Technology, magic and the quest for meaning

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When I was young, I loved to read fantasy novels: Lewis, Tolkien and the like. The appeal of such works, at least in part, is in the way they transport the reader to places and times that are more elemental, raw, and thus beautiful, than the real world. This is by design. Often enough, the authors themselves were disenchanted with the world they found around them, were bothered by the ugly, mechanical environment in which they lived, the dehumanising nature of the market, the destruction of mystery that occurred in a world designed by engineers and economists. You see this, for instance, in the figure of Saruman, the wizard gone bad in Tolkien's *Lord of the Rings*, who uses fire and earth to build an evil army. He is defeated, in a scene that is apposite today, by a force of tree creatures called Ents, which are outraged by Saruman's despoilation of nature. Saruman later returns and works to industrialise the Shire: the realm of the Hobbits, and Tolkien's stand-in for England. But the Shire is soon purged of Saruman's influence and reverts to the happy countryside it was before.

Fantasy writers were not the only ones to harbour misgivings about the changes wrought by economic modernity. William Blake famously imagined a heaven established in 'England's green and pleasant land', in contrast to its 'dark satanic mills'. Prior to that, Friedrich Schiller, whose work *The Gods of Greece* contributed the theme to this celebration in Liverpool, lamented the loss of beauty and of the fullness of life that accompanied the rise of modern science, religion and commerce. Schiller's work anticipated in many ways that of Marx, who found in capitalism a relentlessly dehumanising system, bent on separating men and women from their true essence.

As a young person, I didn't have the words, the poetry or Marxist language, to help me work through the way I felt about my own environs, in comparison with the worlds I read about in books. But the sentiment was similar. I grew up in what was more or less an idealised version of life in American capitalism circa 1980. I lived in a good-sized suburban home, on a cul de sac, in a quiet subdivision on the outskirts of a prosperous mid-sized city. We weren't rich, but we might as well have been. We had two big cars, colour television, a personal computer and a video-game system. I went to good schools, played sports, enjoyed beach vacations in the summer. We went to church every Sunday, to sit for an excruciatingly boring two hours surrounded by other middle-class white people being just as middle class and white as one could possibly be.

And all of it, every bit of it, felt like nothing. It was a world without beauty, without ecstasy, without history or character. We travelled by bland automobile from the land of bland, manicured lawns, to the bland shopping centres surrounded by acres of parking, and it was all seemingly designed to prevent anyone from feeling excitement, ever. This was the American dream.

It can seem churlish to complain about such things. I lived in comfort, and didn't have to worry about where my next meal might come from or whether we might be set upon by armed men in the middle of the night. I had access to modern medicine and education. I was given opportunities to succeed, to ultimately move away and build a career and have the chance to come and talk to audiences like this one about the impressive blandness of my hometown. I was not unaware, as a young person, that there was hardship elsewhere in the world. As I've grown older and seen more of the world, it has become clear just how unreasonably lucky I was to grow up the way I did. I also learned how the luxuries I enjoyed depended in turn on the mystery-destroying institutions of the modern world: technocratic governments and market economies.

Liberals and modernisers have always been exasperated by those complaining about the dark satanic mills and longing for the old days of greenness and mystery: of constant, life-threatening poverty, crushing ignorance and oppressive superstition. You want magic? Here's magic: billions of people now populate earth, most of them living much longer, healthier, richer lives than even the kings of old enjoyed, because of science, because of the dehumanising force of the market. This is the trade-off. We are (most of us) spared the horrors of hunger and sickness and war that plagued us for millennia, and all we have to do in exchange is live spiritually meaningless lives under the inhuman thumb of the market. It's good that we

no longer live in constant material deprivation, such that beauty and mysticism are all we have to cling to. On the other hand, now that we're here, there's the great looming question: what is it all for? Is the machine simply turning for its own sake?

One thing progress affords us, however, is the luxury of asking whether things must be so. Is there not some more beautiful world out there, in which we can all be free of the ills that dogged us in the past – hunger and oppression – without having to give up our full humanity, pretend all our lives that we care about delivering value to shareholders, in the hope that we can save up enough to have a comfortable retirement?

In fact, there must be. More than that, I think it's important for the future of society that we work towards realising that world. What we've learned over the past decade is that comfort isn't enough to satisfy us. Yes, the past ten years haven't been easy, economically. But the hardship that people in the rich world have suffered, even in the places hardest hit by recent crises, is nothing compared with what people went through in the 1930s. Despite the setbacks, the rich world remains richer, healthier and better off than at just about any time in history.

