FREE SPEECH BACKLASH

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No AI Revolution On The Horizon

*By **Englebert Clangworthy** on Sunday, 8 September, 2024*

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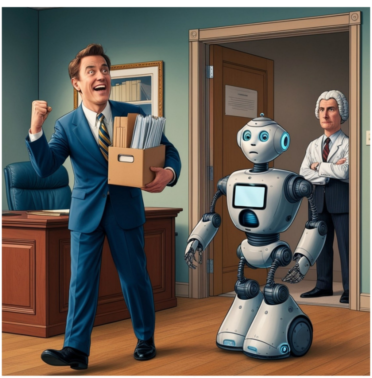

Image by Alpha India

Recently, Rob Mason, wrote an article here called "Revolution", which contained what I think is a rather optimistic perspective on artificial intelligence (AI) and what it is on the cusp of doing for us – or some might say *to us*.

I am hugely enthusiastic about AI. I must be, it's in my job title. The breakthroughs that have arrived over the last couple of years as novel services like ChatGPT, Whisper, Dall-E and Stable Diffusion are immensely impressive, as are the advances made in computational drug discovery and protein folding. Tesla's Autopilot technology never ceases to amaze me.

Nevertheless, I must tell you that, in my view, the gap between the hype and the reality is a yawning chasm of unknowable depths. My industry perspective is that very little of what Rob expects to see is even remotely likely to materialise on a 10-year timescale, less still is it just around the corner.

For example, the promise of autonomous vehicles (AVs): Today, autonomous trains, trams and trolley buses are doable. Autonomous cars are not. Why is this? A few reasons, such as trains being on rails limiting the number of variables in play, but mostly it's because trains in motion can pretty much be completely isolated from uncontrolled interactions with squishy humans. Without an unfathomable global step-change, that will never be true of roads.

A lot of trials of AVs have taken place and almost all of them have been scrapped or shelved, either by their sponsors or by the government. Some high-profile and vexed legal cases have been seen relating to AVs over the last few years. There are too many catastrophic failure modes for which we currently have are no good answers. Solutions are going to take years. Legal liability is a massive unresolved issue. If the AV kills someone, who is to blame? Who gets sued? Who pays? Who goes to jail? Who decides how the AI weighs and resolves the trolley problem? Without significant legal and ethical changes - none of which should be made lightly or by ill-informed lawyers and politicians - there is no satisfactory way to address these questions.

The agency problem is also true with any kind of robotics in any situation where they mix with humans, either directly or in terms of the products and by-products of their work. Some person somewhere must accept accountability for all of this. Good luck finding that guy.

Current AI technologies can certainly assist with a variety of jobs and even reduce the number of people needed to do some of those jobs, but they cannot take over jobs entirely because, again, they don't have technical or legal agency. For an AI to have legal agency and accountability, it needs to have some kind of legal personhood. Corporations have legal personhood, but only as an administrative convenience. Behind that legal personhood is a board and a CEO who are all – despite impressions to the contrary – actual people. What do you even do with a robot that has killed someone? Robot jail? Crush it? If they all run the same software, what does that fix? Can a robot have mens rea?

True innovations such as artificial general intelligence (AGI) where an AI is capable of replacing a rounded, competent human being, is probably not within the capability of current AI tech. Part of the reason for this, say researchers Abeba Birhane and Marek McGann, is that the large language models (LLMs) that underpin things like ChatGPT are premised upon a crude and incomplete understanding of what language even is. Current thinking in cognitive science is that language is not something whose essence can be captured in a fixed statistical model trained on a corpus of text. It is an experience and a process of interaction between humans, with all their prejudices, emotions and irrational urges, and all of whom have skin in the game, be that legal, financial or reputational.

"The idea is that cognition doesn't end at the brain and the person doesn't end at the skin. Rather, cognition is extended. Personhood is messy, ambiguous, intertwined with the existence of others, and so on," said Birhane, speaking to The Register.

Something like Alpha Fold is a good example of where AI can work - using massive computing power and statistical techniques like stochastic gradient descent to essentially throw a trillion things at the wall and see what sticks. That isn't going to work for generating anything that is currently done by creative humans, who make breakthroughs by synthesising disparate and not obviously related pieces of information to make an intuitive leap.

