

Post COVID-19 Futures; Changing Work and Re-Thinking Skills

8 July 2020

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1.0 Introduction: From Crisis to Opportunity

1.1 From looking back to looking forward

From every crisis comes opportunities. The COVID-19 pandemic has cost us dearly and continues to do so. But on the other side of it, whenever that is, there is an opportunity to re-think things going forward. A Guardian report noted (June 29th) that “just 6% of UK public ‘want a return to pre-pandemic economy’”¹. It seems that a substantial proportion of the population has looked back during the last four months and declared themselves unhappy with the lives they were leading beforehand.

At the end of 2019, the wave of digital technologies was already having a significant effect both at work and at home, with a radical transformation of jobs and of employment. Social and spatial divisions were widening and people and places were getting further apart in terms of wealth and opportunity. More was to come even if a global pandemic had not descended on an unprepared world.

*What lies in front of us, is a transformation potentially so fundamental that we have to start re-thinking the whole future of work, opportunity and well-being for a substantial segment of the population. It is not that this “shock of the new” – on the advent of AI and robotization – will be unequivocally bad. Indeed, the evidence of past technological revolutions indicates that more jobs are likely to be created overall than are lost (EPSC, 2019²). The real concern is that, on the way to this better state of things, we will have to **pass through really significant short-term disruptions** where gains and losses play out in greater extremes from place to place³.*

When this was written in February 2020, there was no indication that only weeks away there would come a transformation so drastic that people would be stopped going to work and be locked down in their homes for months and that the global economy would in effect be shut down. This particular “short term disruption” was entirely unthinkable and in July there is a real struggle to return back into anything resembling normal life. Many of the changes we were having to take on board as a society before the virus were probably going to take some time to come through. Now the impact of the shutdown may well see a sharp acceleration as new imperatives for economic survival drive the process forward and the old order is for the time being suspended.

So, people have clearly had time to reflect on how it used to be and wonder whether what came before is really worth going back to⁴. In lockdown, the new technologies came to our aid in keeping us connected; communicating and supplied with basic goods. We have all had to engage with them. This is a transformation in itself. The population at large is better equipped to think creatively about what else we might choose to do with the digital transformation – for society as well as the economy. In the wider context of the pandemic experience, there has been a realisation of the essential value of the NHS and of those we now recognise as “key workers” as being an essential component in our wellbeing. We also saw enough about the uneven impact of COVID-19 on certain groups to know that that inequality has to be taken more seriously. We know definitively that our neighbours’ health is not something we can afford to ignore.

¹ <https://www.theguardian.com/world/2020/jun/28/just-6-of-uk-public-want-a-return-to-pre-pandemic-economy>

² <https://ec.europa.eu/digital-single-market/en/news/future-work-work-future>

³ *Facing the Digital Transformation: Emerging Labour and Skills Shortages*. Peter E Lloyd. <https://www.peter-lloyd.co.uk/papers-and-blogs/>

⁴ <https://www.theguardian.com/world/2020/jun/28/only-13-of-uk-working-parents-want-to-go-back-to-the-old-normal>

This paper (the 5th in our COVID-19 series) looks at some of those trends that were already in evidence before the pandemic to see how – unaltered – they might have taken us forward; what the arrival of the pandemic might have done to change that pathway and what lessons can be drawn from the COVID-19 experience to move to a better future.

1.2 Lockdown and its transformative changes

Before the advent of COVID-19, in the “old” normal, most people had become used to a lifestyle that saw ‘work’ as a place they travelled to and home as where they were when not there. Work was about face-to-face activities and office meetings, or factory or warehouse jobs where you performed as part of a production or goods handling system. Commuting was just the price you had to pay for earning a living and travelling - most often in a press of people or cars - to other locations for work. It was a necessary evil (albeit one that carried a certain amount of kudos for business travellers going to more interesting and exotic places). For the most part, this was undertaken without too much thought or reflection.

For months that system was switched off, with no clear indication about when it will be (or even can be) fully switched on again⁵. For those able to work at home (around 50 percent), this became the site of employment. The binary work/home distinction ceased to apply. For those who had to go to a place of work anyway, the regular hassle of getting there was added to by the new hazards of contagion – especially if it was by public transport⁶. Where this work involved close contact with people, in nursing and in the care sector for example, the hazards were considerable and we are now able to see the sacrifices that people in this situation were called upon to make. All this provided a perfect context for reflection. Most people had the time to stop and think under conditions where the day was no longer fixed and patterned by the disciplines of office or factory practice or transport timetables. The cadence of life was profoundly altered with more available space for thought.

Engaging in its own reflection, the OECD looked back and came up with the observation that:

“the COVID-19 pandemic has also highlighted several key vulnerabilities of our societies and economic system. Global interconnectedness has helped to create huge economic and social benefits for decades, albeit unequally, but also facilitated the rapid spread of the pandemic. More broadly, the speed and depth of the economic crisis have shown that a core principle of the global economy – prioritising short-term economic growth and efficiency over long-term resilience – can have huge societal costs.”⁷

“Build back better” was the OECD prescription – a term that has taken on wide currency.

Much has been written in recent weeks about the short-term need for unlocking the economy. It has been focused on getting people back to work (where their jobs still exist, or boosting infrastructure investment⁸),

⁵ <https://www.ifs.org.uk/publications/14884>

⁶ <https://www.bbc.co.uk/news/uk-52927089>

⁷ <http://www.oecd.org/coronavirus/policy-responses/building-back-better-a-sustainable-resilient-recovery-after-covid-19-52b869f5/>

⁸ <https://www.bbc.co.uk/news/53236921>

getting children back to school (coping with lost learning⁹ or repairing infrastructure¹⁰) and, most recently, going on holiday or to the pub and the hairdresser¹¹.

Meanwhile, as explored in the next section, the pace of business retrenchment and liquidation and loss of jobs is *accelerating fast by the day*. As far back as 12th June, data from the ONS had already made it clear that; “*we are on course for the largest recession in three centuries*” and that “*that the number of people unemployed and claiming benefits is rising faster than at any point in our history*”¹². The response to this so far has been in sound bite exhortations to; “*build, build, build*”, alongside general talk of a Roosevelt style New Deal. We have yet to hear about a coherent strategy for coping with the immediate outfall of soaring unemployment – especially among the young – let alone about the principles to be adopted for a sustainable and socially inclusive future recovery¹³.

1.3 Closures and redundancies - the prelude to recession

Over the last three days of June and into early July the pace of business closures intensified sharply. There had been early warnings about the extent of this as companies – particularly in the airline¹⁴ and tourism¹⁵ sectors – had signalled to government the scale of their potential difficulties. Most were looking for some form of public assistance. With the previously announced tapering of the furlough scheme and the need under legislation to give notice of redundancies, a worrying list of businesses had determined that they could not go on or needed seriously to trim their workforce.

The flood of announcements of closure is becoming redolent of the manufacturing losses of the early 1980s with weekly lists of business failures – then mostly in manufacturing. Unsurprisingly, this time it is the retail and hospitality sector leading the way with high street brands like Oasis, Warehouse, T.M. Lewin and Harvey’s Furniture, joining the shopping centre owner Intu as the latest additions to a list of closures that was already a long one in the sector before the advent of COVID-19¹⁶. This came on the same day that John Lewis announced forthcoming store closures, Harrods declared 700 job cuts, Bella Italia closed 91 outlets with the loss of 1,900 jobs.

