Arnold J. Toynbee in 1967

HUMANIST AMONG MACHINES

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As the dreams of Silicon Valley fill our world, could the dowdy historian Arnold Toynbee help prevent a nightmare?

He was an expert in world civilisations who made the cover of Time magazine in 1947, praised for writing 'the most provocative work of historical theory… since Karl Marx's Capital'. But in September 1921, long before he was the most famous historian in the world, a young Englishman named Arnold Toynbee boarded the Orient Express in Constantinople, bound for London. Fresh from a nine-month posting as a war correspondent for The Manchester Guardian, Toynbee scribbled down reflections about the shadow side of progress in his notebook, while the Balkans passed silently outside his window. Modern technology had changed the world for the better, he observed, but it could also wreak great havoc; there was always the risk that 'the machine may run away with the pilot'. Human mastery of nature came at a price: in 1921, Europe's battlefields were still cooling from the heat of industrial

warfare and the blood of millions dead. They whispered the terms of this Faustian bargain to anyone who would listen. In the roaring 1920s, not many people were listening.

Europeans wanted better lives and they were certain that scientific progress would provide them. After the devastation of the Great War, rationalisation ruled from London to Moscow: empirical methods and new technologies were adopted to streamline everything from cityscapes to national populations, intellectual work to household chores. Many administrators and activists believed that there was no problem (material, institutional or social) that couldn't be engineered away.

Sound familiar? Our times are confident, too. We're optimistic that scientific thinking can explain the world, certain that the solutions to most of our problems are a quick technological fix away. We've begun to treat vexing social and political dilemmas as simple design flaws, mistakes to be rectified through a technocratic combination of data science and gadgetry. Progress is no longer a dirty word. The most influential prophets of this creed are in Silicon Valley in California, where, to the tune of billions of dollars, the tech industry tells a Whiggish tale about the digital ascent of humanity: from our benighted times, we'll emerge into a brighter future, a happier and more open society in which everything has been measured and engineered into a state of perfect efficiency.

And we're buying it. We're eager to optimise our workouts, our sleep patterns, our pregnancies, our policing tactics, our taxi services, and our airline pilots. Even the academy is intrigued. From spatial history to the neurohumanities, digital methods are the rage. Lecture halls have been targeted for disruption by massive open online courses (MOOCs). Sometimes it seems as though there's little that can't be explained by scientific thinking or improved upon through digital innovation.

What are the humanities for at such moments, when we're so sure of ourselves and our capacity to remake the world? Toynbee wrestled with this question for decades. He was as curious as anyone about the latest discoveries and innovations, but he rejected the notion that science could explain or improve everything. And his thoughtful criticism of technology reminds us that poets and historians, artists and scholars must be proud, vocal champions of the humanities as a moral project—especially at moments of breakneck scientific progress. Fluent in the language of crisis and decline, casting about for ways to defend ourselves, today's human-

ists could use a little inspiration. We need our spines stiffened. Toynbee might be a man to do it.

Yet Arnold Toynbee is about as out of fashion as possible. Briefly beloved by the press, he was scorned by his academic peers. Herculean but strewn with errors, his 12-volume account of the rise and fall of world civilisations, *A Study of History* (1934-61), collects dust on library shelves. But Toynbee confronted his world in admirable and inspiring fashion, a model humanist for technological times.

As a boy, he occasionally spent the night at the home of a family friend who was a distinguished professor of the physical sciences. The best part of these visits was the professor's library. The young Toynbee devoured everything he could: literary epics, volumes of poetry, the latest scientific theories, surveys of geology and chemistry and the animal kingdoms. (Maybe this is where he discovered John Milton's *Paradise Lost*, which he allegedly read in three days at the age of seven.)

As he grew older, however, Toynbee noticed that the ambitious works he treasured most were being replaced by scientific periodicals: 'gaunt volumes in grim bindings', technical and bloodless. This wasn't intellectual evolution—it was a destructive (and rather lopsided) campaign. The library had been 'invaded', he recalled, the shelves overwhelmed 'by the relentless advance of half a dozen specialised periodicals… The books retreated as the periodicals advanced.' Crestfallen, Toynbee found the volumes he'd once loved discarded in the attic, 'where the *Poems of Shelley* and *The Origin of Species*, thrown together in a common exile, shared shelves of a rougher workmanship with the microbes kept on gelatine in glass bottles.' Year by year, the library grew a little less human: 'Each time I found the study a less agreeable room to look at and live in than before.'

Toynbee's intellect was as voracious as his teenage reading habits. An intrepid gentleman scholar, he was anxious to absorb as much of the world as he could. In early photographs he certainly looks the part. Handsome and confident. Dream in the eyes. Dressed to the nines and possessed of a curious, imploring gaze. His career was glamorous and global in a way that came to his particular generation of well-heeled young Europeans. First, Balliol College in Oxford; then, British intelligence during the First World War, and the Paris peace conference after it. He reported on war crimes in Greece and Turkey, swam across the Euphrates River near Aleppo,

sat down with Iraq's King Faisal and China's Chiang Kai-shek, crossed the Soviet Union aboard the Trans-Siberian Railway. Even as he became a distinguished professor of history, he lived for the world beyond the ivory tower.