Sean Thomas – an author who writes a column for The Spectator – seems absolutely convinced that ChatGPT is going to take his job. I'm pretty sure that if this happens, it will be because – bestselling or not – he isn't a very good or original author. I'm not well known for my optimism, so I find it strange that I have a more optimistic view of Sean's prospects than he does himself.

I'm not saying these things can never be achieved with AI, but they probably cannot be achieved with even the most awesome enhancements to the current technologies, because they are lacking in some of the fundamentals required, and there is currently no clear way to overcome this. As a chap from Gartner once said to me, "Nobel Prizes and Fields Medals will be handed out" before these technologies reach the state of maturity where they can fulfil the promises made in Rob's article.

Another senior Gartner analyst says that AGI is unlikely to appear in any useful form in the next 10 years. Meanwhile, (((Goldman Sachs))) do not currently see how about half of the $1Trillion invested in AI technology to date will ever be recouped. There are good reasons to suspect that even at $24 for a monthly subscription, OpenAI are haemorrhaging money on ChatGPT.

There are other obstacles, too. Today's AI is enormously power hungry, particularly during training, to the point where it won't scale to the levels needed to fulfil any of the promises Rob writes of, without significant breakthroughs - there simply aren't the resources on the planet to overcome that. Nor are there the words: a current crisis is that, having already poured the internet's entire supply of high-quality text into the training of the models, researchers are running out of ways to better train the LLMs we have today. They are seriously experimenting with the idea of models generating their own training data. Iterative systems generally do one of three things: They tend towards zero, or infinity, or chaos.

We also face various possible logistical challenges. Global supply chains are fragile and likely to break down as the USA repudiates its Bretton Woods role as security provider for global shipping lanes. The only country in the world with the capability (on a 10 year timeline) to produce the silicon for high-end AI systems is Taiwan, which has China breathing down its neck, waiting for the right time to fulfil Xi's promise to reunify. Peter Zeihan thinks we're likely to reach a point of scarcity where we must choose very carefully where to deploy AI. See the books "Goodbye Globalization" by Elisabeth Braw, and "The End of the World is Just the Beginning" by Peter Zeihan for more on these things.

So, while AI has enormous promise indeed, there is a mountain to climb, and we don't yet have sight of the peak or the tools to survive when we get there.

Engelbert Clangworthy is an AI Specialist at a multinational manufacturing company and a 30-year veteran of the corporate IT world.

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Frank Palmer
a year ago edited

if I remember correctly, the philosopher Daniel Dennett, in his book "Content and Consciousness ", made the following point. If you 'tell' a computer or robot that someone had just been murdered in the next street, or was being attacked, it could only be said to understand that statement if it felt concern, or revulsion, and wanted to call the police, etc. etc. . Can AI have human feelings, or the desire or intention to take action ? Wittgenstein argued that all our activities, thoughts, feelings, and our many different uses of language, belong to our 'form of life' as human beings. In his " Remarks on the Foundation of Mathematics" he presented a powerful and convincing argument that not even a calculating machine 'calculates' (an activity that takes place in, and is essentially related to, other activities "in the stream of of human life'). So many people these days (possibly influenced by 'science fiction movies) have such a myopic view of what 'understanding' involves (and our consciousness involves self-consciousness, knowing what kind of beings we are). Jonathan Miller once pointed out that each age models what the mind is on the latest technology. Hence Freud modelled the human mind on the idea of hydraulics (his work is full of metaphors of that kind). In our age there is a temptation to model the mind on the workings of a computer. Computers and robots are not 'beings' and cannot possibly know what they are. They are not alive. They do not have 'lives' in any meaningful sense of that word. Artificial intelligence' is not intelligence, it is an oxymoron. The more that some people try to exalt the epistemological status and capabilities of computers, the more they downgrade and dehumanise their conception of human intelligence and understanding.

5 0 Reply Share ›

jeremy Morfey → Frank Palmer
a year ago

It begs the question whether an increasing number of indoctrinated people have human feelings, or what was once known as such?

0 0 Reply Share ›

Frank Palmer → jeremy Morfey
a year ago

Where humans are deficient in PROPER feelings we hold them to blame. That would make no sense in the case of a computer.

