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## Life Less Normal

*“Is that how we lived then? But we lived as usual. Everyone does, most of the time. Whatever is going on is as usual. Even this is as usual, now. We lived, as usual, by ignoring. Ignoring isn't the same as ignorance, you have to work at it.”*

Handmaid's Tale — Margaret Atwood

We've heard plenty of chatter about normal life in the last few weeks. Lots has been said about a departure from *the normal*, and questions are repeatedly being asked about what disruptions we must endure to normal life to reduce the spread of the novel coronavirus, and to eventually help find a way to return to normal.

Through critical thinking in feminist, race and intersectional scholarship, we know though that this 'normal'—ordinary life before Covid-19—is suffused with complications and surfaces acute problems for many across society. For people often assigned to the margins—for people of colour, the homeless, the colonised, the disabled, the low-waged, the unemployed, the displaced, and so on—normalcy relies on long histories of prejudice and continued exploitation. For many millions, globally, 'the normal' is a life in precarity that demands continued endurance.

As we live through the Covid-19 pandemic, these inequalities are becoming increasingly apparent. Coverage in the popular press shows just how widespread and deeply rooted the effects of the imbalances are, and how lethal their consequences can be. From hardships felt by low-paid key workers and those on the front-line, to the disproportionate numbers of deaths among ethnic populations in ostensibly wealthy, modern enclaves (most strikingly among health workers in the global North), the brutal inequities and injustices of late capitalism are being felt.<sup>1</sup>

In HCI, and through parallel research in science and technology studies, we also know that technological systems and scientific programmes<sup>2</sup> serve to sustain many of these injustices. Technoscientific systems and infrastructures that seek to monitor and optimise human behaviour and productivity, or that manage the functioning and health of bodies, enforce an idea of normal that obscures the brutal realities and erases those at the margins, sometimes violently so.<sup>3</sup>

At this moment of worldwide disruption from 'the normal', then, it seems another question we could be asking is whether we want to reimagine what, exactly, we want to 'return to'. And, for HCI, we might ask what versions of technology we might

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<sup>1</sup> See: [Miami's flawed Covid-19 testing system exposes city's rich-poor divide](#);

<sup>2</sup> Yusoff, K. (2018). *A billion black Anthropocenes or none*. U of Minnesota Press.

<sup>3</sup> Star, S. L., & Strauss, A. (1999). Layers of silence, arenas of voice: The ecology of visible and invisible work. *Computer supported cooperative work (CSCW)*, 8(1-2), 9-30.

imagine to disrupt the troubling normalcy that marks our times. The question I want to think with here is: “*What worlds are we making possible?*”

Let’s start then with this idea that will be familiar to many readers: that is, how the *status quo*—what we think of as ‘*normal*’—masks and erases those at the margins of society. From our experiences with Covid-19, we know that crises can make visible those who are usually out of sight. Such disruptions to the normal also bring into sharp relief the technoscientific systems that the few profit from and how they are reliant on discrimination and exploitation.<sup>4</sup> So the exploitation of gig workers and Wetherspoons staff, but also cleaners, migrants, carers, and people involved in mass food production and supply chains are a necessary part of sustaining the normal. Crises, like the one we are in, surface the dependencies intrinsic in ‘ordinary’ society and who is exploited to maintain normalcy.

For me, the critical point here is that the challenges we’re facing are deeply structural<sup>5</sup> and are deeply entangled with the sociotechnical systems we work on in HCI.<sup>6</sup>

Think about this with respect to the spread of Covid-19. The efforts to limit its impact have, of course, been varied and uneven. There have been varying reports of the virus and its technologies of mitigation and containment being used to reassert the balance(s) of power and wealth in society, and exert control over the already marginalised and exploited—a biopolitics of our time.

This impact is set alongside concentrated incidences of job losses, and [fraud and crime](#). For us, I think, questions must be asked of how technologies and versions of technoscience are being mobilised. Everything from access to testing and ventilation equipment, to the machinery for ‘rebooting the economy’, to distributing state-backed welfare, need to be examined to understand how the sociotechnical, sociopolitical and healthcare are being entangled. And how these entanglements are amplifying already deeply set injustices and discrimination.

The point I want to make here is not just that the technologies we envision and work on play an active role in these conditions. Nor do I want to make any exaggerated claims about the impact HCI has had on the technology sector. Rather, my claim is that we (in our urge to design interactive systems that appeal to the many) are inexorably intertwined in worlds that furnish and sustain the conditions for exploitation and discrimination. We are not innocent bystanders serving up neutral technologies

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<sup>4</sup> Klein, Naomi, and Richard Peet. "The shock doctrine: The rise of disaster capitalism." *Human Geography* 1.2 (2008): 130-133.

