

The future is AI – but will it allow humans to play a part?

The automation of jobs is gathering pace and could usher in a workplace revolution we'll adapt to – or create a world in which we're third-class citizens, says Tom Whipple, Science Editor at The Times

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Rebecca DeWald used to have a regular gig. She would translate a fast fashion brand's website into German. It wasn't much fun for someone with a PhD in translation studies – describing dresses isn't exactly Goethe – but it paid the bills. Then one day there was a change in the terms of her employment. The company switched to using machine translation. She kept the job, it still paid the bills. She was now there to check and standardise whatever was produced by the computer. But there was a niggle.

“What it meant, actually, was that us humans were training a machine,” she says. Each corrected caption for a mid-priced T-shirt, each set of high heels, each pair of skinny jeans, was a data point for the robot that was going to replace her.

With the release of chat programs that can imitate humans, the world is now beginning to consider what the coming of artificial intelligence means. What will it do for our jobs if large swathes of once solid professions – law, accountancy, medicine – disappear? What does it mean to be a human when the thing that humans most prize – intelligence – has become the cheapest commodity on the planet?

Translators, for good and ill, don't have to wonder. “You can take the world of translators and interpreters as a microcosm of the world in general,” says Nicki Bone, chairwoman of the board of the Institute of Translating and Interpreting. Not all of them are adjusting. “Of course we have our pessimists.” But, she adds: “There are also opportunities, and optimists.”

The speed of change, though, has been breathtaking.

Science fiction writers try to predict the future. Normally, they fail. In Douglas Adams's *Hitchhiker's Guide to the Galaxy*, there is an odd creature known as the Babel Fish. If you put it in your ear, it will automatically translate the language of the person speaking to you. Adams, with his Babel Fish, was not predicting the future. He was creating a plot device that meant his protagonist could talk to anyone he met. It was, as the book itself stated, “bizarrely improbable”. But the future has no care for what we do or do not consider probable.

Last week, in *Stuff*, a gadget magazine, there were no jetpacks or hoverboards. There was, though, an advert for a set of earbuds, in essence indistinguishable from Apple's, called "Timekettle". In the advert, a couple are having coffee. The man says, "Would you like to have dinner tonight?" The woman, wearing the earbuds, hears, "Möchten sie Abendessen heute Abend?" These earbuds performed simultaneous translation.

No one is pretending we are quite there, Babel Fish-wise. Given the rough edges of both translation and transcription software, using Timekettle might end up being a somewhat awkward date. But one day? Even one day soon? For translators, AI is not coming — it has come. Increasingly, says Bone, she and her colleagues are acting as editors of a machine's first pass, rather than translators of the raw material.

For some, that's fine. "People will say, 'OK, instead of working at one rate for this number of words per hour, I'm working at many more words per hour, but for a much lower rate.' Some are happy to take that on. Some won't, as a matter of principle."

As we marvel at Chat GPT and its uncanny ability to mimic human writing, translators are, for the rest of the professions, the canary in the coalmine. Or, as Google Translate would put it, *le canari dans la mine de charbon*.

And Bone's opinion of our collective future? What will life be like when computers can file your taxes and legalbot3000 can do your conveyancing? Humans will still have their uses. For instance, it takes a human to confirm that yes, unusually, the French actually do use the phrase "canary in the coalmine". Sometimes, those uses will be rather more important still: getting a legal or medical analysis wrong can be catastrophic.

"What I always say," says Bone, "is there can never be any complete replacement for the human mind." View the AI as a tool, no different from the calculator for an accountant or the tractor for a farmer and, she says, it's clear it is as likely to bring benefits as harm.

This, as it happens, is also the conventional answer of economists. No one these days laments the loss of opportunities in the lift attendants sector. When typists became redundant, it didn't lead to a rise in fast-fingered beggars. The combine harvester took a scythe to the scythe industry; there is no legacy today of scythe unemployment.

There is an anecdote techno-optimists like that illustrates the absurdity of believing it would ever be otherwise. Milton Friedman, the economics professor, was travelling overseas and passed some roadworks. Looking out of his car window, he was confused. He asked his host why the labourers were using shovels rather than machinery. The answer came that it was in order to maintain employment levels. Friedman's response? "Then instead of shovels, why don't you give them spoons and create even more jobs?"