0 0 Reply Share ›

This comment was deleted.

Frank Palmer → Guest
a year ago edited

He also wrote that it is to the "soul" of another person that we respond, not "what the philistines call mind". I'll try and give the reference to Roger's article later.
Edit. I've now found it. It was in an article he wrote for The Times(1985) called "De Anima" (reprinted in a posthumous collection, a book entitled "Against the Tide").

1 0 Reply Share ›

This comment was deleted.

Frank Palmer → Guest
a year ago edited

I haven't had time to re-read the whole article, but I think he did draw that analogy. Like Wittgenstein, he didn't think of the soul as a separate entity. Wittgenstein's comment regarding our attitude to other people was "my attitude to him is an attitude to a soul. I do not say that he has a soul".
Oh, and by the way, in his discussions of architecture, Roger said - something like - our response to a beautiful building is like our response to a face, which is why ugly tower blocks seem faceless, and soulless. (And Wittgenstein of course said that 'the face is the soul of the body".)

2 0 Reply Share ›

This comment was deleted.

Frank Palmer → Guest
a year ago

Yes. Sorry, in my back and forth mentions of Wittgenstein and Scruton, I may have not made that clear enough. I was just trying to indicate the deep significance of the face, for both Wittgenstein and Scruton.

1 0 Reply Share ›

This comment was deleted.

Frank Palmer → Guest
a year ago

Thank you.

1 0 Reply Share ›

Geoff Leach
a year ago edited

Thanks, Englebert. I worked as a software engineer for 30 years (now retired) and I don't claim to have anything beyond the most superficial knowledge of AI's operating principles -- only what I can read in the popular press. However, I do have long experience of the hype-vs-reality cycle in new technology.

A friend of a friend works in marketing, and she was astonished at how good ChatGPT (and similar LLMs) were for generating copy from prompts -- condensing material into punchy text, while being fluent and articulate, and with the requested tone.

Equally, we can all be impressed by AI-generated images which, for many purposes, produce well rendered versions of imagined scenes. Maybe with a few wonky bits, but certainly good enough to quickly produce an editorial illustration matching the topic of an article. (As in Tom Armstrong's recent profile on FSB's in-house artist "Alpha India".)

Both of these are cases where the output of the AI can be immediately assessed by the user, and can be quickly retried and tweaked until it produces what is desired. It may very well replace some low-level tasks for copy editors and graphic designers.

But for more involved work I am less convinced. ChatGPT will (I believe) happily write an entire essay or technical report on some topic, with an output that impresses with its style and tone. But not necessarily its substance. I remember there was a story a few months back where a lawyer was sacked for using ChatGPT to write an analysis on some legal point, and it produced a suitably weighty text, replete with references to past court cases, many of which were fictitious. So the AI-generated text might be useful for suggestions or a first draft, but would need someone with detailed knowledge to pick through everything and ensure its accuracy. Anyone with that level of knowledge, and assuming English is their first language, would probably be sufficiently educated to just write the text themselves.

Certainly, when I think about my old job as a software engineer, where I might spend a few days investigating some technical topic, and then summarising it so that others could understand what it was, and the context in which it might fit into our project, then it would be of little use to produce a fluent but inaccurate document. So maybe ChatGPT is not yet ready to replace what I used to do.

(As to whether Sean Thomas's own articles in the Spectator could, or indeed are, being written by AI -- I daresay that I lack the exquisite cultural and literary refinement to make such a judgement.)

But sometimes I wonder if I am overthinking this. Coming from a maths / science / engineering background, I value accuracy and objective standards of truth. But maybe other people just want something that sounds good -- glib and fluent verbiage, with little substance, like the speech of a politician. So perhaps we really are going to be seeing a lot more from ChatGPT and its AI friends.

5 0 Reply Share ›

Tom Armstrong Mod → Geoff Leach
a year ago

Thanks for a very informative comment Geoff.

Alpha never gets it exactly as I want it. I have to visualise the image first and then write half a page describing it, and them mostly she will require several more attempts at tweaking before the image is acceptable. No doubt I'm not very skillful yet though.