<sup>5</sup> [Zoe Williams](#) makes this point forcefully in her Guardian piece: “[We say we value key workers, but their low pay is systematic, not accidental](#)”.

<sup>6</sup> [Katrin Fritsch](#) makes a similar point by raising the specter of the *hyperobject* in her Medium article: “[Back to normal?! Data and Technology in Times of Crises](#)”.

or indeed fixes<sup>7</sup>, we are integral and complicit in worlds that make many lives a lot less like the normal we are accustomed to and, to be frank, a lot less bearable.

I've struggled here to choose an example to illustrate this point, not because there are too few, but because the examples are everywhere when we choose to notice. Let me illustrate my argument, then, by first touching briefly on a realm of work that has been central to HCI pretty much from its inception, remote collaboration and video conferencing. I then want to turn to what might seem an unrelated area, the technoscientific capacities that enable exploitative, global, animal farming and food supply chains. Placed together, spanning varied realms and scales, we'll see that the ideas and logics in HCI intertwine with many of the inequities that are surfacing during the coronavirus crisis.

Video conferencing, for many of us, has become a regular feature of work during the pandemic. With daily calls via Skype, Zoom, Microsoft Teams, etc., those in HCI will be reminiscing about its seminal research covering the interactional challenges of remote working via video, and the human work involved in coping with dropouts and partial views of interlocutors and the spaces they are working in. We will also remember that video conferencing was seen as one way of creating a more accessible workplace for those with disabilities or who need to work flexibly. Who could have imagined video conferencing and the troubles of remote talk would have come into their own in the time of a global pandemic?

Yet what many in HCI will have also overlooked, including myself, is just how divisive, societally, remote, computer-based work would be in 2020. Covid-19 has made it strikingly clear that a significant proportion of under-valued and low-waged work must by in large be performed in-person. Those most at risk in society—careworkers, cleaners, bus and delivery drivers, packaging and factory workers and so on—are at risk because they simply have to be 'in place' to work, and at the same time don't have the privilege or choice not to work.

The turn to knowledge work in HCI was then a turn away from the less privileged and a corresponding investment in a very narrow and distinctive class in society, the wealthy and educated. And in turning its attention away from those who have to be at work, HCI also turned away from large swathes of ethnic populations and race groups. The shocking statistics of Covid-19's disproportionate impact on black, asian and other minority ethnic groups will take some time to fully explain. However, amongst other important determinants, I'm confident a need to be physically at work will be a critical factor.

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<sup>7</sup> [Tamar Sharon](#) writes about the complications of companies like Apple and Google building global contract tracing infrastructures in "[When Google and Apple get privacy right, is there still something wrong?](#)"

Again, the point to take away here is not that HCI and its research into remote work and video conferencing are the direct cause of the inequities that surround us today. Nor is it to suggest we've not contributed to programmes that prioritise the fair and equal access to ICT. It's that we have played, arguably unwittingly, a part in furnishing a world where the wealthy and privileged have the choice to work remotely, to isolate and socially distance, and to stay safe. HCI is part of a rationalising of work and labour that makes a version of normal possible, perhaps even probable. In responding to the current crisis, I believe it is then incumbent on us first to notice how we are implicated in these worlds and then to think how we might use our design methods and outputs to create the conditions for many more potential worlds, and alternatives that might just offer better ways of living and dying together.

To turn now to the seemingly distant world of animal farming and food supply chains. Though understandable attention is being given to wet markets in China — that sell live animals and often exotic species — the dangers we must acknowledge are a good deal closer. Consider the results of an article published in 2018 by epidemiologist Madhur Saharan Dhingra and her colleagues (Dhingra et al. 2018).<sup>8</sup> The authors use a survey of avian flu viruses to show that highly pathogenic cases are far more likely to emerge through commercial poultry farming and intensive production systems, and correspondingly their occurrence is more likely in high-income countries. It's also conditions like these that accelerate the spread of zoonotic diseases, diseases that make the jump between species. Avian flu and coronaviruses are thus more likely to move between species and to humans in factory farming conditions where animals are kept tightly packed and huge quantities of effluent have the opportunity to flow between systems of food production.<sup>9</sup>

Of course, we know the scale of this farming and scope for the spread of diseases relies on technologies that sense physiological functions, monitor activity, and track the mass transportation of bodies. Although we might argue the concerns of HCI are a long way from animal farming, a very particular logic of bodies is being applied that feels not unfamiliar. Bodies, here, are reduced to quantitative measures and optimal metrics for maximum productivity yields. Moreover, value is assigned and generated through the production and proliferation of data, and the transactional potential it affords. HCI might not be directly involved in designing and building technology for factory farming, but it is deeply entangled in a logic that enables it, and allows it to perpetuate.