And yet people are angry. They're angry enough to vote for politicians who stir up racial and ethnic discord; for politicians who promise to make life in rich countries better by punishing the most vulnerable members of society; for politicians who seek to break apart the system of international institutions that made us rich in the first place. Comfort is clearly not all that matters. A sense of purpose matters too. The things we believe about ourselves and the world around us matter. The ability to feel like a fully realised human being matters. Comfort is important, but if that's all society provides, then society puts itself at risk. We need more than that. We need to enable people to have satisfyingly human lives: lives of beauty and magic and meaning and wonder.

Is that possible? To understand whether it is, it's useful to recall the ways in which our imperfect modern institutions enrich us: to understand the logic beneath the dehumanising machinery. It all begins with the insight that Adam Smith described in his discussion of the pin factory. Smith pointed out that by breaking the production of pins into small tasks, and assigning those tasks to workers who would specialise in that one thing, a team of workers could produce many hundreds of times more pins per day than if each worker instead produced pins from start to finish. The message was: through specialisation and trade, we can become far more productive and far richer than we can through self-sufficiency.

Specialisation and trade is in part about the creation and dissemination of new knowledge. The modern economy is possible because of the accumulation of vast amounts of scientific and technical know-how; far more of it than any one person could hope to master. As industrialisation unfolded, it became ever more important for workers to accumulate specialised knowledge, and for skilled workers to bunch together in factories and cities, within which many different kinds of expertise could be brought to bear in production, and within which areas of specialised knowledge could cross-pollinate, fuelling the process of innovation. And so in that way, modern growth demanded that we become intellectual specialists rather than creatures who ought to seek to understand all of creation.

In production itself, specialisation became particularly important. Factory managers broke production processes down into small series of tasks. This made it easier to replace lost workers: hiring someone to make the same weld over and over again is much easier than finding someone with the skill set to build an entire machine. Hyper-specialisation boosted productivity: workers doing the same task over and over again became extraordinarily adept at it, and didn't lose the time involved in switching from one task to another. A worker given the job of inserting the same screw into the same spot over and over again might lose his mind from the monotony, but he'll also get incredibly good at inserting that screw into that spot.

What's more, breaking processes into small, discrete chunks allowed firms to better engineer their production systems. It became easier to monitor workers, to specify what techniques workers should

follow in order to produce more, and, ultimately, to automate tasks.

This process of specialisation, of the construction of ever larger, more complex systems of production that could nonetheless use modestly skilled labour because of the fracturing of production processes, was wildly, magnificently productive. Even as mechanisation squeezed employment out of manufacturing, this process continued across service industries. We all have our little role to play, our tiny plot of land, our little bit of specialised knowledge, which we contribute to the operation of the global economy.

The upshot of this is that we've all found ourselves embedded deep within the belly of the machine. Industrialisation brought massive factories, in which people became cogs alongside the equipment around them. Today, some of us are more closely connected to the end products of our work than others. Nurses and therapists are able to observe the effect that their work with patients has. As a journalist, I'm involved in the production of my wares from beginning to end. Yet even in such cases, the broader shape of one's career is governed by distant forces: the operation of inhuman medical bureaucracies, for instance, or the distribution of an article by the impenetrable algorithms of a giant social network.

Marx would say that we've all become alienated. We're subject to fickle, anonymous market forces. We work within soulless corporate bureaucracies. For most of us, the craft aspect of the work we do matters far less than our ability to deliver tangible, measurable contributions to management.

Indeed, aspects of a job that can be considered 'craft' in nature are signs of inefficiency! The more art there is than science to doing a task well, the less able firms are to analyse and optimise those tasks, to break them into pieces that can be done by more easily replaceable workers, or, in the limit case, to automate them. A worker with a unique, difficult-to-define, valuable skill-set might be hailed as an asset by his employers, but don't be fooled: that worker is a pain in the firm's rear. That worker represents aspects of the business that can't be scaled, optimised and computerised. That worker is an obstacle to progress.

This is the modern economy. The more we love a job, appreciate its subtleties, commit ourselves to it out of sheer passion, the less well we fit within the machinery of modern capitalism. The economy wants us to be cogs, able to move easily to wherever we're most productive, to change jobs or employers or cities when market conditions change, and not to be sentimental about it. If you become too attached to where you live, or what you're doing, you might become reluctant to move to the spot where you can contribute the most to production. The more bland and disposable the settings around us, the less likely we are to become attached to them.