3 0 Reply Share ›

Geoff Leach → Tom Armstrong
a year ago

I think the level of detail needed to instruct the AI image generator is fair enough. If you look at one of the completed images, and had to describe the various elements that it contains, the setting and the characters and the relationships between them, then it would take quite an amount of text, and several attempts to get it right.

I suppose that the time where you can shortcut that process is when you have a very typical and stereotyped sort of image in mind, one where the image generator already has a huge library of examples to draw from.

1 0 Reply Share ›

Tom Armstrong Mod → Geoff Leach
a year ago

It's worth doing, but frustrating at times. Much better than paying Getty Images £20 a pop for a photograph!

0 0 Reply Share ›

marylyn ford → Geoff Leach
a year ago

I don't think the personhood of an AI vehicle is the main problem, so much as who is going to get on a vehicle that is programmed to kill the fewest number of people in an accident?

1 0 Reply Share ›

Fiscal McPhee
a year ago

I have for a while suspected that the 'threat' of AI was just something else that was being weaponised to keep us in a low-level state of fear so this is a welcome dose of reality, Thank you.

4 0 Reply Share ›

Geoff Leach → Fiscal McPhee
a year ago

Having worked in the IT industry, I have something of a jaundiced eye when seeing some technology issue reported as a threat.

It reminds me of the Millenium Bug from 25 years ago. Where the people warning most loudly of the "threat" tended to be the same organizations that were offering their highly paid consultants to "solve the problem".

A business model which, I am sorry to say, seems to have been rolled out to tackle an astonishing number of "problems" in society that we previously failed to spot: climate change, institutional racism, transphobia etc etc.

1 0 Reply Share ›

Tom Armstrong Mod → Fiscal McPhee
a year ago

You wouldn't put it past them, would you?

1 0 Reply Share ›

Andreadsweald
a year ago

Not being averse to new technology (even at my advanced age) I started playing around with publicly available AI as soon as I could., I was soon disappointed. It was like being talked down to by a Californian knowitall 20 something. Of course, all it knew was what it had ben fed by,.,... yes, Californian knowitalls - the sort of people who think Wikipedia is the fount of all wisdom and that people must be protected from wrongthink, as defined by Californian knowitalls.

AI is going to be very useful in many fields. It can do things that impress and will undoubtedly do even more of them in time. But it cannot *think* - even if it is capable of fooling some users into believing it can.

4 0 Reply Share ›

Geoff Leach → Andreadsweald
a year ago

This is something that occurred to me when I first saw the output of ChatGPT (and similar LLMs) -- very impressive in terms of style, tone and the general fluency and articulacy of the text -- but could be good or bad in terms of content.

That makes sense if you think of how the model has been trained on a huge corpus of texts written by professional writers (such as journalists and copy editors) which uniformly represent a good style of written English.

I suppose that if you ask AI to produce something on a popular topic, on which many articles have been written, and on which there is an established consensus, then the output will be reasonably accurate, in that it combines a large number of sources all of which agree in substance. But if you ask it to produce something on a contentious topic, or which requires original thought and reasoning, then it appears less useful.

There is also a danger here, because we tend to grant more authority to well written text.

If I scroll through hundreds of comments on a newspaper article on some topic (looking for that one person who spent a lifetime working in that field, and so knows far more than the poor journalist who had only two days to research and write the article) then I naturally accord more weight to someone who wrote several paragraphs of well-reasoned argument. But I just assume that the comment writer knows what he or she is talking about.

Now that AI can produce well-written nonsense on any topic, then I will have to be more sceptical.

3 0 Reply Share ›

Tom Armstrong Mod → Andreadsweald
a year ago

Good comment. The world seems to be run by shallow Californian knowitalls these days.

3 0 Reply Share ›

Paul Sutton
a year ago

IT is useful (obviously) but also horrible. I mean, our politicians are in fact less human than it (IT).

Excellent to read that many cafes are banning lap-top jockeys from hogging tables. There's a local coffee shop to me, which is cursed by these types - they sit tutting, spreading unease, occasionally even do excruciating conference calls. All of them are 'progressives', who voted Remain and have been 'banging the bishop' over hefty prison sentences for 'rioters'.

Here's how I deal with them :

THE FEW CONTROLLERS

'Presumably I can sit here?'