Even before COVID-19, the anticipated hollowing out of shop-based retail was already well on its way¹⁷. The ‘sameness’ of the British retail offer in shopping malls meant that earlier chain store closures (such as British Home Stores, and more recently Debenhams) had left malls with empty spaces looking like a mouth

⁹ <https://www.bbc.co.uk/news/education-53100881>

¹⁰ <https://www.bbc.co.uk/news/education-53215221>

¹¹ <https://www.theguardian.com/world/live/2020/jul/04/uk-coronavirus-live-pubs-and-hair-salons-reopen-in-england-as-lockdown-eases-latest-updates>

¹² <https://www.theguardian.com/commentisfree/2020/jun/16/record-unemployment-uk-government-ons-figures-labour-market>

¹³ In computing terms, the government cannot simply apply ‘control, alt, delete’ to restart the previous operating system. The previous system was horribly affected by the virus that no anti-virus programme was able to detect. Neither can the previous system be made resilient by a disconnected series of software patches (the sticking-plaster approach). More, a new operating system is needed where a systematic series of *program updates* need to be *activated*.

¹⁴ <https://fortune.com/2020/06/11/airline-layoffs-job-cuts-coronavirus-covid-19-lufthansa-british-airways-emirates-american-airlines-sas-norwegian-easyjet-united-virgin-ryanair/>

¹⁵ <https://www.statista.com/statistics/1104835/coronavirus-travel-tourism-employment-loss/>

¹⁶ The news about retail closures is documented at <https://www.retailgazette.co.uk/blog/category/all/coronavirus/>

¹⁷ <https://www.retailresearch.org/retail-crisis.html>

with missing teeth. This was accompanied by the demise of small shops on the 'high street'¹⁸. The recovery from lockdown is destined to make this visual manifestation much more widespread.

Some fast food suppliers in particular niches are finding conditions difficult and making redundancies. The virtual emptying of the air terminals and the rail platforms has seen SSP, the owner of Upper Crust and Ritazza, cut half of its 9,000-member workforce. Earlier redundancies included those of Travis Perkins and Frankie and Benny's as out-of-town retail parks begin also to lose their retail players. The consultancy business added a name to the list as Accenture closed out 900 jobs. On top of this was the list of operations-site closures associated with the cessation of air travel – Swissport, British Airways, EasyJet and so on, and it shows that local job losses in and around the nation's airport hubs are going to lead on to permanent effects on what were previous growth hubs.

The same is the case with retrenchments at Rolls Royce and most recently at the Airbus site in North Wales. All of these events will have employment and income multiplier effects. The impact on local labour markets around the UK is going in some cases to be extreme and it is still far too early to say how much further this will go. This one paragraph, representing the last few weeks but - mostly one day - of closure and redundancy announcements, has to alert us to the seriousness of what lies ahead. If Phase One was the virus event itself (still ongoing) then Phase Two is rapidly unfolding. A concerted effort is going to be needed at all levels of government and society to imagine the challenges to come and move quickly to prepare for the worst of them.

A real existential fear is that many of the country's more vulnerable places will rank high on the list for the most seriously impacted - as unemployment is distributed unevenly across geographies. As Andrés Rodríguez-Pose warned us back in the "better days" of 2018, the patterns of deprivation and poor jobs was more than just an economic risk:

*"The rapid rise of populism represents a serious and real challenge to the current economic and political systems. The stakes are exceptionally high and there is no time for business as usual. The array of solutions is, however, limited. Doing nothing is not an option, as the territorial inequalities at the root of the problem are likely to continue increasing, further stirring social, political and economic tensions."*¹⁹

Previous labour market policies for the most disadvantaged failed to offer the necessary social and economic resilience to cope with the existing situation, let alone a pandemic. The warning is stark – tackling inequality, social and geographical – is going to be one of the most critical challenges in the recovery. Soundbites like "levelling up" may have their place for aspiration - but will not substitute for some hard thinking about how to address what has become a defining feature of the advanced economies for past decades (See Thomas Piketty, 2020, *Capital and Ideology*²⁰). Returning to past labour market, fiscal and social welfare policies will not help to 'build back better'.

Despite all this, we are at a moment when all the users of the complex, hyper-connected system that is the contemporary economy and society can take time out and begin to reappraise what they might want from it in the future. A comprehensive *system re-design* presents itself as a real possibility – since we are faced with dramatic change in any case. While it is as yet hard to speculate on what that future might look like (and we aim to contribute here), we can at least see what might have been the likely pathway from what we know about some of the observable pre-pandemic trends that we would have faced anyway. This can

¹⁸ <https://www.theguardian.com/society/2018/dec/01/everything-must-go-what-next-for-the-high-street-new-retail-empty-shops>

¹⁹ <https://doi-org.ezphost.dur.ac.uk/10.1093/cjres/rsx024>

²⁰ <http://piketty.pse.ens.fr/en/ideology>

offer a basis on which to begin re-thinking what else we might want to consider post-pandemic. We will use this as a narrative device for what follows. Our overall purpose is to take some thoughts about this into one particular question; *'facing the prospects of mass unemployment, and potentially dramatic shifts in demands for skills and competences, how will policy need to respond?'*

2.0 COVID-19: New Challenges for Work and Workplaces

2.1 An opening for the intensive application of new job replacing technologies

When the virus episode is over, the deep transformation of work²¹ and society²² going on under the influence of the digital technologies is likely to be exaggerated and move forward in disruptive ways²³. The development of Artificial Intelligence (AI), Robotics, video and networking technologies and 3-D printing was already transforming workplaces, transport networks, and platforms for production before the pandemic. Now, as balance sheets come under severe pressure from lockdown, moves to replace expensive humans (with all their idiosyncrasies of needing holidays, being off ill, and wanting salary increases) with technologies that can replace them (robots working 24 hours a day etc. and not complaining when they are replaced) are likely expected to increase sharply.

This is not, of course, a one-way street. The evidence of past technological revolutions indicates that more jobs are – in the long run - likely to be created overall than are lost²⁴. However, the real concern for us now is that on the way to this better state of things, we will have to pass through a challenging period where the gains and losses play out in even greater extremes from place to place. This was going to be the case before COVID-19. To get some sense of the scale of the shutdown that unfolded, the ILO has been monitoring the global labour market impact of COVID-19²⁵, noting (June 29) that “*there was a 14 per cent drop in global working hours during the second quarter of 2020, equivalent to the loss of 400 million full-time jobs (based on a 48-hour working week)*”²⁶.

The need for restored and new jobs to cope with this order of potential loss is so great that no simple going back to where we were is likely to fit the bill. New jobs from the ongoing ‘Fourth Industrial Revolution’ will arise but the numbers needed over the required timescale are unlikely to be forthcoming. On top of this, past experience shows that this is generally *not for the same people and in the same places* where jobs are lost and new ones arise²⁷. What seems highly likely is that there will be even greater *polarisation* in labour market opportunity, both by occupation and place in the post-virus world. High-end, well-paid jobs will continue to be created more easily for those with the requisite and flexible skill sets.

At the same time, large numbers of the formerly more secure jobs will disappear, as we are already seeing, while many low-wage, low-skill, low-attachment jobs will emerge²⁸. This is a process capable of raising serious instability in the context of the pandemic recovery. Going forward, waiting for market forces alone

²¹ <https://op.europa.eu/en/publication-detail/-/publication/795efceb-47cc-11ea-b81b-01aa75ed71a1/language-en>

²² <https://www.economist.com/leaders/2019/12/18/pessimism-v-progress>

²³ <https://www.ft.com/content/70cace2c-1bec-4c02-a23c-9d55884b21ac>

²⁴ <https://ec.europa.eu/digital-single-market/en/news/future-work-work-future>

²⁵ https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_749399/lang--en/index.htm

²⁶ https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_749399.pdf

²⁷ <https://academic.oup.com/cjres/article/11/1/189/4821289>

²⁸ A graphic example of this can be seen in the move of ‘customer-facing’ jobs in high streets to AI controlled warehouses, where ‘picking and placing’ (increasingly by robots) displaces workers and to ‘algorithmically managed’ home delivery services. For example <https://www.ft.com/content/79434838-2142-11ea-b8a1-584213ee7b2b> and <https://www.bbc.co.uk/news/technology-52340651>

to deliver what is needed will not fill the bill. As in the depression of the 1930s and the Post-War period after 1945, the state will be needed to step in.