Our society valorises all of this. We describe it as 'dynamism'. I work for a publication that's constantly clamouring for structural reforms. The point of structural forms is to boost flexibility: to increase the extent to which people flow across jobs and places. And again, we don't do this for no reason, or because we're sadists, but because this is the way to boost income growth. And the more income we have, the more problems we can solve, the more people we can bring out of poverty and so on. But there is an inescapable human tension, which most of us feel in our bones, even if we don't know exactly what its source is. The drive to be what we fundamentally are not makes us miserable. The drive to pretend that it doesn't matter that we have to choose between being close to family and being where the good jobs are eats away at us, or many of us, at least. Money makes up for some of the strain, but at some point it's worth asking whether such trade-offs are really necessary in the first place.

That brings us to artificial intelligence and the new technological revolution that's beginning to transform the world economy. Now, let's be clear, AI certainly has the potential to make all of the old industrial problems even worse. Most of what we call AI today is built on machine learning, which is when computers, given massive amounts of data, learn to recognise simple patterns. Let me give you an example. Suppose, for instance, that hospitals equipped doctors and nurses with devices that gathered data on where they were at all times, what they said in interactions with each other and with patients and so on. By devices, we could just mean phones, or you could imagine something like Google Glass. Pool all

the data, alongside figures about patient outcomes or hospital spending, and you could begin to use algorithms to detect patterns, like whether pairs of doctors and nurses attending to patients are better than a doctor or nurse alone, or whether the amount of time spent with a patient matters, or whether the kind of language the nurse uses or what path she takes through the hospital hallways matters, and so on. Pretty soon you begin to generate guidelines for how those workers should behave. Perhaps you feed those guidelines to them through a headset, issuing them instructions on what to say and how to say it as they meet with a patient. And there you are: AI has turned a job based on human interactions into one in which the human becomes a cog in a machine. The more this occurs, the more data is gathered, the more patterns are identified, the more efficiencies can be found. And there we all are, marching to the beat of our AI overlords in pursuit of higher productivity.

If that's not a nightmare vision of dehumanising labour, I don't know what is. And these sorts of scenarios are another reason why now, more than ever, we must try to imagine something better. The good news is that AI might also make it easier to achieve that 'something better' than ever before.

This might occur in relatively prosaic fashion. As AI improves, the productivity of the human cogs will grow, meaning that it takes fewer people to do the same amount of work. And just as the turning of individuals into cogs during industrialisation paved the way for lots of automation, the breaking down of service-sector tasks into analysable pieces might well hasten the time until an AI can do the job all on its own. So while the dehumanising effect of AI will be unpleasant, it will also mean that lots of people will need to find new jobs.

That sounds bad. People in this part of the country don't need me to tell them that the loss of industry work took an enormous toll on many communities. The loss of service-sector work could as well. And if the structure of the social safety net is such that when people are displaced by machines they have to find other work in order to feed themselves and put a roof over their heads, then that's not a very beautiful or magical outcome. But the rising productivity generated by new AI will mean that society as a whole will be richer. And if those riches are distributed evenly: perhaps through the adoption of a universal basic income, then a large share of the population will enjoy the financial freedom to remove themselves from the machine.

What happens after that is a choice that society will have to make. John Maynard Keynes, the great British economist, reckoned that what to do once material scarcity ceased to be a concern was in fact humanity's great problem. And perhaps many people will choose to spend their time in destructive ways: caught up in unmanageable drug addiction or violence. But many people will not. And maybe, if the social norms surrounding how one ought to spend one's time evolve in the right way, most people will not.

Instead, most people can choose to indulge their basic humanity. In their book *How Much is Enough?* (2012), Robert and Edward Skidelsky suggest that when the constraints of scarcity are repealed, governments might want to instruct people in how to spend their free time well: to teach people to write and enjoy poetry or paint landscapes. That seems unnecessary to me. Do you need instruction in how to spend your free time well? We would sleep more. In the modern world, that sounds bad, but sleep is lovely and most of us get too little of it. We might spend more time reading and watching television or playing video games. This distresses some people, but why should we regret a world in which people spend more time at idle entertainment and less moving packages around warehouses, or manning call centres, or engaging in risky financial schemes that endanger the world economy?

