Whispering to Machines

Brief Thoughts on Human-AI Relations

Zachary R.J. Strong

About the Author

Zachary R.J. Strong is a scholar, author, futurist, artist, and mystic from the industrial city of Hamilton, Ontario. Versed in a kaleidoscope of topics and perhaps the only person to ever graduate from McMaster University with a combined degree in engineering physics, commerce, and mathematics, Zachary dances happily and comfortably at the intersection of science, history, media ecology, and spirituality. He has written multiple papers and books on topics including higher education reform, expert intuition, the Egyptian dynastic chronology, flaws and corruption in psychology, and the Industrial Revolution.

Website: https://zacharystrong.net

Legend

Regular Black Text = Written by Z.R.J.S
Blue Text = Written by NovelAI
Green Text = Written by NovelAI in the style of Jules Verne

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On May 11, 1997, an artificial intelligence named "Deep Blue" made history by defeating the reigning world chess champion, Garry Kasparov, in a six-game series. Ever since then, the capabilities of computer programs have continued to match or surpass human abilities in countless spheres of expertise, causing many to question whether humans will still be good for anything at all in the future.

There are a range of opinions on the future of work in light of advancements in artificial intelligence, however the most likely scenario is that the jobs that we do will evolve over time as different technologies become more powerful and complex. Although the focus of many thought leaders has been on how technology will replace human labour, the opportunities for human-computer collaboration are rather exciting. This can especially be seen in the creative sector, which is currently exploding with AI-driven potential.

Some examples of artificial intelligence in the creative arts include the ability to turn a photo into a video clip with a simple click (e.g., Google Photos), an AI algorithm able to design a new image from existing images in various combinations (e.g., Google's Tensorflow), artificial neural networks being used to create paintings that look like works by famous painters, AI-generated music produced by machines, and artificial intelligence that creates original written content, such as this very article.

This article is not entirely written by an artificial intelligence - rather, after setting some initial parameters and beginning the article with some original direction, I let the AI take over at certain points to continue my train of thought without any effort on my end. If I don't like what it writes, I can delete it and have it generate some new options, or I can go in and edit the output as if I were a newspaper editor.

Although artificial intelligence is an extremely powerful tool, it is not a cure-all solution that can be deployed without a strategy or direction. There is a significant amount of work involved in selecting the right algorithm and designing the proper environment in which to deploy it, as well as learning how to train new algorithms to perform specific tasks. Indeed, there is no such thing as "general artificial intelligence", which means that any AI must be designed, developed, and trained specifically for its role.

For example, my collaborator in this article, NovelAI, was trained on a massive library of open-source projects, including the works of great writers like Sir Arthur Conan Doyle, H.P. Lovecraft, and Jules Verne, whose styles it can emulate if asked. Despite this great power, my early experimentations with the tool suggest that careful direction and tending is required.

In the WIRED article "Picture Limitless Creativity at Your Fingertips", futurist and technology guru Kevin Kelly coins the term "AI whisperer" to refer to the skill of coaxing a powerful but naive AI to produce a specific desired output. This can especially be found in the realm of AI-produced visual art, where entire manuals have been produced for whispering to DALL-E and other programs.

The intimacy suggested by the metaphor of whispering is particularly powerful - it feels like working a magic trick, using your own human creativity to convince the machine that it needs to change its programming. It's a wonderful feeling to discover the secret of a powerful technology, the way we do when we learn magic tricks. In the case of AI, the secret is to know that the AI knows it has a magic wand and you need to encourage it to use it.

The AI whisperers are the artists, scientists, and writers who use their intimate knowledge of these tools to create original pieces of work while letting the robots do most of the heavy lifting. This can be seen in the work of artists like Katerina Jebb-Powell, who has used AI tools to produce some of her most important work, and the writer Chris Baty, creator of the novel-writing program "Novel Writing Machine".

Artists have traditionally worked alone to achieve success, often by making something beautiful or meaningful and hoping that someone will notice it one day. With the advent of AI, a new model is emerging: a model which requires a certain comfort level with

technology, a willingness to be vulnerable in front of the machine, and a willingness to iterate upon an idea at speeds never before accessible to creative workers.

There is indeed a magical sense in which AI whisperers are creative hackers, as they use the tools of AI to create new things that may not otherwise have been possible, and doing so with minimal human effort expended. Indeed, the synthesis of artificial and human intelligences in the realm of creative endeavour may represent the ultimate vision of Marshall McLuhan's metaphor of technology and media as extensions of the human body and mind.

Whereas Bach, Mozart, or Rachmaninoff had to conceive of every single note in a unified whole using only their minds, pens, and paper, the incredible creative power of AI may allow musical composers to extend their abilities even beyond a symphony to create entirely new pieces of music. Writers such as myself could one day use AI to build entirely interactive fictional worlds more intricate than even a George R.R. Martin series.

Perhaps the most exciting part of harnessing the creativity of artificial intelligence is the possibility for collaborative work. We are entering a new era where two or more intelligences can work together in unison using tools we did not have access to before. The next generation of writers will write novels in conjunction with AI systems, and these might not even be human authors in the conventional sense of the word.

The world is changing, and so too are the tools needed to keep up with it. It's the job of us humans to find a new balance between the artificial and human realms of existence - to use our humanity to make use of the intelligence of these new tools, while also allowing them to augment our abilities. While there is much speculation about the future of work for humans, we should also consider that this is simply a different phase in our evolution and that we shouldn't fear change but embrace it. As with every other era, we should use the latest technology available to advance ourselves and improve our quality of living, just as we harness new materials and tools for building houses, bridges, or airplanes.

It has been said in many different ways that we first shape our tools, which then shape us in turn. For example, the invention of the plow changed the agricultural landscape, and therefore the way people lived. Similarly, we may be on the threshold of a new age of technological advancement that will change the way we look at the world and the way we live in it. Indeed, as we increasingly come face-to-face with intelligent machines that can paint, write, play, think, and design like us humans, we may very well find the next stage in human evolution involves unprecedented harmony with intelligences similar to our own, yet enigmatic and capricious enough to keep the dance interesting.