2.2 Deeper penetration of online shopping

A widely experienced shift in consumer behaviours before the pandemic - and now one almost universally adopted under lockdown – was where the regular shopping basket was sourced over the internet and where delivery was organised by advanced logistics technologies to produce goods and services at the front door²⁹. Online delivery of everything from groceries, through clothing and general shop goods to pizzas, and ‘high end’ meals³⁰ or packaged meal ingredients³¹ was already making inroads before the end of 2019; especially for busy, two-worker households where commuting took substantial time out of the diurnal schedule. Delivery drivers were a fast expanding segment of the labour market even in lockdown.

Beyond the pandemic, this is set to move to a new, higher, level with an expansion in range and intensity. No major retailer is going to survive without travelling along this pathway to some degree. Some features will make this even more imperative. For example, how will we ‘try on’ clothes³² in a future where contagion is possible - when they may be ‘infected’ by another person doing the same? The super-dominance of internet providers like Amazon has been massively enhanced by the imposed need to shop online for almost everything.

As a result of this, and as physical retail outlets reduce in importance, the warehouse logistics, and goods delivery sector has expanded considerably. By contrast, liquidations and job losses in high streets, supermarkets and most recently shopping malls (see the story of the failure of Intu³³) are being announced with sad regularity³⁴. These bi-polar job shifts are seeing, on the one hand, growth in the technology infused logistics industry and on the other, considerable job losses for retail workers in place-based outlets (though not all, as Primark announced new openings on July 2³⁵).

Earlier suggestions that worker-replacing technologies in the warehousing and logistics sector would appear, have been (for the present perhaps) overturned – with growing recruitment. However, the explanation may have more to do with the lead times needed to install new automated infrastructure in the distribution centres than a long-term demand for labour. So, there has indeed been a sudden expansion in jobs for warehouse (or what Amazon called ‘fulfilment’ centres) staff and delivery drivers³⁶. But it is too early to tell how far this trend in recruitment will be maintained.

In all the sectors affected by the turn to online, it is still likely that in the longer run, the overall balance of jobs will be a negative one – not least because the climb out of recession will see consumer disposable

²⁹ <https://www.economist.com/special-report/2019/07/11/digitisation-is-helping-to-deliver-goods-faster>

³⁰ For example Michelin starred restaurants starting delivery of meals <https://www.ft.com/content/61535042-6e86-11ea-89df-41bea055720b>

³¹ “The recipe box sector has been one of the few winners in the crisis. Mindful Chef has reported a 452 per cent rise in customer numbers since the end of March, as well as a 387 per cent increase in its recently launched sideline in frozen meals” <https://www.ft.com/content/90b7e7a6-f22d-44f1-93da-eeaad80fc70c>

³² <https://www.ft.com/content/89e9de1c-0213-49b8-82ba-edca04e1e910> This is a problem also for the luxury clothes sector where much purchasing has been in person with personalised shopping.

³³ The retail shopping mall group failed on June 26 <https://www.bbc.co.uk/news/business-53195980>

³⁴ For example on July 1 <https://www.bbc.co.uk/news/business-53247787>

³⁵ <https://www.bbc.co.uk/news/business-53261037>

³⁶ <https://www.forbes.com/sites/johnkoetsier/2020/04/13/amazon-hired-100000-people-last-month-now-its-hiring-another-75000/#1e97682c9db4>

demand under pressure as unemployment takes its toll, and as the economy struggles to recover. The concern is that at both ends – shop retail and warehousing and distribution work – where activity in the past was labour intensive, it will no longer be so. Furthermore, wide geographical dispersal was a feature of the retail sector but with the demise of high street retail and the growth of large scale and highly automated distribution centres³⁷ this distributed pattern will be profoundly altered.

2.3 Workplaces having to respond to the possibilities for contagion

Confronted with the impact of COVID-19, employers now have to take on board that humans are potentially contagious to each other in many workplace contexts. A single person can infect many others³⁸. In a production setting: “*add the challenges of social distancing on a busy production line, together with loud machinery forcing staff to raise their voices. Researchers know that situations where people sing - or have to shout - increases the chances of them projecting the virus to others nearby*”³⁹. Whether one metre, 1.5 or two, whether wearing a mask or full PPE (Personal Protective Equipment), workplace layouts must respond, with spacing, hygiene facilities and adjusted circulation routeways. These can present huge potential costs to absorb while restricting plant or office capacity well below the previous levels.

With such restrictions, having people together on site quickly becomes much more expensive (enhancing the pressure to look for the technological solutions we have outlined). Furthermore, the new hygiene and related requirements are cost impacts coming in just as businesses are facing significant reductions in income: the British Chamber of Commerce reports on June 30 that:

*“63% of businesses reported a fall in export sales (8% reported an increase, 29% said they remained constant); 73% saw a fall in domestic sales (10% increase, 17% remained constant); 64% reported a worsening of cashflow (11% saw an improvement, 25% reported no change); Investment intentions for services and manufacturing fell to the lowest since BCC records began; 58% expect their turnover to fall over the next 12 months (25% expect a rise, 17% think it will stay the same); In the previous quarter - January to March - 56% of firms were expecting an increase in turnover”.*⁴⁰

From the worker perspective, employees may be less willing to travel, even if the rules allow them actually to get to work, and their mode of travel did not put them so much at risk. In general, where it is feasible, automation is going to seem a lot more attractive across the board than it did four months ago. What was perhaps a gradual five-year programme of investment in worker replacement technologies, has probably suddenly become a more immediate priority⁴¹.

³⁷ <https://www.economist.com/special-report/2019/07/11/digitisation-is-helping-to-deliver-goods-faster>

³⁸ A good recent example is the incident at a German meat packing factory where the conditions were ideal for COVID-19 – it survives well on indoor cool places and maybe transmitted through air conditioning.

³⁹ <https://www.bbc.co.uk/news/uk-england-leicestershire-53100321>

⁴⁰ <https://www.bbc.co.uk/news/business-53239961>

⁴¹ Robots can also get software bugs and viruses, and they may even become unavailable through hacking and cyber-attacks. They can infect each other through software viral transmission. Security in the one domain may open the door to vulnerability in another. There is even the potential for digital transformation pandemic. On 19 June 2020 Australia reported a systematic cyber-attack that were “*were widespread, covering "all levels of government" as well as essential services and businesses*” and were almost certainly originated by a “state-based actor”. The digital solution may also have its limits. <https://www.bbc.co.uk/news/world-australia-46096768>

2.4 The transformation of the office: Working from home

While shopping for basic goods has been transformed into an increasingly online activity, a much more systemic transformation has been taking place with respect to the role of the office as a workplace⁴². Before the virus arrived, offices were already well down the track of being organised around online networks, sophisticated workstations, and nationally and internationally distributed working, but the office was still very much at the core of most businesses⁴³. Although people increasingly had found that working at home was a possibility using digital communications technologies, it was not at that stage a requirement. Presenteeism in offices was still the 'norm', and with it came the crowded commuter trains and buses, and the congested business districts of the major cities.

