LIKE IT OR NOT ...

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Reflections on AI and Design

Everywhere you look, AI is in the news. There is no shortage of prognostications of its likely impact on economics, politics and society at large. Promise or peril? Some envision that AI will change the world for the better in astonishing ways, and others fear that AI will eventually turn us into mere pets of our computer masters. The scenarios on both sides are entertaining, but like most predictions rendered with certainly, they are very likely to be wrong. While humans may be very good at imagining the future, they are very bad at actually predicting it.

AI is the natural outgrowth of earlier, much less powerful computer systems, and it will take a huge leap forward when quantum computing achieves commercial scale (which is only a matter of time). In many ways, the landscape has already been irrevocably altered. An obvious example is that spending habits have shifted to the degree that only about 10% of all transactions are handled on a cash basis. The rest are fully automated, so everything we buy is tracked electronically. The result is a huge amount of data that can be used to predict spending patterns, which in turn can help manage the supply chain. If you buy a book on Amazon or a movie on Netflix, algorithms predict with unsettling accuracy what your next purchase is likely to be and make sure those temptations pop up on your screen at just the right moment.

Our cellphones already know who we talk to and for how long, when we go places and where to, what kind of information we seek on the internet, where and what we eat, and so forth. Cellphones have permeated our lives to the degree that they have even replaced the need for office space, as we can conduct business from just about any location at any time of the day via email, Zoom, text (and even voice!). This is truly amazing when we realize the iPhone is just a teenager (it was invented in 2007, a mere 17 years ago). If past is prologue, it does not take much imagination to envision that in another 17 years, we will be living in a ubiquitous-electronic universe with access to unlimited amounts of data, one that has been entirely invented by clever humans.

All technology can be used for good or ill. If anyone doubts this, consider Alfred Nobel, the inventor of dynamite. Legend has it that one day, over his morning coffee, he opened the newspaper to read his own obituary, which described him as a rather unsavory character who invented the greatest destructive force known to man. Fortunately for him, the obituary was a mistake (it was actually his brother who had died), but it did inspire Nobel to devote the remainder of his life to good works, such as establishing the Nobel Prizes. Hence, when the legitimate occasion for his obituary presented itself, he was rendered in a much more sympathetic light.

The same potential for good and evil pertains to just about everything, from firearms to petroleum refining to nuclear energy. Even water in excess quantity can cause deadly and destructive floods. So, the question for AI is not whether it will be used for good or ill (the answer is yes in both cases) but how, as the humans who invented it in the first place, we will manage it to get more of the former and less of the latter.

This is where design comes in. People have always been dissatisfied with the status quo, constantly seeking ways to improve their environments. We create structures of all kinds to make this happen, from roads, bridges and dams to buildings of all shapes, sizes and functions. Design is the process by which we move from the current state to a new, more desirable future state. Design thinking can be applied to a wide range of human endeavors, creating both objects and processes along the way. In short, if we can imagine it, we can achieve it.

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As our newest and most sophisticated tool, AI can be of enormous value, but it's just a tool, like the flint that early cavemen used to spark fire. It will enable designers to greatly improve both the speed and the quality of their explorations. AI will enable the documentation of design intent to be much more accessible and accurate. And when applied to the supply chain, the manufacturing process and the construction site, it will enable projects to be delivered at much higher quality and lower cost. The potential is certainly there, but the potential will not be realized unless AI is put to use in a truly thoughtful way.

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A great analogy is the "invention" of human language. It was language that enabled humans to communicate with each other and thus undertake much more complex and difficult tasks that could not have been achieved without broad-based cooperation. Yet no one person created language. Who invented the pronoun or the preposition? Everyone and no one. Language results from the cumulative effort of many thousands of people over many thousands of years. In fact, it is estimated that there are currently 7,117 languages in the world today (700 of which exist in New York City alone). The internet, and its newest offspring AI, operate very much like that.

That is why AI is inevitable. It is built upon a network of networks – tens of millions of computers connected to the internet, interwoven with multiple redundancies. It does not come equipped with an on/off switch. We are like a teenager who has been given the keys to Dad's Ferrari. It's a sophisticated machine, to be sure, and we need to figure out how to drive it.

Our biggest failure will be in not learning how.

Scott Simpson is a regular contributor to DesignIntelligence and a senior fellow in the Design Futures Council.