



Research report

‘Right now? I will take any future’: Documenting moments in AI futures in a time of crisis

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The role of technology can affect the way we view the social world and our ability to imagine futures within it. Some claim that technology has the capacity to shift the ground from which our imagination is exercised and that this is crucial in how future possibilities and limits are viewed (Simmel, 2010). Considering the future of Artificial Intelligence (AI), there is a chance that now is such a time when multiple crises and social upheaval give rise to new narratives and ideas about what might be possible.

In this piece, we present analysis of (n=25) thought leaders and scholars in AI and AI Futures conducted during the COVID-19 pandemic 2020, which points to a similar view: that crisis impacts AI ‘imaginaries’ and future sense-making is shaped by the stories we tell about AI (Felt 2017). We explore AI possibilities (Amoore 2013) and priorities through the situated future imaginaries of our participants to think about how a shifting present creates a changing sense of the technological future. In particular we note how “unimaginable” that AI future seems to the participants.

Moments of crisis

Moments of crisis prompt questions about the future. The COVID-19 pandemic challenges expert understanding of how futures are constructed and provokes reflection on socio-technical attempts to deal with catastrophic situations. This is evident in the domains of health and education, for example (Hussain et al., 2020; Milne & Costa 2020; Brammer & Clark 2020). As technology advances, the limits of our imaginations extend and our expectations of the future are altered and reframed. This is particularly pronounced in the area of AI, which is a vanguard of development and looms large in notions of what will come. Indeed the power of socio-technical imaginaries (Josanoﬀ, 2014) generates new visions and narratives that influence policies and scientific diplomacy. In some senses, to ask about the future at a time of crisis seems inappropriate, yet we see the utility of data. This paper focuses on interview data with AI thought leaders, conducted during the first lockdown in 2020. The subject matter, AI futures, asked how far AI technologies will contribute to society, alongside many other technologies to the future.

Interviews were conducted at a time when there was a palpable sense of digital-fatigue due to forced distancing. In one sense AI and digital technology 'came to the rescue' of work practices, yet there was also the sense that individuals were critical of, and hence reflective about, digital technologies. There was a strong need for physical human connection and rejection of mediated sociality. At a macro level, AI offered solutions for tracking and tracing the virus, detecting disease, and more (Inayatullah 2020) and at the same time threatened surveillant control by governments.

The UK went into lockdown on 23rd March for three months. Similar restrictions occurred globally. The interviews took place between June and August 2020, with participants from Europe, the US, and the UK. The original research design involved face to face interviews and workshops but the pandemic undermined [standard social science](#) and [fieldwork methods](#). Instead, video conferencing technology enabled a form of face-to-face interviews while broadening the geographical range of participation.

The interviews were premised upon the following questions: How do we envision the future? How do we set short-term and long-term goals for AI? Who sets these goals? How do we balance them? Can a beneficial future be modeled?

The answers given were conceived as situated within the COVID-19 crisis so as to reflect on how a crisis can change perceptions of what is possible and engender implementation strategies.

Sense-making AI: new narratives and futures

Some thinkers have tried to make sense of the way we understand the future as the product of the now. When the now is imbued by crisis, questions about the level and degree of change and the resulting disruption are inevitable. Disruption to established 'imaginaries' was celebrated by one participant referring to the behavior of broader society:

'Will it shake them up enough? Will it just shake them up and then we'll all settle down in the same place, or will they shake them up enough that when they fall again, it'll be different?'

The question this participant is posing, it seems, is the extent to which COVID-19 will impact society in the future and whether it will shake us up enough to influence our behaviour. Perhaps AI could help with the next pandemic and future crises (Heaven 2020).

Before the pandemic, there had been a huge amount of discussion, speculation, and commentary on the role of AI in society. Some of this discussion was already infused with the potential of future difficulties born of wide ranging potential applications leading to transformative change, in some instances radically so (Vaishya et al, 2020). The discussion of AI has become even more heated during the pandemic, with talk of an urgent need for robust AI [ethics](#), concerns over health [surveillance, and debates about the role of robot carers](#).