The shape of the office in its open plan form, with its hot-desking possibilities and with its on-site video conferencing facilities was in most cases still at an early stage of encompassing the possibilities offered by technology. The standard driver for open plan office working made financial sense – more people in less space and (hopefully) more profit and productivity and easier supervision. As our previous papers argued⁴⁴, the compression and congestion of spaces in cities and offices had unconsciously offered the COVID-19 virus a perfect transmission environment and this has impacted mindsets.

While people were unable physically to go to work, the disciplines, and skills of remote working (both technological with Zoom, Teams, remote data access, and social/psychological skills for using the home base) emerged, and a massive transformation opportunity opened up. This might have affected as much as 40-70 percent of the pre-virus workforce, although it varies across sectors. Managers have had to learn new methods for managing their virtual teams but, where these have been seen to be successful, whole sectors have had the chance to discover the productivity gains to come from this way of working. Many businesses, with parts of their pre-virus activity assigned to international working through internet platforms, discovered that they have a new option – *to use people at home* (in both senses).

In the face of the pandemic, many office-focused businesses have already reviewed their staffing location, and their travel and mobility arrangements⁴⁵. With the huge lockdown pressures that have appeared on their balance sheets, companies have explored ways to use fewer workers with greater efficiency. The COVID-19 event will have given the process of change a sharp impetus – in many cases against the dire scenario of 'change or die' for the firms involved. Emphasising this further, around half of the UK workforce discovered that working from home is a feasible option under virus conditions. For management, the supervision aspect of the spatially fixed office with its open plan format could be quickly taken up by digital forms of surveillance⁴⁶. In some cases, it was, however, still a regulatory requirement to have an authorised office location⁴⁷.

Over time, many of the less obviously convertible office roles such as basic research⁴⁸, marketing and promotion and even HR have begun to respond to the fast-emerging possibilities of Artificial Intelligence

⁴² <https://www.msn.com/en-gb/money/career/goodbye-to-open-office-spaces-how-experts-are-rethinking-the-workplace/ar-BB13rOBv>

⁴³ See, for example, a 'vision for the future' back in September 2019:

<https://www.economist.com/business/2019/09/26/redesigning-the-corporate-office>

⁴⁴ <https://www.peter-loyd.co.uk/papers-and-blogs/>

⁴⁵ <https://www.bbc.co.uk/news/uk-52720007>

⁴⁶ <https://www.ft.com/content/cae7905e-ced7-4562-b093-1ab58a557ff4>

⁴⁷ There were some issues as we noted previously, such as the challenge in maintaining security of business IPR, and privacy regarding sensitive data. In some cases, regulations required that certain business activities could only take place in secure office locations. <https://www.ft.com/content/9fdd9de9-00ea-4fd4-a558-6b43e8b774a3>

⁴⁸ <https://www.economist.com/business/2018/07/14/law-firms-climb-aboard-the-ai-wagon>

(AI) and Virtual Reality (VR) where the pandemic has seen an acceleration in exploring more sophisticated collaboration platforms and devices, using virtual and augmented realities:

*“despite advances in video conferencing, ad hoc and informal “water cooler moments” where colleagues interact in person are much harder to recreate digitally, making it hard for employees to maintain their sense of cohesion with peers and the wider organisation. Tech companies are now looking to close that gap”.*⁴⁹

Nevertheless, as the pandemic has progressed, it is clear that while the ‘office’ is not necessarily consigned to history (for example *“homeworking can also cause mental stress, with many employees noting “video call fatigue” and craving real human interaction. A survey by Monster, the jobs website, found that more than 50 per cent of respondents who are teleworking due to the pandemic are experiencing burnout”*⁵⁰), in many cases it will still substantially see a move away from a dominantly place-based activity:

*“Last month, Facebook said as many as half its 48,000 employees could be working from home within a decade, while Canadian e-commerce firm Shopify followed Twitter in saying its 5,000 employees could work from home permanently. In the UK, the chief executive of Barclays bank, which operates from a tower block in Canary Wharf, has said that “the notion of putting 7,000 people in the building may be a thing of the past”.*⁵¹

The lockdown experience has provided an unlooked-for opportunity to stress-test organisational viability, work continuity, and the experiences of staff working at home as a business process re-engineering option. Sharply falling city centre rents also tell us that, going forward, a significant shrinkage in the scale of the office sector is likely – at least in the short term and even perhaps the long. The successful pressure from business on the Government (in England only initially!) to have social distancing reduced to 1+ metres has seen space-capacity concerns ease this to some degree, but in many cases this has post-dated the thinking about the need to change anyway. The office as we knew it in February 2020 will have gone through a process likely to change its function, form, purpose and even location.

From the employment perspective overall, an automation trend fuelled by advances in AI and robotics, that was slowly working its way through the labour market pre-virus has been given a considerable boost. What could not be prefigured at the right scale, however, was what would specifically happen to the office as a place of work. Two forces can be seen as underpinning this: those changes we have just outlined, but on top of them a potentially far-reaching shift in the *preferences of the office workers themselves*. Many will have discovered that there is a way of life beyond the congested daily commute to the centre and will look more closely at working from home in more attractive and liveable surroundings beyond the urban core. Evidence of this already coming though in real estate home search data (the market for country houses in Dorset and Wiltshire has “gone mad”⁵²).

Combining all these forces together, the geography of the city is undergoing a transformation - though we are, as yet, far from clear about an emerging shape. This decentralisation trend will bring with it another wave of change as those local activities that service the office clientele – city centre restaurants, bars, take-aways and so on - lose a good deal of their market. Theatre and entertainment venues are among the worst

⁴⁹ <https://www.ft.com/content/0f77fd34-aa65-11ea-abfc-5d8dc4dd86f9>

⁵⁰ <https://www.ft.com/content/1e86dc36-907b-11ea-bc44-dbf6756c871a>

⁵¹ <https://www.theguardian.com/business/2020/jun/27/why-the-home-working-boom-could-tumble-londons-skyscrapers>

⁵² <http://www.wrightpropertysearch.co.uk/>

hit by lockdown⁵³ How cities will respond to such challenges may require more sensitive governance and greater autonomy than before:

*“... cities need to run themselves for the post-covid era. They are already grappling with how to move millions of people when nobody wants to squeeze onto crowded buses and trains. Some have bold plans for expanded networks of bike paths, and have erected plastic barriers to encourage walkers to occupy the roads. This is encouraging. But cities that fear commuters will drop trains and buses for private cars, clogging the roads, would do even better to manage demand by pricing driving and parking more highly. Cities also need more autonomy .. National governments and states will need persuading that cities should have more power, especially as many will also be begging for money”.*⁵⁴

2.5 Manufacturing and production: The impact of the pandemic on global solutions and emerging national rivalries

Another area where change was rapidly underway before 2020, and will be likely now to intensify, was in how production was geographically distributed and connected up through ‘just in time’ supply chains. ‘Just in time’ manufacturing, facilitated by supply chains that delivered components to a factory only hours before they were used, originated in Japan in the 1960s⁵⁵. Driven partly by the lack of available land for development and avoiding locking capital up in warehouses of components; just-in-time was accelerated by the digital transformation - enabling the ‘joining up’ and integration of information without the friction of space – one of original enablers of globalisation. Alongside changing transportation possibilities, in particular massive ships and containerisation⁵⁶, global electronic digital networking had brought us the complexly integrated world of ‘just in time’ just before the pandemic arrived. This same dynamic, fully integrated, hypermobile global system also brought us COVID-19. We explored this in an earlier paper in our series on the virus.