Headphones in he was tapping on his device before I'd agreed. One of those laptop jockeys in Botley's artisan coffee shop. A writer-in-residence of the digital future, swapping human failings for the icy perfections of code and spreadsheet.

The setting was perfect – for him. A mixture of faux-chumminess and industrial austerity; a Covid redoubt, haunted by the lockdowns its regulars enjoyed.

I stole his tablet and it couldn't have been easier.

'Is your milk allergy-tested?'

He peered into the cake display, reciting its tempting contents. The device sat open and unlocked. I took it without glancing, remembering Clemenza's words to Michael Corleone on how to leave Louis' restaurant in the Bronx. Walk straight out but don't hurry.

The bar at Botley's Premier Inn was perfect – for me. Its jarring interior sure to repel hipsters and digital workers; the purple and cream tones ensuring he'd never set foot there. His files revealed:

* A list of dogging locations off the A420 and A34. I'll initially spare you elaboration (his activities were lovingly chronicled).

* A database of Tesco superstores in the Oxford area, linked to programs for stock-levels. It was in edit-mode so I made random changes then hit 'Go Live'. Expect vast quantities of Tunnock's Tea Cakes in your local store.

* A detailed inventory of his late-father's possessions, with likely values and ideas on how to ensure he - and not his sister - got them. Most were worth under £20.

* A local health authority database of Covid vaccination status for Botley's locals. I recognised many names, including my own. Scrolling through, each cell linked to information on voting habits, views on Brexit, ethnicity, race, qualifications, occupation…even where one shopped for food.

There was a link to 'preferred pronoun if realignment prescribed or promoted.' I edited my own information, until the program locked when I identified as a pan-sexual Muslim with a geography degree from Durham, seeking urgent and drastic realignment.

Later I returned to the artisanal oasis, wearing a mask, balaclava and great-coat - like a revolutionary from Dr Zhivago. I pushed the sorry item under one of the benches and almost collided with its febrile owner, ranting at a cowering barista.

'Surely you have CCTV? It was stolen and this is now a national security matter. I can have you closed and searched if it's not returned!'

And me? I tinker along.

It needed starting - a rebellion, of sorts.

3 0 Reply Share ›

Fiscal McPhee → Paul Sutton
a year ago

Very amusing. Never leave your device(s) unattended.

3 0 Reply Share ›

Paul Sutton → Fiscal McPhee
a year ago

Thanks - it's turned into a whole story. Next bit is set in various superstores near me.

1 0 Reply Share ›

Tom Armstrong Mod → Paul Sutton
a year ago

We need Mr Holmes on this, pronto Paul.

1 0 Reply Share ›

Paul Sutton → Tom Armstrong
a year ago

It's a different thing - the prologue to a novel, about this Laptop character and my persecution of him!

1 0 Reply Share ›

This comment was deleted.

Paul Sutton → Guest
a year ago

Yes, I hate them too! Delighted to see the disaster enveloping them, with sales plummeting and fires.

I want to see the term 'laptop jockey' increasingly used! Not sure if I saw it or - dare I hope - invented it!

2 0 Reply Share ›

Fiscal McPhee → Paul Sutton
a year ago

'Laptop squatter' would be more apt, would it not?

2 0 Reply Share ›

Paul Sutton → Fiscal McPhee
a year ago

No - jockey (attached to various things) is often a phrase. For example, arse-jockey!

0 0 Reply Share ›

Jon_Redman → Paul Sutton
a year ago

Is that the same as a knob jockey?

1 0 Reply Share ›

Tom Armstrong Mod → Paul Sutton
a year ago

My wife recently had a motor accident that resulted in the insurance declaring her car being beyond economic repair. We replaced it with Toyota Varis Cross, a hybrid, which is great - when it works. It's only got 150 miles on the closk and its been back to the garage twice, as the 12V battery that starts the engine cannot depletes itself every two days. It's a nightmare.

1 0 Reply Share ›

Bob of Bonsall
a year ago

Why is everyone getting so excited over Artificial Insemination????