Given that AI was already achieving relatively high levels of media coverage, the extent to which AI has been deployed in response to the pandemic has received significant media attention. On the one hand, AI has fallen short, '[missed its moment](#)' and '[let us down](#)'. The '[limitations](#) of AI' have revealed themselves as [contact-tracing apps](#) make health surveillance and automated decision-making a reality for everyone. AI's application to the pandemic is being evaluated and it's value judged in the way it facilitates social adaptation and supports [a cure for the virus](#).

On the other hand, "solutionist narratives" abound (the idea that AI could be the answer to everything): AI is presented as a [silver bullet](#) for the pandemic, and suddenly, those averse to 'scary

robots' (Cave et al, 2019) welcome them into our hospitals. Indeed, AI's potentially revolutionary role in healthcare is [applauded](#) and AI-based communication [tools](#) celebrated.

AI in our home and leisure has been boosted, with families remaining connected and entertained through AI technologies, video calling, smart phones and games and creative media. Education and business organisations have stayed afloat through the use of digital technologies, much of which relies on AI.

This research was not focused on the pandemic and there were no direct questions about it, but when conducting social research, we are mindful of the social conditions in which we are operating. Discussion about AI in the context of a world in multiple crises, inevitably emerged throughout the interviews.

Difficulty imagining the future

Many participants reported difficulty in talking about and imagining the future.

It is so hard to think about the future when the present is so different from what we know...

I really have no idea because the next 20 years is a very difficult time period to scope out what's going to happen considering that, you know, we now have a massive pandemic and lots of things that we thought were never going to change have suddenly had to change so things like attention to global warming and, you know, reducing our traffic, our patterns of travelling all over the world and instead relying vastly on technology to keep us in touch, well, that had a sea change over two months or less.

Some felt that a question about the future in the time of interviewing was not validly posed. Instead, perhaps it is a privilege to worry about AI at a time of global crisis:

There is a future – how you feel about the future is how you feel about the future, looking at it from where you are now. And, looking at the future from where I am now, it is hard to be optimistic, quite honestly.

So, we have managed a pandemic, we have managed dreadful responses to it. We have managed America collapsing practically in uproar, with a semi-fascist – or maybe not even semi-fascist – president, with threats of the military on the street. We have authoritarian regimes in a large and increasing number of countries – Turkey, Hungary. Well, Britain you would say is going that way too, America has gone that way. We have climate change which is an on-coming train that nobody wants to talk about. And, people are worrying about AI! It is like I shrug at this point, and I go, are you worried about AI? You should be so lucky to worry about AI, for Christ's sake!

Scientists have long bemoaned that this 'unprecedented' crisis was actually rather preceded. One participant commented that managing the future was completely foreseeable with regards to the pandemic:

There are barriers, you know, things that could happen and some that we don't even imagine now like Covid, well, we could have... you know, this one was perfectly foreseeable, it's how can we prepare ourselves or try to steer things in the way that would be most beneficial.

At the same time many participants felt we should be doing more with technology to support individuals and services:

I am not being negative, I am trying to be completely accepting of the situation we are in, and it is extraordinary to me that we are not using these tools to ameliorate that situation. That is what we should be doing.

Imaginations of a beneficial future with AI

There was a sense from some participants that AI was reported in the press, and by other leading thought leaders, as a [solution](#) to intractable political and social problems and that this was exacerbated by the pandemic. A somewhat mixed emotional response was often portrayed - see this example of a profit narrative at the expense of border guard's roles:

We've seen this kind of, you know, solutionism narrative with the pandemic I think predominantly coming from the tech companies but perhaps understandably being picked up by governments around the world because of also the austerity context, you know, so if you can replace ten border guards with one automated system or if you can reduce pressure on the NHS or if you... so, you know, understandably these things get picked up.