Before the system was forced to come to a partial halt⁵⁷ to cope with the emergency, things were *already beginning to change*. The economic power of China in the global economy was becoming an issue – both strategically and for home country workers in certain sectors. This was giving rise to more nationalistic responses around the world but particularly in the USA⁵⁸. For decades, China, perceived as a source of cheap, compliant, and flexible labour, had attracted a significant share of the global manufacturing base. Even before the pandemic seriously disrupted extended supply chains, potential trade wars were making an appearance⁵⁹. The open trading environment without close regulation that had emerged in world trade also attracted the attention of those with concerns about global warming⁶⁰, forcing the logistics industry to start taking action⁶¹.

⁵³ <https://www.theguardian.com/commentisfree/2020/jul/06/arts-recovery-package-sector>

⁵⁴ <https://www.economist.com/leaders/2020/06/11/great-cities-after-the-pandemic>

⁵⁵ https://en.wikipedia.org/wiki/Just-in-time_manufacturing

⁵⁶ <https://en.wikipedia.org/wiki/Containerization>

⁵⁷ While us ‘humans’ had to remain in our accommodation, governments did allow some continuation of movement and supply chains, particularly food and medicines, or the economy would have broken down.

⁵⁸ For example: <https://www.economist.com/news/leaders/21738883-americas-technological-hegemony-under-threat-china-battle-digital-supremacy>

⁵⁹ <https://www.cnbc.com/2019/02/28/1-in-5-companies-say-china-stole-their-ip-within-the-last-year-cnbc.html>

⁶⁰ <https://www.earth.com/news/environmental-impact-supply-chains/>

⁶¹ <https://www.allynintl.com/en/news-publications/entry/supply-chain-its-environmental-impact>

When COVID-19 hit, the system where many of the wealthier countries had allowed the globalised division of labour to lead to home deindustrialisation in favour of a shift to a services-based economy found themselves desperately exposed (again something that had been in play beforehand but whose impact was played down). Many countries discovered that they had left themselves with inadequate capability to build adequate stocks of PPE⁶². They also had no domestic capability to manufacture a range of the products that were suddenly needed – from the most basic (face masks and scrubs) to the most sophisticated (ventilators and pressurised oxygen delivery systems).

Looking desperately to source products internationally, businesses and governments found themselves in intense competition with each other. There had already been some concern about the way the dominant global producers had configured their production facilities. We see this now, where a single country (the USA) dominant in the critical medicines sector; *“bought up almost the entire global supply of one of two drugs used to treat coronavirus”*⁶³. The story of the scramble to produce a vaccine – with 19 different variants currently under scrutiny in the race to be first – is yet to play out in this environment as the successful ones move to production and delivery⁶⁴. Supply chain risk has therefore become a hot topic. On June 17th, the French government indicated that it was going to look closely at its dependence on outside global sourcing for key pharmaceuticals⁶⁵ and for some components of health equipment.

The key question for the longer run future of work is just how far is it likely that the jobs lost overseas will be coming back as a means of developing supply chain resilience (where countries look inwards to production). In some sectors this seems clearly to be the case. Overall, it is still very hard to see how these new ‘trade wars’ will develop. Given the fact that COVID-19 is a quintessential ‘global’ problem, retreating into national silos may not be the best way of building resilience against future pandemics. Indeed, those countries that have responded best to the pandemic are those that have built strong policies (often based on experience with SARS, MERS, or EBOLA) and who share and coordinate at the international level⁶⁶. It is simply too early to call how the impact of the virus on globalisation will play out.

2.6 Prospects for nearshoring through technology innovations

For some time, we have been hearing about “nearshoring” – production retreating from being globally configured to being brought back home and closer to the end-consumer. Once again, new technology comes into the equation. For businesses taking reasoned decisions about future supply chains, the potential of some digital technologies can be highly attractive. For example, developments in 3-D printing (3dp) may well chime in with other aspects of the post virus world. As with all technologies, however, there is a need to avoid hype and consider realities. Back in 2011, the Economist advised about 3dp that it is *“a technological change so profound will reset the economics of manufacturing. Some believe it will decentralise the business completely, reversing the urbanisation that accompanies industrialisation. There will be no need for factories, goes the logic, when every village has a fabricator that can produce items when needed”*.

⁶² <https://medium.com/bridges-to-the-future/covid-19-pandemic-has-exposed-the-structural-deficit-in-the-nhs-5b19ad0764eb>

⁶³ <https://news.sky.com/story/coronavirus-us-buys-up-almost-entire-world-supply-of-covid-19-drug-remdesivir-12018430>

⁶⁴ As of July 3 140 potential vaccines were being researched, and *“scientists are hoping to develop a coronavirus vaccine within 12 to 18 months”* <https://www.theguardian.com/world/ng-interactive/2020/jul/02/coronavirus-vaccine-tracker-how-close-are-we-to-a-vaccine>

⁶⁵ <https://www.france24.com/en/20200514-covid-19-forces-france-to-look-at-relocating-its-pharmaceutical-industry>

⁶⁶ <https://www.economist.com/science-and-technology/2020/06/25/pandemic-proofing-the-planet>

Such developments have not yet transpired, but it is clear that the technology offers ground-breaking possibilities. There is even the potential for human organs to be produced using it⁶⁷. Its costs make it highly affordable. It is not only big business that can make use of 3-D printing (3dp); schools and universities were using it to print personal protective equipment (PPE) during the pandemic⁶⁸. This single example illustrates the potential innovative and production capacity that could potentially exist at local levels, that is if it could be harnessed effectively. The future is still opening up and the possibilities are enormous.

As an example, this capability to reassign some key aspects of production to the local setting might well take a step jump upwards in response to the new sense of vulnerability and to a general review of just-in-time supply chains. While the capabilities of 3dp are just at the threshold of mass application, it may well form a major component in the transformation of the production sectors. What is already clear is the real potential to enable the 'just-in-time' manufacturing of components *on site* without depending on extended physical supply chains⁶⁹. These new techniques and approaches have the potential to throw up entirely new kinds of products and production systems in ways that are as yet genuinely futuristic.

Even before the possibilities of 3dp arrive, the possibility of using it to replace international supply chains had already been identified in those sectors where fashion and the need quickly to follow trends gives market advantage⁷⁰. In part, this reflects a change in the price of labour in those countries in the Far East whose wage rates have been responding to the emergence of a new better paid middle-class. Even where opportunities continue for global clothing and textile producers to find cheap labour, these may not be so attractive on the other side of the pandemic. Another of the possibilities of the pandemic episode is that it might lead to more intensive consideration of the option of bringing production back home to the UK.

However, returning this could have devastating economic impacts on the countries thus far used for their cheap labour: for example, "*Global remittances are projected to decline sharply by about 20 percent in 2020 due to the economic crisis induced by the COVID-19 pandemic and shutdown*"⁷¹, this may result in "*undoing years of progress in curbing global poverty*"⁷². So, simply de-linking the supply chains, and localising production, may end up in more parts of the world having a greater risk of contagious illnesses, exacerbating the risks of future pandemics.

The question arising from this necessarily selective review of what changes to domestic labour markets COVID-10 will bring is, 'on the other side of the crisis what will work look like, what jobs will survive, what will be lost and how can the right kinds of jobs for the future be created'? If the answer to this is 'more of the same before the event' then we are failing to address the downside of where we were going.