That world was moving forward at unprecedented speed. There was hardly enough time to figure out the latest invention before the next one arrived: the telephone, the wireless telegraph, electric trams, subways, massive ocean liners, airplanes, radio, the movies. In the 1920s, Europeans were more astonished by mechanisation than anything else; the factory had become both dazzling idol and master metaphor. Fordism and Taylorism (also known as 'scientific management') applied the logic of mass production to human beings, calibrating people like cogs in a machine.

Toynbee looked at this popular amalgamation of scientific principles and mechanical processes and gave it a name: the Industrial System, a term he used throughout the first volume of his *A Study of History* (1934). It was a perfectly fine approach, he thought, with real explanatory power and impressive achievements. But he bristled at the notion that it could do or explain everything. The problem with the Industrial System was that it didn't know when to stop, pushing relentlessly into domains where it simply didn't work.

Take the humanities, for instance. Historians had begun looking to the Industrial System for inspiration, borrowing its language and methods for their own work. Toynbee was scandalised. (He shouldn't have been: historians are scavengers at heart.) In 1934 he decried these developments as the 'industrialisation of historical thought' and warned that the results would be absurd at best, catastrophically sterile at worst. Certain historians, he reported, were now referring to their classrooms as 'laboratories' to keep up with the times. Toynbee thought this was ridiculous. Seminars, he reminded his readers, were not controlled chemical mixing sites but rather nursery gardens, places for students and ideas to blossom organically.

His was a Romantic response to modern life: the conviction that technology risked cleansing the universe of its poetry and meaning

An even bigger concern was the rise of what we might call assembly-line histories: standardised collections of facts produced by the division of scholarly labour. Toynbee's primary target was *The*

Cambridge Modern History (1902-12), a 14-volume history of Europe since the Renaissance with four editors and dozens of authors. He thought that such works were feats of engineering rather than achievements of scholarship: 'They will take their rank with our stupendous tunnels and bridges and dams and liners and battleships and skyscrapers, and their editors will be remembered among the famous Western engineers.' Impressive, in other words, but not really history. Most of all, Toynbee lamented the career of Lord Acton, the late architect and editor of the series. Once 'one of the greatest minds among modern Western historians', Acton's creative intellect had been snuffed out, the great man reduced to assembling facts and chapters by collected authors as though he were working in a factory.

Toynbee's criticism was anthropological more than anything, a nimble skewering of the grand analogy nestled at the heart of the Industrial System. Human beings were not machines, he insisted. Minds were not factories. 'In the world of action,' he wrote in volume one of *A Study of History* (1934), 'we know that it is disastrous to treat animals or human beings as though they were stocks and stones. Why should we suppose this treatment to be any less mistaken in the world of ideas?' It was a deeply Romantic response to modern life: the conviction that what was most essential couldn't be quantified or measured, that technology risked cleansing the universe of its poetry and meaning. The Industrial System seemed so powerful only because it had shrunk the world, congratulating itself on being able to know and control the fragment that remained. As the American poet Jack Gilbert would put it in 'Winter Happiness in Greece' (2009): 'The world is beyond us even as we own it.'

'The historical-minded student of human affairs and his scientific-minded confrère are really indispensable to one other as partners in their arduous common undertaking,' Toynbee insisted in 1961. He was no Luddite. And like the scientists and industrial titans of his age, he thought it was a worthy goal to try and explain everything. But Toynbee's was a mosaic universe, variegated and collaborative. Grasping the whole would require every way of thinking that human beings could bring to bear. 'One must be free to resort to the different methods of the poet, the historian, and the scientist in turn,' he argued. Today, we could do worse than emulate Toynbee's genuine and self-reflective brand of intellectual pluralism: 'No tool is omnicompetent. There is no such thing as a master-key that will unlock all doors.'

Intellectual pluralism is important. It's also pretty unobjectionable as far as banners go, easy to gather a crowd behind. Academics reminding one another to let a hundred flowers bloom are a little bit like politicians calling for a renewed spirit of bipartisanship: not wrong, but really asking only for the lowest common denominator of critical engagement. Toynbee called for harmony, but he was never one to settle on such safe ground, rather continuing onto more challenging terrain. He dares humanists to imagine a more muscular role for themselves as engaged critics and moral thinkers.

We forget sometimes (or are uncomfortable in saying) that the humanities are at root about questions of value: what it means to lead a good life or how to build a just society. Toynbee never forgot. Articulate and combative, he understood that humanistic inquiry is a moral enterprise, an unfinished project of exploration and improvement. And he knew that humanists must be crusaders, that their strength lies in their capacity (and willingness) to confront members of the public with hard questions about themselves.