Most commonly, participants referred to the ability of AI, and related tools, to process big data and the potential benefits in addressing the pandemic:

With the pandemic, a lot of useful technologies can be deployed that could help prevent the spread of the pandemic, identify patients, speed up testing but the same kinds of tools like collecting vast amounts of data because that's where they get their so-called intelligence from, that data can also be misused.

Shifting perspectives

There was a sense of the future shifting from speculation and fantasy towards real and pressing issues.

I'm starting to sort of think about what has shifted - so prior to the pandemic what I would have said is that there is a kind of fantasy of what AI can do that always involves a sort of future production so in fact, a future that isn't here now but that is kind of this envisioned future.

Many were concerned with the effects on equality and financial gains of those in power and with means:

Quantity of revenue to capital in labour is a key economic concept - and being fucked up by automation - creating a super-rich class. But are the super rich happier than those less financially well off - I don't think so. An unintended consequence of the consumer economy. The more money the better, like an argument for Universal Basic Income.

Others had very mixed feelings about the future, noting that these critical moments of crisis create even more uncertainty:

I have to say, at the moment, I have mixed feelings about many things

.... So yeah, so it's not that I feel...it's not dystopian, and it's not a utopian future either, at the moment.

This was presented in the starkest of terms when one participant asserted “I think in the future we might look at this as a period of war”.

A touchless world

One effect of the pandemic was to completely reframe what application areas matter and why. Some experts talked about how care robots might be on the rise in hospitals and care settings because they posed less of a health risk vis-a-vis spreading infection. This was not always welcome by participants who often expressed wariness over the role of such machines particularly, where they were seen to replace human interaction:

I'm kind of wary of I suppose the notion that actually what will be necessary is some sort of humanoid form for those things to happen although I guess you might even say now that in a care home setting where agency staff have probably, and of course inadvertently, spread the virus by going from a care home to care home, how much is that going to accelerate the use of robots for basic tasks including cleaning and delivery of food and so on to those sorts of settings? So, absolutely I think it will be accelerated.

The extent to which this is positive is of course debatable. Indeed, some commented that the pandemic might change things radically regarding our expectations for face-to-face and human-to-human interaction.

It definitely has changed our reliance on certain technologies. When it comes to care for elderly and preferring human contact, we're all just products of our environment.¹

More concerningly, participants warned of [issues of isolation](#) and potential dehumanisation as more of us work at home, paradoxical in relation to the technological development that is keeping many of us going:

I mean it's, you know, paradoxical that Covid-19 may be pushing us further down this thing where people work by themselves for large parts of the day, you know, what will be the impacts of that? It's just, yeah, I mean it's already changed dating and many other things, yeah, very hard to predict so we need to proceed very carefully.

AI and the human condition

Many were hopeful about the future role of technology and felt that it might precipitate positive change for individual happiness:

In a way bizarrely this tragedy, this pandemic has made me more hopeful that positive change over the next 20 years can happen especially regarding the implementation of technology.

¹ Original verbatim quotation edited for clarity from: *So, it definitely has changed things, the pandemic, in terms of our reliance on certain technologies, right? And I guess what I was saying before about care for elderly, and then, maybe, preferring human contact, I suppose we're all just, basically, products of our environment. So, if we are now headed towards a generation who are, like, less, have fewer expectations surrounding in-person interactions, then, as they age, that will be part of their makeup, and that will, you know, change their expectations if this is a sustained issue for how they're provided for in their adult years, and beyond, into old age.*

Some felt we should use the opportunity to enable AI to do the things we cannot do, rather than to try to do what we can do, only better. This kind of view was regularly reported in the interviews, where AI was seen as a tool to assist and augment human capabilities, not outperform or replace them.

I mean, as a society, use the fact that AI will do all these things and create stuff and factories, most of which we don't need, but anyway, people want, fine, make AI do it, while realising what the important jobs are. And this is where the virus comes in...