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<sup>8</sup> Dhingra, Madhur S., Jean Artois, Simon Dellicour, Philippe Lemey, Gwenaëlle Dauphin, Sophie Von Dobschuetz, Thomas P. Van Boeckel, David M. Castellan, Subhash Morzaria, and Marius Gilbert. "Geographical and historical patterns in the emergences of novel highly pathogenic avian influenza (HPAI) H5 and H7 viruses in poultry." *Frontiers in veterinary science* 5 (2018): 84.

<sup>9</sup> Science journalist, Sonia Shah, details this in *The Nation*: [Think Exotic Animals Are to Blame for the Coronavirus? Think Again.](#)

Consider this further down the supply chain. The human labour of food production, so often hidden from us when normalcy prevails, is, in this crisis, attracting attention.<sup>10</sup> The pandemic is revealing the precarity of low-waged, immigrant populations who ordinarily work thanklessly to supply us with food. Routinely classed as unskilled and easily replaceable, we see at one and the same time how undervalued people's lives can be, but also how critical they are to normality. Again, a technoscientific logic operates here, one of extraction where systems of monitoring and surveillance are deployed to extract maximal labour from people working across global supply chains. Far more sophisticated than the Taylorism applied to the factory floor at the turn of the 20th Century, algorithmic technologies manage and optimise globally distributed supply chains against demand, locating human labour amongst the flows of just-in-time production. The remarkable achievement is that maximum extraction and productivity operates across scales and locations, from the factory farm, to labourers along the supply chain, to the infrastructures of circulation. It's hardly surprising that human bodies, and indeed other living bodies, appear marginal, if not expendable.

Of no coincidence, are the parallels with the remarkable work from Lily Irani and Noopur Raval. They show how the piecemeal tasks of Turkers and monitored activities of gig workers slot into interlocking technoscientific and capitalist logics. Our medical imaging software<sup>11</sup> and takeaway orders, for instance, so much a part of the everyday and in different ways recognised as critical in the pandemic, at once depend on a normally invisible labour that sustain flows of capital and wealth, worldwide.

It should then be clear that the technologies we are preoccupied with in HCI—technologies that count, monitor, calculate, identify, etc., all across geographically dispersed networks of fibre and wireless communication channels—are implicated in a version of normal that is exploitative and unjust. The intensive farming of animals and our food supply chains are just examples of where computing and computational technologies afford and sustain logics in which inequity and exploitation are prerequisites. Although this structural machinery undergirds our dependence on an injustice that feels removed from us, it aligns with the same axes of power and wealth, *and* amplifies the conditions in which nonhuman born viruses can establish themselves and thrive in humans.

In HCI, I believe we need *ways of understanding* how technology and technoscientific infrastructures create very particular conditions for sociotechnical

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<sup>10</sup> A member of [Angry Workers](#) who works at a Bakkavor factory, April 16, "[Don't call us heroes](#)": [Life on a Production Line](#).

<sup>11</sup> Shuai Wang, Bo Kang, Jinlu Ma, Xianjun Zeng, Mingming Xiao, Jia Guo, Mengjiao Cai, Jingyi Yang, Yaodong Li, Xiangfei Meng, Bo Xu 2020. A deep learning algorithm using CT images to screen for Corona Virus Disease (COVID-19) medRxiv 2020.02.14.20023028; doi: <https://doi.org/10.1101/2020.02.14.20023028>



relations and indeed multi-species relations. For example, how, technoscience is implicated in deforestation and the massive depletion of wildlife habitats; how it affords a machinic logic in the transportation and slaughter of animals; how it persists in reducing human labour to counts and metrics; and how it creates the conditions for microbes and what emerge as human pathogens to flourish literally in our *backyards*.

I also believe HCI and design must face the challenge of imagining how life might be otherwise, in and after the pandemic. Perhaps it is about more than “*what worlds are we making possible*”. The question to be asked might be better put: “*What technoscientific interventions might make other worlds possible?*”

Finding ways to mitigate the spread of Covid-19, supporting, for example, contact tracing, symptom tracking, and immunity certification are undoubtedly important goals. The longer-term challenge for those of us invested in design and technology’s proliferation is to look beyond these immediate fixes, however. We need to be asking what multi-scalar modes and practices might be reimagined to be responsive and responsible for the seemingly separate technoscientific realms of managing human pandemics and caring for our sociotechnical and multispecies relations? We need to be imagining worlds that resist singular or monolithic ways of valuing life, that question the logics of extraction and transaction, and make possible a multiplicity of ways of living together. As Justin Smith writes in his article, *It’s all just beginning*: “These are not end times” “What this is, rather, is a critical shift in the way we [need to] think about the human, the natural and the overlap between these.”