Today, technology cries out for robust criticism. As Toynbee recognised, scientific principles and technical innovations might help us build a better railway, a faster locomotive—but they aren't very good at telling us who can buy tickets, what direction we should lay the track, or whether we should be taking the train at all. 'Man,' he wrote in *Civilisation on Trial* (1948), 'cannot live by technology alone.' Humanists have a professional responsibility to challenge public faith in scientific progress and technological whizzbangery, to question how the future is to be conducted and to whose benefit. It's our job to make sure that the machine doesn't run away with the pilot.

There's no shortage of writing about Silicon Valley, no lack of commentary about how smartphones and algorithms are remaking our lives. The splashiest salvos have come from distinguished humanists. In The New York Times Book Review, Leon Wieseltier, acidly indicted the culture of technology for flattening the capacious human subject into a few lines of computer code. Rebecca Solnit, in the London Review of Books, rejects the digital life as one of distraction, while angrily documenting the destruction of bohemian San Francisco at the hands of hoodied young software engineers who ride to work aboard luxury buses like "alien overlords". Certainly there's reason to be outraged: much good is being lost in our rush to optimisation. Yet it's hard not to think that we've been so distracted by such totems as the Google Bus that we're failing to ask the most interesting, constructive, radical ques-

tions about our digital times. Technology isn't going anywhere. The real issue is what to do with it.

We need critics who can scrutinise digital technology without rejecting it, who can imagine how it might be deployed differently

Scientific principles and the tools they generate aren't necessarily liberating. They're not inherently destructive, either. What matters is how they're put to use, for which values and in whose interest they're pressed into service. Silicon Valley's most successful companies often present their services as value-free: Google just wants to make the world's information transparent and accessible; Facebook humbly offers us greater connectivity with the people we care about; Lyft and Airbnb extol the virtues of sharing among friends, new and old. If there are values here, they seem to be fairly innocuous ones. How could you possibly oppose making new friends or learning new things?

Yet each of these high-tech services is motivated by a vision of the world as it ought to be, an influential set of assumptions about how we should live together, what we owe one another as neighbours and citizens, the relationship between community and individual, the boundary between public good and private interest. Technology comes, in other words, with political baggage. We need critics who can pull back the curtain, who can scrutinise digital technology without either antipathy or boosterism, who can imagine how it might be used differently. We need critics who can ask questions of value.

Our society isn't very good at asking these kinds of questions. Since the 1970s, the free market has slowly become our master metaphor. Its benchmarks of efficiency and profit have become ours. Our capacity to respond to the world and engage with one another as citizens has eroded, and instead we've become consumers in all things, rational actors seeking competitive advantage. To borrow a phrase from the essay 'The World We Have Lost' (2008) by the late British historian Tony Judt: 'We have forgotten how to think politically.' (Say what you will about the men and women of Toynbee's generation: from far left to extreme right, they certainly had political imagination.) And so while the issues we confront would have been familiar to Toynbee—surging confidence in scientific thinking and technological wizardry—our challenge is in many ways much greater. For we've forgotten how to speak the language of value, how to think beyond the market.

Humanists are well-equipped to offer this kind of criticism and we should do so aggressively. The language of value is our mother tongue, after all. Freedom and justice, privacy and the self, right and wrong—these are complex and contested humanistic concepts, not economic or technological ones. What's more, reimagining the humanities as a robust moral enterprise is the most compelling case we have for their continued relevance in a digital age.

The longer the humanities are roiled by crisis, the more arguments are mooted in their defence. Most of them aren't getting us very far. They're technical and small. We tell wary undergraduates that it's possible to land a job with a literature degree, that in their courses on modernism and Jane Austen they will learn precisely the kind of writing and communication skills employers want. Most of all, we remind students, administrators and legislators that the humanities teach 'critical thinking', a term used so frequently and automatically that it has lost whatever charge it once possessed. Not one of these arguments really captures what the humanities are all about. They fail to seize the imagination. And so the crisis continues.

It's time for humanists to walk out on a limb. Like Toynbee, we should be as engaged in the world as we are courageous in our convictions. The humanities are most of all a moral enterprise, the pursuit of answers to big questions about how we live together and where we're going. The stakes are high. We must remember how to speak the language of value, encouraging our readers and students to ask not simply 'Is it more efficient?' or 'How much does it cost?' but 'Is it good or bad? For whom? According to which standard?'

The US novelist Ursula K Le Guin put it well in her speech at the National Book Awards in New York last year when she observed that we need 'the voices of writers who can see alternatives to how we live now, and can see through our fear-stricken society and its obsessive technologies, to other ways of being'. This is what the humanities are for—not writing better quarterly reports or grabbing a gig in corporate communications—but for posing fundamental questions of value and helping us imagine alternatives to the way we live.

A curious but trenchant critic of science and technology as well as a determined moral thinker, Toynbee can help light the way through the woods for despairing humanists. Neglected and over-

looked, he offers a persuasive answer to one of our most troubling questions. What are the humanities for in a technological age? For Toynbee, the answer was clear: to save us from ourselves**.**   📖

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