⁶⁷ <https://www.ft.com/content/eabb0e00-9755-11e9-98b9-e38c177b152f>

⁶⁸ <https://www.bbc.co.uk/news/av/uk-england-london-52160563/coronavirus-london-schools-use-3d-printers-for-nhs-visors> and <https://www.ed.ac.uk/informatics/news-events/stories/2020/the-appleton-tower-face-shield-factory>

⁶⁹ https://www.dhl.com/content/dam/downloads/g0/about_us/logistics_insights/dhl_trendreport_3dprinting.pdf

⁷⁰ The recent issues surrounding the Leicester virus outbreak open a window on what – on the downside – this process might involve for fast fashion. <https://www.ft.com/content/0b26ee5d-4f4f-4d57-a700-ef49038de18c>

⁷¹ <https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history>

⁷² <https://www.economist.com/international/2020/05/23/covid-19-is-undoing-years-of-progress-in-curbing-global-poverty>

3.0 Conditions for Labour: Growing Insecurity and Shifting Skills Needs

3.1 The job and income losses of lockdown

One of the most significant COVID-19 shocks to date - apart from the excess deaths it caused - is how many workers have lost their jobs and, as we saw in Section 1.3, how many more will be joining them. The Government furlough scheme has done a great deal to cushion the immediate impact on the workforce to this point: “As of June 28, 2020, approximately 9.3 million jobs, from 1.1 million different employers were furloughed”⁷³. The Claimant Count measure of UK unemployment (as of 16 June data) had increased in May 2020 to 2.8 million. This represented a monthly increase of 23.3% and an increase of 125.9%, or 1.6 million since March 2020⁷⁴. The US data are staggering - with 47.2% of adults jobless as of early July⁷⁵. Given the redundancies being announced late in June the expectation is that this trend will continue.

Relating back to what was said earlier about the generalised process of inserting more worker-replacing technologies into the workplace, this scale of severance presents a clear opportunity for a more gradual process to be stepped up. Once the worker-occupants of a given job task are no longer present, consultation and potential compensatory payments drop out. Whether technology is involved or not ‘hired back’ workers can be faced with new terms and conditions. We are seeing clear evidence of this approach already with British Airways⁷⁶ and Ryanair⁷⁷ seeking to re-recruit furloughed staff on less favourable terms and conditions. Any transformation that was going on or under consideration beforehand will find a context ripe for acceleration as the recovery from the pandemic proceeds.

By income group and by occupation, the effects of both the virus and lockdown have varied enormously and so will the longer run impacts be when recovery takes place. Early estimates were that around 50 percent of those in the higher income brackets could work from home (as compared with 10 percent of those on low incomes). Not all of those will be continuing to do so. By the week of July 3 those still working from home had “dropped to 29%, from 33%”⁷⁸. Employers may have begun to call people back but for many this may be a voluntary return in the face of “a strain on personal relationships (21%) or that “working from home was difficult (13%)”.

By employee group, it is clear where the biggest hit of both the virus and lockdown has landed to date - on those lower income earners *who cannot work from home*. In terms of propensity to be infected an ONS

⁷³ <https://www.statista.com/statistics/1116638/uk-number-of-people-on-furlough/>

⁷⁴

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/june2020#unemployment>

⁷⁵ <https://www.cnbc.com/2020/06/29/nearly-half-the-us-population-is-without-a-job-showing-how-far-the-labor-recovery-has-to-go.html>

⁷⁶ <https://uk.finance.yahoo.com/news/coronavirus-british-airways-sacks-350-pilots-160828713.html>

⁷⁷ <https://uk.finance.yahoo.com/news/coronavirus-ryanair-michael-oleary-warns-of-3500-job-losses-if-pay-cuts-cannot-be-agreed-082027907.html>

⁷⁸

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsongreatbritain/3july2020>

study of potential exposure⁷⁹ showed that the bulk were in those activities where close contact was essential – nurses, medical practitioners, nursing auxiliaries, care workers and home carers and AHPs, physiotherapists, occupational therapists, ambulance staff and so on. With the exception of the doctors, the bulk of these are workers in occupations where wages are low. They will still be in high demand.

Beyond the core of these ‘essential health-based services’ directly involved in care; low paid workers are the most affected (by infection risk and) by lockdown either directly or indirectly (employees in cafes and restaurants and the high streets and public transport generally, security guards, construction workers, plant operatives, cleaners, taxi drivers, bus drivers, chefs and retail workers). An ONS Report for 26th June shows, how many of these people were in jobs that put them in harm’s way.

“Among women, four specific occupations had raised rates of death involving COVID-19, including sales and retail assistants (15.7 deaths per 100,000 women, or 64 deaths). Because of the higher number of deaths among men, 17 specific occupations were found to have raised rates of death involving COVID-19, some of which included: taxi drivers and chauffeurs (65.3 deaths per 100,000; 134 deaths); bus and coach drivers (44.2 deaths per 100,000; 53 deaths); chefs (56.8 deaths per 100,000; 49 deaths); and sales and retail assistants (34.2 deaths per 100,000; 43 deaths)”⁸⁰.

Many people in precarious forms of employment will also be among those who have either fallen through the net of the Chancellor’s support schemes or are waiting for the benefit system to respond. As we move from lockdown to recovery, the government has been quick to restore punitive sanctions in the context of welfare benefits (a move that surely cannot be justified where the number of available jobs has fallen so drastically). In this context the evidence is that: *“More than 3 million people in Britain are going hungry because of the coronavirus crisis, according to new research showing that stark drops in income have pushed many families into poverty during the lockdown”⁸¹*. With the evidence now emerging of the long run damage to employment prospects, it might be reasonable to expect that this is destined to increase.

3.2 A wider scale of negative impacts right across the occupational spectrum

Evidence from both the US and the UK is that the employment and wellbeing impact of COVID-19 may be felt across a wide spectrum of society. Those at the top of the salaries/savings ladder, still remaining fully employed, or currently being ‘furloughed’ (and receiving up to a 80% of their wage/salary up to a fixed monthly ceiling), may well be able to absorb the impact in the short term. Many of them will, however, be seriously concerned about what happens to their employment situation when the state subsidy drops out and they have to re-engage with their employers.

The Office for Budget Responsibility report of 14th April⁸² offered little comfort with a forecast of a dramatic fall in output and a massive rise in unemployment over the next two quarters. Nothing since then will have

⁷⁹

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/whichoccupationshavethehighestpotentialexposuretothecoronaviruscovid19/2020-05-11><https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020>

⁸⁰

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020>

⁸¹ <https://www.ft.com/content/e5061be6-2978-4c0b-aa68-f372a2526826>

⁸² <https://obr.uk/coronavirus-lockdown-to-deliver-large-but-hopefully-temporary-shock-to-the-economy-and-public-finances/>

improved that dire prospect. ONS figures (June 22) reported “*The monthly decline in GDP in April 2020 [-20.4%] is three times greater than the fall experienced during the 2008 to 2009 economic downturn. During the global financial crisis, from the peak in February 2008 to the lowest point of March 2009, a total of 13 months, GDP contracted 6.9%*”⁸³. This was the sharpest decline in more than 40 years⁸⁴.

The sudden shift from job retention to redundancy for many people whose jobs were assured at the start of lockdown, will see the damage from the pandemic impacting on people whose ex-ante expectations allowed them to take on significant household and mortgage debt. These are generally the people whose jobs are those normally the ones young people would hope to occupy in their future careers. They occupy the upper middle range of the income distribution - accountants, lawyers, marketing executives, events managers, Public Relations and HR specialists. Normally, their position in the occupational hierarchy gives them significant resilience in times of economic stress.

This time, however, they are right to feel vulnerable that they are facing the uncertain future. It is a feature of this group they are normally highly geared with mortgage debt and loan finance for cars and luxuries like expensive holidays. They are critically important to the economy for their propensity to spend from this assumed position of security. Lose this, and the economy has a serious demand side shortfall that will impact across the board. The Chancellor of the Exchequer has a difficult decision to make about the post-lockdown transition in respect of this set and it is no surprise that late in June the ‘economy’ began to overtake the public health in government messaging – not without opposition from the scientific community⁸⁵. Restoring the ‘relatively normal’ on 4th July was a gamble because the worries about the economy in part overrode the precautionary principle about the infection risks, particularly when the UK ability to ‘track and trace’ has been so poor, and remains without a viable working smartphone App⁸⁶.

