulty processing information and making decisions, it's simply because your brain is full.

To read the article, click here.
_____

2045: The Year Man Becomes Immortal

In a recent *TIME Magazine* article Raymond Kurzweil, the author, inventor and futurist, believes that we're approaching a moment when computers will become intelligent, and not just intelligent but more intelligent than humans. When that happens, humanity – our bodies, our minds, our civilization – will be completely and irreversibly transformed. He believes that this moment is not only inevitable, but imminent. According to his calculations, the end of human civilization as we know it is about 35 years away.

To read the article, click here.
_____

Life, Living and Technology in 2050 – A Snapshot

In this Formicio Insight article Peter Cochrane argues that our condition as a species is defined by the ecology of our planet, the status of our technology and the numbers of us occupying any given land mass. Today, the

spontaneous creation of new intelligences.

With the arrival of a myriad of sensor components and their rapid deployment on the periphery of networks, the internet, robotics, large and small systems, we are much closer to creating true (artificial) intelligence than ever before. And when combined with our existing and established approaches to visualisation it could result in some significant advance in the way we view, experience and react to complex situations.

Interestingly, this will also see a marked change in the way our systems react to us! So if this is only a matter of when, and not what if, there is only one question left to ask; will we be smart enough to recognise a new intelligence when it spontaneously erupts on the internet or within some other complex system we build?

To read my full article in which I define intelligence, click here.

I welcome your thoughts.

Peter Cochrane
peter.cochrane@formicio.com

industrial and information revolutions are the primary definers of our condition, and so it will be in 2050 as the outcomes of a new industrial and cyber revolution come to a head.

To read Peter's article, click here.
_____

About Formicio

Formicio is an independent consultancy bringing impartial advice and fresh insights to business and technology leaders around the world.

We develop critical organisational capabilities through our experiential learning programmes, and through our consulting we help clients become more innovative, succeed with the most complex transformation programmes and equip their IT organisations to meet the challenges ahead.
_____

Parting Thought

"I know that I am intelligent, because I know that I know nothing."

Socrates, 469-399BC