3 0 Reply Share ›

Geoff Leach → Bob of Bonsall
a year ago

A friend of mine (who works at a vets) used to have a boyfriend who worked in artificial insemination (of cattle that is, rather than offering his services in a personal capacity). We may have exchanged some confusing messages before I explained that, as a software engineer, "AI" meant something different to me.

4 0 Reply Share ›

Bob of Bonsall → Geoff Leach
a year ago

Yes, quite!

0 0 Reply Share ›

Tom Armstrong Mod → Bob of Bonsall
a year ago

It's only those who do not want, or fear to be inseminated Bob.

1 0 Reply Share ›

This comment was deleted.

Bob of Bonsall → Guest
a year ago

Some years before I retired I was sent to a seminar on "Asset Information", a new name for Network Rail's track inspection trains and made the same joke when I saw the "Welcome to AI" poster in the entrance foyer.
No one know what AI meant in agriculture!

5 0 Reply Share ›

Rosie
a year ago

I have an acquaintance who works for a company that is employed and paid , by other companies, to try to hack into their programs. He tells me there is no need to worry about AI as it will never happen in most of our lifetimes as the skills are not there!

2 0 Reply Share ›

Tom Armstrong Mod → Rosie
a year ago

It sounds like car companies who employ car thieves to try to break into their cars.

My youngest son is a film editor, and has worked on films like Star Wars. He has experimented with AI, but does not hold it in high regard.

1 0 Reply Share ›

jeremy Morfey
a year ago

Where AI repeatedly breaks down is when it makes presumptions.

There is little more irritating than being second-guessed on the presumption that what interests us one moment may interest us the next. When I am exploring life or the web, I often like to see where randomness takes me, and enjoy the serendipity of the unexpected or the unprogrammed. All too often the repetition is at best tedious and boring, and like the Chinese water torture may be quickly excrushiating.

Does anyone remember the electronic drum machines that came during the 1980s? The identical sound repeated over and over may replicate accurately any percussion sound one desires, but in reality an acoustic drum was far more pleasant to listen to, because of the slight and subtle variations with each beat.

A decade or two ago, I enjoyed social media and was a regular on Facebook and Yahoo! Yet in recent years, since they used up bandwidth with analytical algorithms that define what category I belong to, deliver content according to these, and suppress other content deemed of no interest to me, it has made both platforms very unpleasant to use, and I now avoid them except to dip in from time to time to get news about my estranged daughter, or to find out whether Alma Deutscher has finally got round to writing her symphony.

I do not see this improving as ever faster broadband for some allows developers to load up ever more unwanted stuff onto my system.

What I want to know about AI is that will it ever gain the capacity to love, or would it be merely an illusion as humanity loses that capacity?

1 0 Reply Share ›

Tom Armstrong Mod → jeremy Morfey
a year ago

We'll try to continue to expose you to analogue randomness Jeremy, I promise.

0 0 Reply Share ›

Jack W
a year ago

Good article, thank you.
It was feared that computers, would make life easier and put many out of work, it didn't happen. I think the same will happen with AI, it will be a pain in the arse, make life more difficult and stressful, and will consume vast amounts of energy whilst achieving little.

1 0 Reply Share ›

Tom Armstrong Mod → Jack W
a year ago

Very true Jack. I can remember when computers were going to make everything so much easier. What a lark!

1 0 Reply Share ›

Granonymous
a year ago

The New Yorker. Anthony Lane. "Abridged too Far". How to use the App. "Blinkinst" to read a book in 15 mins. A very funny satire on the benefits of AI........or not

1 0 Reply Share ›

Tom Armstrong Mod → Granonymous
a year ago

Thanks, I'll look it up.

0 0 Reply Share ›

Neiltoo
a year ago

Fascinating, thank you.

1 0 Reply Share ›

Joseph B. Fox
a year ago

Trolley buses don't run on rails. Americans often refer to trams as trolleys, which can give rise to confusion, as in the "Trolley Dilemma".

1 0 Reply Share ›

Tom Armstrong Mod → Joseph B. Fox
a year ago

True Joseph, but the operate within fixed limits and approaches to them can be limited. But maybe the writer meant trams.

2 0 Reply Share ›

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Free Speech Backlash

We are fed up with and concerned about the constant attacks on personal liberty and restrictions to free speech, and think it time we did our bit to stop it.

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