Loss of jobs by those normally at the very bottom of the labour market will have much less impact on demand side shortfalls in the level of consumer income. However, the people involved have been much less able to build up financial resilience and may quickly descend into poverty. Younger workers among them, especially those leaving education and entering the labour market, have been most likely to lose their jobs in this crisis. For the young starting out there will be a high price to pay - thrusting many of them into a situation where many need (if they can) to return to the family home. After lockdown, these young starters will be seeking to find work against a rapid rise in general unemployment. The lessons of the 1980s about how to absorb the young into work or additional skills and learning will need to be re-examined to see how to deal with the problem.

Research carried out by Kings College and Ipsos Mori (April 9) noted that, while the policy of lockdown was broadly accepted, there were clear anxiety impacts:

“Half of those surveyed (49%) said they had felt more anxious and depressed than normal. Over a third (38%) said they were having trouble sleeping and more than a fifth of people (22%) said they were already facing significant money problems or were almost certain to do so in the near future.

⁸³

<https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputintheuconomy/april2020>

⁸⁴ <https://www.theguardian.com/business/2020/jun/30/uk-economy-fall-covid-19-gdp-figures-coronavirus-pandemic>

⁸⁵ <https://news.sky.com/story/coronavirus-scientific-advisers-distance-themselves-from-pms-lockdown-easing-12013442>

⁸⁶ <https://www.wired.co.uk/article/nhs-tracing-app-scrapped-apple-google-uk>

*Among workers, 16% said they had either already lost their job or were very likely to do so in the near future*⁸⁷.

It is absolutely clear that a very substantial share of the working population is more vulnerable than ever before to shocks of any kind. More than this; since average wages have been flat in real terms since 2008 there has been little opportunity for most people to build up any substantial form of financial resilience. Sounding the alarm as job losses mount⁸⁸, the Resolution Foundation called on the government to continue subsidising the wages of workers in the sectors of the economy hardest hit by the COVID-19 crisis until at least the end of 2021⁸⁹.

3.3 Impacts on precarious jobs in the platform and gig economy

In an earlier paper we pointed out that around 25 to 30% of employees in employment were to be found in low-paid, non-standard, and often precarious jobs. We have just shown that these are likely to be experiencing the most damaging short-term impact of the lockdown measures. Many of these workers are attached to the so-called 'platform economy' - a global marketplace for labour articulated by the Internet to put workers across the world in a position to perform online service tasks of a relatively simple nature, or (for example with Uber) to be reliant on a platform to secure work, but also being self-employed and without the usual protections of employment contracts.

The platform economy was just one part of a wholly new re-shaping feature for employment before the pandemic – with the rise of what has variously been called the *gig economy*, *the sharing economy*, *digital work*, *on-demand work*, and *platform work*⁹⁰. Difficult concisely to define, it is characterised by the prevalence of short-term contracts or freelance work, as opposed to permanent jobs, usually where relations between workers and employers are intermittent and where most work lies outside the stability and protection of a clear contract. With these new flexibilities, the labour market is much more sensitive/responsive – contingent to - changes in the overall economy.

Part of the rationale for this form of labour is that downswings see a faster response time - with labour much more easily laid-off and sub-contracts adjusted to the new circumstances. Upswings can also be followed more flexibly - but probably at a rather slower rate. For workers in this marketplace a sense of how quickly their fortunes could be dramatically altered has become normal since they find themselves invited to *shift their contract status* with reference to competition coming from other parts of the world – often by becoming temporary, accepting zero hours, or going into self –employment. By this means, employment is rendered more *precarious* for vastly increased numbers of people. A new class term – the *precarariat*⁹¹ – living in poverty while still being in employment, has been adopted to reflect this⁹².

⁸⁷ <https://www.kcl.ac.uk/news/life-under-lockdown-coronavirus-in-the-uk>

⁸⁸ <https://www.theguardian.com/business/job-losses>

⁸⁹ <https://www.theguardian.com/business/2020/jun/29/uk-needs-biggest-ever-peacetime-job-creation-plan-to-stop-mass-unemployment>

⁹⁰ *At its core, the gig economy is based on application driven platforms that dole out work in parcels – driving, delivering, cleaning are the most popular – where work is sourced and delivered over the internet/cloud. It is modern form of piece work – paid by piece delivered/order fulfilled. It can also apply more widely to any work contracted over the internet and carried out remotely*

⁹¹ <https://www.weforum.org/agenda/2016/11/precarariat-global-class-rise-of-populism/>

⁹² *Forbes in its Global Analysis (2015) in highlighting the rise of what it called the “temporary workers” phenomenon made the following arresting statement: “Mass hiring of temporary workers is not just a retail thing. It’s happening everywhere – all classes of work from the executive suite to field labourers in every industry across the globe”. In a*

As we entered the COVID-19 crisis, a large share of those in work were, then, already in a precarious situation and the future for them lacked any hope of sustainability or financial resilience. Many workers were dependent on a low wage just to pay their bills, put food on the table and get by. Most had no employer-based back-up system to support them when the pandemic arrived. With COVID-19, as we have seen, this was the set that had to continue to go to work regardless of the risk to them, to their families and to their friends and neighbours. They did not have the luxury of staying at home or of avoiding public transport. It cannot, then, have been a surprise that this is the segment of the population that was earliest and hardest hit by the virus and that is figuring in the new secondary outbreaks.

As we turn to look towards the future, we need to ask ourselves as a society whether – regardless of whether or not market approaches demand its existence – we are prepared to take the responsibility for the costs of the precarious labour market not just to the individuals involved but to society at large. We entered the pandemic with a rate of inequality among the highest in the advanced nations. COVID-19 has both revealed the extent of this and the direct and collateral costs of its existence.

Having discovered that our neighbour's health is important to our own in ways we could not have imagined, this is surely a time to look closely at whether or not the continued, unregulated growth of a fast-growing segment of the workforce dependent on precarious work is acceptable. If, on recovery, jobs are to grow again but a substantial share of them are to be precarious in the ways just described then we should take into account the social and political costs.

3.4 Shifting skills needs

Conditions for middle income workers used to stable and sustainable jobs had been undergoing change for some time before the pandemic hit. Technological innovations were already having a significant impact. The process known as “hollowing out” was seeing many of the more established clerical, secretarial and administrative jobs in both the private and public sector giving way to automated office solutions. Futures forecasters were already predicting further job replacement – particularly in the services, both private and public.

During 2019, however, there were signs from among many major employers that they were suffering skills shortages⁹³. Gaps being identified were not in these more routine activities that the new technologies were continuing to affect, but for what they described as “soft” skills⁹⁴. Their issue appeared to be that they could not recruit the intelligent; adaptable and socially competent people they were finding themselves short of. Despite the more gloomy forecasts of job losses in some of the core sectors of the economy, unemployment rates were generally down and there was no longer a pool of people they could filter to find staff for some key areas of shortage.

study of the US Workforce 2020 the following are estimates of the use of temporary workers by different sectors showing the penetration of this form of working. In all, 82% of Retail employers used temporary workers. The equivalent for Financial Services was 81%; Healthcare 81% and Public Service Agencies 86%. It is suggested that the total share of self-employed workers in the US economy may rise to as much as 40 percent by 2020. Cited in

<https://www.peter->

[loyd.co.uk/app/download/5810221400/Work+and+Employment+in+the+Information+Economy+Deep+Transformation+with+Polarising+Spatial+Outcomes.pdf](https://www.peter-loyd.co.uk/app/download/5810221400/Work+and+Employment+in+the+Information+Economy+Deep+Transformation+with+Polarising+Spatial+Outcomes.pdf)

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<https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/quarterlyeconomiccommentary/apriltojune2019>

⁹⁴ https://www.edge.co.uk/sites/default/files/documents/skills_shortage_bulletin_5_final_-_web.pdf

The advent of the pandemic has changed all that. Low unemployment rates are a thing of the past and the demand side for labour has been transformed. Businesses are looking to shed labour rather than recruit and uncertainty surrounds the whole situation. The question of the moment is not what skills sets do we need to add; it is more one of ‘as we shed staff in numbers, which staff and skills shall we keep?’ It is too early to tell but a reasonable prospect is that the ‘hollowing out’ process will continue and it will be middle and upper management who might be called upon to leave the organisation.