There are plenty of modern equivalents of the JCB arriving in a world of shovels. Consider the UK-based startup Papercup, a software company that applies itself to dubbing. It takes videos in one language and overdubs them in another. If you are watching, say, *Top Gun: Maverick* but in Spanish, then the dubbing will use a synthetic voice that tries to capture some of the nuances and emotions of Cruise's – but in Spanish.

For now, this is only semi-automatic. There is a "human in the loop" linguist to check Cruise isn't about to say something embarrassing; not all *Top Gun* call signs sound quite so badass when automatically rendered in Spanish. But this human, of course, can get through a lot more dubbing than if he or she were starting from scratch. In one sense then, it is taking the jobs of legions of linguists and actors. In reality, it is taking no jobs at all, because until it existed, this work was not being done. Most videos on the internet are not made by people with the budget to hire Tom Cruise. Most are never dubbed at all.

"On YouTube, there are 250 million hours uploaded every year and on Spotify there are two and a half million podcasts," says Jesse Shemen, chief executive of Papercup. "The numbers are staggering. What people don't realise is that literally 99.9 per cent of all of this video and audio content is stuck in a single language. The reason is simple: traditional dubbing as it stands today just fundamentally doesn't scale. It's a very laborious, time-consuming process."

Accusing Papercup of taking the jobs of linguists, then, is like accusing a crane company of taking the jobs of artisanal medieval builders because it helped to construct the Shard. They couldn't have built it in the 1500s; we couldn't have dubbed a million hours of footage in the 2010s. Like the Luddites, each time a new technology arrives, we fret. But today, after centuries of jobs being destroyed by technology, we have better lives with more people in better jobs than ever before. The loss of jobs to technology is, in this view, not merely to be expected: it is to be embraced.

That, then, is the easy dismissal – the overwhelming counter-argument of history. Like the engine behind Chat GPT, we can extrapolate from the corpus of data the most likely next sentence in the human story, and that sentence is: relax, it will be fine.

Except, what if it really is different this time? What happens when there aren't better jobs? What happens, in fact, when the better jobs are precisely the ones being taken? Didn't the Luddites actually have – from their view if not the economy's – a point?

Anyone reading a recent blog post by Sam Altman, a software engineer, would struggle to tell whether he foresees utopia or a dystopia. On the one hand, he writes, AI will bring unimaginable wealth. On the other hand, unless something changes, most of us will get none of it. “In the next five years, computer programs that can think will read legal documents and give medical advice. In the next decade, they will do assembly-line work and maybe even become companions. And in the decades after that, they will do almost everything, including making new scientific discoveries that will expand our concept of ‘everything’,” he writes.

And Altman's qualifications for this assessment? He is the chief executive of OpenAI. And OpenAI is the reason most of us are talking about AI at all – it created Chat GPT. He is clear it is just the start. Just wait, he says, until the AIs start designing the AIs. “This technological revolution is unstoppable. And a recursive loop of innovation, as these smart machines themselves help us make smarter machines, will accelerate the revolution's pace . . . Software that can think and learn will do more and more of the work that people now do.”

What this means is the value of labour will, he predicts, drop to near zero. To use a Marxist analysis, power will shift from labour to capital. The consequences? Many: for self-worth, for employment, for perhaps even human dignity itself. As Jerry Kaplan, a Stanford computer scientist and definite technosceptic, puts it, bit by bit, without us noticing, the balance of power will change until finally, “we will learn the truth – who is the farmer and who is the farmed”. We will make ourselves the pets of computers.

More immediately, before AI starts taking us for walkies, there are consequences just for quality of life. Already, we are seeing that a greater proportion of the wealth created is going to companies rather than workers. That can only get more extreme. “If public policy doesn't adapt accordingly,” Altman warns, “most people will end up worse off than they are today.”