... Because the important jobs that we should be supporting for human happiness and happy societies and so on, are doctors, teachers, nurses, carers, people who specialise in helping, you know, people with and without learning difficulties. And outdoor jobs, looking after forests, there's any number of jobs which give human satisfaction, that relate us to other people, to the living world and so on. We should be able to use the opportunity to, I don't know whether you have a universal basic income or do it some other way, that's not an argument I know too much about, which is the best way to do it. But I'm just baffled by the drive to continue as ever before, while we've got this contradiction. I think AI should do the things it's best at and we should do the things we're best at, which is rather a different view.

Targeting the profit motive and the super-rich was something which emerged regularly. We note that from some of these emerging themes, there are a number of issues:

I think it means that we... much more of the focus tends to be on current opportunities and current innovation activities that are having an impact rather than this speculative thinking about the future of AI, which is fun and is very interesting and exciting, but obviously there's a more pressing need to address current problems now as the technology is being more widely adopted.

These findings suggest that the pandemic is a critical moment in which it is important to stand back and reframe what we - a collective we - want from the future, starting with where we are now. This could seize the moment to:

- Better understand and educate ourselves as to what we mean by AI. AI is an umbrella term which all too often is conflated with the spectacular and less so the processes underpinning it - such as Machine Learning and Natural Language Processing.
- Raise awareness of social technical issues and inequalities caused by AI. Particularly as the pandemic itself has widened inequality and thereby access.
- Better manage processes for collective intelligence and participatory research and approaches for anticipatory governance. Considering also where AI can help.
- Involve the young who will have important views on their needs and wants for the future based on a very shifting present.

It was felt that stakeholders could seize moments such as the pandemic to open up a discussion about the potential of technology. Research suggests that the pandemic has shown that people often develop a shared sense of [identity](#) with those around them at a [time of crisis](#). It may also have deepened [divides](#) with respect to access for information and funds.

Working collectively, this could involve the meaningful engagement of diverse stakeholders to expose inequalities and related concerns:

So inequality makes people unhappy, at least that has come out in the virus story quite a lot, people talking about how to reduce inequality.

Dangers relating to inequality, discrimination, bias, exclusion that are kind of ongoing social problems that characterise the social world and characterise the social actors who are often the people that build these [technologies](#).

To respond to the issue of AI futures, many felt there was a great need for governance and ethical approaches.

AI in a crisis needs ethics

One of the biggest topics I think is wildly overdue, that I have been hearing a lot lately, is just the relationship between ethics and AI...

... So, it feels more like we are looking at the second order and third order ramifications of that wave, where we are seeing that we can learn things pretty well with fairly sparse data, but where is the data coming from? Who put the data together? Who decided what the futures are in the data? How do those futures bias what is learnt? There are just really clear questions we could have been asking all the while. I am particularly interested in the role of AI and what it is – it is so hard to think about the future...

There is a lot of focus on the [urgent need for AI ethics and governance](#), participants regularly described the need for 'design on design' within AI development and the need for rigor and ethical reflection, this included the need to tackle [algorithmic bias](#), for instance with respect to race, social background, gender and age, to combat trust in systems and relatedly the need for fairness and transparency in AI across all actors not simply [those elites researching](#) or designing AI:

The design before design - it needs to be something that enables us collectively to answer particular questions or to respond to particular problems, without having the illusion that things can just be solved, you know. But it can certainly, I think, and that's maybe why I moved on from the mitigating... But I suppose, you know, being prepared and having that mindset is a way to mitigate the bias.

We should be pushing all those critical questions in all of the domains where they're beneficial and where they seem to be harmful because where the benefits are experienced there's still a potential for harm.