And of course, we would do other things: caring for family members and friends, tending our gardens and taking walks, indulging in our hobbies. Plenty of people would choose to engage in business – an interest in commerce is written deep in our DNA – but given a liberation from the machine, we could engage with the market on our own terms. We could produce things for the love of doing it: craft goods, home-brewed beer or home-made cheese, or indeed landscape paintings. People would do so because they wanted to, not because they feared hunger or falling behind. If only a few items sold each month,

there would be no risk of bankruptcy.

Talking about it feels so frivolous, but the aversion to frivolity was built into our psyche by the desperate need to survive. When there was an urgency to working hard, because survival depended on it, indulging in silliness or leisure was immoral. But when there was abundance …? We have a difficult time understanding what life was like in the days before agriculture, when hunting and gathering tribes were spread thinly across the land. Most of what we know comes from studying the modern hunter-gatherers who continue to live in places that the modern economy has not yet touched, like the deep Amazon or the Kalahari. And studies of those Indigenous tribes suggest that their lives are, if not exactly a utopia, more relaxed and frivolous than our own. In abundant years they can work as little as twenty hours a week to obtain the diet they need, and appear to spend a healthy portion of the daytime sleeping. When nature is less forgiving, their lives are correspondingly harder. But technology stands to free us from lean years, and return us, in some sense, to the world we inhabited for 200,000 years. We can – and hopefully will – learn to take the opportunity to indulge our basic humanity.

Yet that doesn't solve the problem of an absence of purpose, of meaning, of a sense that we're cosmically and mystically engaged in some broader, tantalising, energising mission. That was the attraction of the fantasy novels I read as a child. It was the attraction of, or at least the solace provided by, pre-industrial conceptions of humanity's place in creation. That was the thing of which modern industrial growth so clearly deprived us. And what, ultimately, could restore that?

Here I would propose that we're entering a world not so very different from the ones contained in those fantasy novels. It's a world of magic. Are we not able to speak a few words in order to generate music from thin air, or summon to hand something that we want or need? Don't we communicate with mischievous fairies and pixies, who sometimes assist us and sometimes cause trouble: creatures with names like Siri and Alexa? Aren't there powerful wizards who seek to use this magic to shape the world around us in ways we scarcely understand? Doesn't it seem as though some of these wizards, carried away by power or a sense of their own destiny, threaten to cast the realm into darkness?

And we – we are the heroes of the story; not great sword-wielding warriors, but heroes like Tolkien's hobbits, normal people of no particular ambition who have been given an important task: to make sure that the good magic triumphs over the bad, and that everything works out in the end.

Does that sound silly? Perhaps it does, but I think it's worth taking seriously.

What does our quest entail? First, we must all recognise that our true task is not the work we do as cogs in a machine, trying to earn a little more and buy a little more. Our true and enduring task is more important: to keep our realm peaceful, free and prosperous. We have to find allies who are willing to help us, to build fellowships with beings of all sorts. We have to work together to overcome setbacks, and to try to understand when and how magic can be used well and when it's too dangerous and corrupting to be trusted to wizards or, perhaps, to anyone. We have to resist temptation, because power-hungry users of dark magic can offer us rich inducements to abandon our quests. We have to recognise that dark forces never rest for long, and so we need to build institutions – sisterhoods and brotherhoods – that will survive for generations and help future heroes in their quests.

To make it a bit less abstract: technology is in many ways like magic. It's wielded by people who study its dark arts and utter phrases that most of us cannot understand. It can give us unusual powers and be used for good and evil. It is, increasingly, all around us. The industrial machine of which we've been a part doesn't see technology as magic; it sees it as a tool that can be used to produce ever more. According to the logic of the machine, technology will get better until maybe none of us need to work, and then we have to figure out what to do with ourselves.

But that's not right. Rather, the more powerful technology becomes, the harder we must all work to keep society from being overwhelmed by it. We have a very real, very crucial quest ahead of us, to protect ourselves from being destroyed by dark magic. We have to work together to build fellowships in order to

learn about and manage this magic and make sure it's used for good. Call those fellowships what you want: orders, guilds, unions, parties, movements, whatever. But it's critical that we all understand that reclaiming our humanity, and making the world a beautiful place, means working to build up society and affirm our own strength as participants within it. It's a job for heroes, and perhaps, if we do it well, they'll sing songs about us in the future, telling our tale.

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