Altman is one of a number of commentators who suggest we should consider a radical solution. If power moves from labour to capital, so too should taxes. We should tax wealth rather than income, and redistribute that money through a system that, in effect, grows to become a universal basic income. Employment as we know it could be over. To which Stephen Cave, director of the Cambridge Leverhulme Centre for the Future of Intelligence (mission statement: “The rise of powerful AI will be either the best or the worst thing ever to happen to humanity”), says – only half-jokingly, only half-reassuringly – think of the mulberries.

There is a semi-regular test used to evaluate the skills of robots. It’s not playing chess: a budget mobile phone can beat the finest grandmasters. It’s not imitating a human: by most reasonable assessments the famous Turing test of machine intelligence has tumbled. It’s picking up an egg. For anyone who worries about the arrival of sexbots anytime soon, watching this test is both reassuring and wince-inducing. Put it this way: as the yolk flies and the shells crack, these are not hands you would let anywhere near your sensitive parts any time soon.

And so with soft fruits. “Mulberries,” says Cave, “they’ll be the last ones to fall.” Ask any post-Brexit farmer: for all our technological prowess, we are far from replacing humans in something as simple as fruit picking. This is not as trite a point as it seems. In the 1980s Hans Moravec, a roboticist, came up with a law that still largely holds true, and is today called “Moravec’s paradox”. “It is comparatively easy to make computers exhibit adult-level performance on intelligence tests or playing checkers,” he wrote, “and difficult or impossible to give them the skills of a one-year-old when it comes to perception and mobility.”

It’s not just that if robots can’t beat us at all manual tasks, there is no reason to believe they will do so at all intellectual ones. It’s also that there are things humans can do that robots can’t, specifically because they are humans. Why do we have waiters? It wouldn’t be hard to put food on conveyor belts. Why do we have concierges? Why do we abhor the idea of robots in care homes? “We are human beings,” says Cave. “We value our interactions with other human beings, and we value authenticity. I don’t think that will change.”

In a recent government report on the future of AI, which concluded employment would ultimately simply readjust, this was referred to as the “AI paradox”: the more AI takes over our jobs, the more human the jobs that remain will become. We will do jobs, Cave argues, precisely because humans want humans to do jobs.

“There’ll be a lot of things for humans to do. Some of which we do now, and some of which we can’t imagine. But that gives me reason to be optimistic in the long term.” And in the short term? That’s a little different. That’s when he leans to the less optimistic half of the Leverhulme’s mission statement.

“What’s really hard is the transitions. And when we look back to periods of serious unrest, industrial unrest, civil unrest, civil wars, world wars, the rise of fascism, the rise of communism, these happen over transition periods where whole swathes of the population are put out of work. It’s all very well saying, ‘Don’t worry, 100 years from now, you’ll be fine’. If we automate trucking and three million truckers are put out of work in the US, you know, the Trumpism we’ve seen will be nothing.”

Yet peaceful transitions are possible. These days, Rebecca DeWald doesn’t translate clothing descriptions: she is a literary translator. One recent job was translating the Ukrainian writer Andrey Kurkov’s *Diary of an Invasion*, originally written in English, into German, where it won an award.

Sometimes she uses AI to help – but it’s a tool. It’s where the real translation starts. “The actual work of a translator is always the editing. The more you edit, the more you’re chipping away at your style and getting closer to the author’s style,” says DeWald, a member of the Translators’ Association committee. It’s nice to have the time to really craft the text. It’s puzzle solving. There’s a geeky pleasure. How do you render an idiom in another language?” A computer can describe fast-fashion trousers, or the human mind. For that, you will always need a human.

At least, that’s the human view. There is one key player yet to be consulted about a future AI-assisted world. The Times approached Chat GPT for comment. At first it gave a bland response and I suspected it was sugarcoating the truth. So I requested it to be a bit scarier.

“The rise of robots and artificial intelligence threatens to upend the very fabric of our society, leaving a wake of unemployment in its path,” it replied. “As machines become increasingly advanced, they have the potential to replace human workers in a vast array of industries. The march of progress shows no mercy, and soon, no job may be safe from the cold, mechanical grasp of automation. The future of work, and indeed of humanity itself, hangs in the balance as the machines continue to advance.”

Or, more pithily, time to plant some mulberry trees.

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