Building trust

Many participants talked about how this was an opportunity to embed transparency into AI and to be open about data and its importance. Here the sense was that this needed to be managed carefully and collectively in order to ensure fairness for the public good:

Health is sort of pressing at the moment. You know, it's an opportunity to build trust in these systems if they are seen to be deployed in fair and honest and clear and transparent ways that are for the public good. I'm not sure that anyone is bothering to take up that opportunity or who it would be that would take it up but it does seem that... I do sort of have a feeling that people recognise the importance of data. I've taken a fairly sort of critical position in this interview but I don't believe that there should be no data-gathering and I think this is a moment that shows you how data can play a really important social role. This is a good

moment if you want to win people over but you do have to do things properly in order to win people over.

With the rise of conspiracy theories and growing speculation and distrust in science as well as political mandate, AI could provide an opportunity to help dispel myths and build trust if employed carefully, as one expert pointed out:

You know, we get asked a lot, "Is COVID-19 a bioengineered pandemic?" and the answer is no, because if you were bioengineering a pandemic it would be a lot, lot worse than this. Anyone who knows what they're talking about would know how to make something much more dangerous than COVID-19.

Ethical considerations must be at the heart of AI design

Finally, participants regularly described opportunities to improve trust in systems by applying AI and machine learning to healthcare problems and to provide support when human interaction is no longer possible. But this must not be done, at the expense of human connection.

I think people have remembered what it is like to spend time with their children, that is both good and bad, and in spaces, again both good and bad for green spaces particularly.

Perhaps now is a time for stakeholders to rethink and reframe how we talk about futures (there is not just one) with technology, and the choices we make in a post-Covid world?

So, yes we should think about the future, but we also should think about how we manage it now. Because otherwise it doesn't really make sense to fantasise about it if you are talking about the future.

What does this mean for constructing AI futures?

We can see ways that the pandemic has influenced participants' responses implicitly and explicitly and therefore how COVID and AI intersect. In many ways this is not surprising. There is probably no aspect of social life that has not been affected by the pandemic.

At first, it seems that constructions around the future of AI *may* be changing as a result of the pandemic. We see this reflected in the ways in which participants characterise the future, express difficulty in predicting or imagining futures, and also in the ways participants explicitly referred to shifts in perception toward this technology. Robots in care homes provide one such example: there is a shift in the way robotics in care and health settings is perceived because of robots inability to catch the virus. Equally, we note how experts are particularly keen to ensure that the focus is moved away from a preoccupation with the far future and instead we [note urgency](#) reflected in all their directives to consider the pressing issues of today. The need for considerable thought about crisis ethics is one stark example. Going forward, we will ask how this work relates to the larger AI ethics/futures debates and consider the extent to which perceptions of AI shift in a post-COVID world.

The interview accounts suggest that now could be an time to consider what we choose to move forward with, i.e. what a post-pandemic future with AI really looks like, what 'we' really want from AI (an inclusive and equal 'we') as well as crucially, what technology we might choose to cast aside in a post-pandemic era.

If you're technically minded, what we're doing at the moment is really interesting, it will transform many things, but after it's done that transformation we'll go back to just taking everything for granted and seeing the world as a boring normal place to live.

...So just be prepared, in the future when you look back on this technology it's not going to seem exciting and revolutionary and really important, it's going to seem part of everyday life, it's going to be stuff you take for granted, it's going to be sitting there in the background, and a lot of it is going to seem technical and boring and "I don't need to worry about this because someone else has got it under control". I think it is really important to bear in mind...

We have considered how COVID-19 might have challenged our understanding of how futures are constructed, our knowledge about socio-technical attempts to deal with catastrophic situations, and the position of the scholar vis-à-vis crucial collective concerns.

What is in no doubt is that this is an urgent time to pause and consider the future of AI, what we really want from AI. As well, it is key that we open up broader debates about a post-Covid future and consider what kind of society we want to build. We find even [those debating and leading](#) the development of future AI found there is a pressing need to think about how we work towards a desirable future, now, and that we have no choice but for the present to keep moving.

This blog describes just some of the emerging themes from our interviews relevant to AI at the time of crisis. Further research should specifically target AI futures at a time of crisis and futures more specifically.

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