Past experience suggests that when a shake-out of workers in this set takes place (as with de-industrialisation episodes in the past) workers separated from higher status jobs tend, in looking for work, to “trade down” the labour market in jobs of a lesser standing. In this ‘bump down’ process they may find themselves replacing or shutting out workers in lower skilled or disadvantaged groups. It may be that the unemployment outcomes that result do not appear for the set made redundant but in lower status workers – adding to the pool of the already disadvantaged.

One area where pre-virus employment trends had already seen a dramatic shedding of labour in the UK was the public service sector. A decade of politically motivated austerity resulted in swingeing annual cuts in the Local Authorities and Public Health. Tragically, many areas of the NHS saw a hollowing out of a cohort of what in regular times would have been regarded as stable; secure and sustainable jobs⁹⁵. The drive for privatisation had seen a transfer of what would have been job openings in the public sector to a cluster of private-for-profit enterprises. Many expanded by means of non-standard, low wage employment contracts.

Restoring the public finances after the Financial Crash had a far greater impact on the middle segment of the UK labour market than those slower moving changes coming from the new technologies. Here, as people are encouraged to “clap for the NHS and key workers⁹⁶” public pressures to change the conditions of employees may have acquired much greater political weight and we may hope for some re-evaluation in terms of wages and conditions.

3.5 Summary: A bleak scenario of job loss

The prospect before the UK, most analysts suggest for two years at the least, is for much less available work and significantly more unemployment with suggestions of up to 5 million. Many of those affected will be young and well-educated – leaving schools and colleges with little prospect of a start in the workforce as well as those on the first rungs of the career ladder being suddenly separated from their jobs. There are bound, however, to be large numbers with lower educational achievement on leaving school who will struggle to get a start.

An entire cohort of 18-24 year olds is going to have their prospects seriously blighted. They will be joining hundreds of thousands in the more mature age groups – singles, family formers, mature and experienced employees and those close to retirement. Many of these will have had no prior experience of losing their job and will be thrust into job search and Universal Credit for the first time. The workers for whom severance can come quickly and with no cost to the employer will be those already in the precarious labour market where contract conditions carry no guarantees beyond the work already in hand. As was pointed out earlier, one of the attractive features of the non-standard, zero-hours contract to employers is that hiring and firing

⁹⁵ <https://medium.com/bridges-to-the-future/covid-19-pandemic-has-exposed-the-structural-deficit-in-the-nhs-5b19ad0764eb>

⁹⁶ Quickly put in place, and just as quickly forgotten. <https://www.bbc.co.uk/news/uk-52959591>

can be matched flexibly and virtually instantaneously to demand shifts. The post-virus recession will see the earliest and sharpest rises in this subset.

With the levels of demand in the economy falling so sharply and deeply in response to lockdown, it is also reasonable to expect severe (and mostly unheard of) unemployment among early to mid-career professionals in things like accountancy, finance, law, management consultancy, events management, media (theatre and performance arts) and so on. There are already harrowing tales, so far mostly from the US – about queues for foodbanks that see applicants waiting in line in their expensive SUVs⁹⁷. A number of these losses, such as culture⁹⁸ and restaurants, arise directly from the pandemic itself where audiences and crowds are proscribed any relaxation⁹⁹ is strictly dependent on social distance¹⁰⁰.

The sharp contraction of the air travel industry, where high seat occupancy is a key part of the business model, falls into this set with pressures on both airside and landside jobs¹⁰¹ of all kinds now coming through. Similarly, jobs in the public transport sector from tram systems, through train travel to buses are having to speculate on how much custom will return even when the current virus episode is over¹⁰². Many of these jobs will be expected to come back at this stage – but the concern is that in recession not all will and even then people may have decided to shift their views on the necessity of travel when other lifestyle choices and modes of interaction have been seen to work well in practice.

There is considerable debate on the shape of the recovery period and the duration of the worst effects. We hear of V-shaped¹⁰³ and U-shaped (or W or L or ...¹⁰⁴). One concern is that L-shaped may be prolonged on the way to U. It is unheard of for all the elements of the global and national economy to be simultaneously shut down – not as some kind of economic or financial system failure but as a necessary act of policy. The hope is that pick up will be swift, but the fear remains that the combined loss of demand and supply nationally and globally will take some time to become re-coupled and start to create jobs.

Since manufacturing generally was not in good shape before the virus on a global basis (China's spectacular GDP growth rates having already fallen back from previous spectacular highs), the recession that many were already predicting on the non-pandemic economy may have been "midwived" into being by COVID-19. Consolidation was already afoot in industries that have been the earliest to declare redundancies in lockdown - vehicles, aircraft, aero-engines for example. The question is, facing this scenario, what short-term and long-term policies are needed to cope with it? Cope we must, since the portents of not doing do so are dire.

⁹⁷ <https://finance.yahoo.com/news/pre-covid-global-foodbanking-network-212726365.html>

⁹⁸ <https://www.ft.com/content/aa93b17b-55ea-4273-aff0-80b6d92c2c8d> and <https://www.theguardian.com/world/2020/apr/26/uk-could-become-cultural-wasteland-due-to-coronavirus-say-artists>

⁹⁹ And, relaxation involves not just relaxing the rules of distance, but also relaxing peoples' fears about going to a restaurant again "A study conducted by food hygiene rating website SOTD (Scores on The Doors) has highlighted that 30% of consumers are reportedly nervous to set foot back into restaurants." <https://realbusiness.co.uk/covid-19-restaurants/>

¹⁰⁰ And see our previous paper for a discussion over the mess concerning social distancing.

¹⁰¹ Swissport announce 4,500 job losses <https://www.bloomberg.com/news/articles/2020-06-24/unions-call-for-aid-to-avoid-4-175-swissport-job-cuts-in-u-k>

¹⁰² <https://www.raconteur.net/business-innovation/uk-transport-patterns>

¹⁰³ <https://www.independent.co.uk/news/business/news/coronavirus-recovery-v-shape-recession-uk-gdp-bank-england-andy-haldane-a9594741.html>

¹⁰⁴ <https://www.marketwatch.com/story/v-shaped-u-shaped-or-l-shaped-why-the-look-of-the-economys-recovery-doesnt-really-matter-2020-06-16> and <https://uk.reuters.com/video/watch/idRCV008EU2>

4.0 Making an Opportunity out of a Crisis

4.1 Change will come

Some substantial changes will be needed for the future. Two books, written before the pandemic – *Capital and Ideology*¹⁰⁵ and *Angrynomics*¹⁰⁶ – made it clear that all was not well in the ‘old normal’. Piketty was warning that inequality was widespread; pernicious and dangerous, while Lonergan and Blyth in *Angrynomics* detailed a combination of adverse economic developments with manifest unfairness that has made many people angry. No wonder, once people had time to reflect, there seemed little support for the idea of going back. With five months of the pandemic behind us, the argument that, as *Angrynomics* puts it using computer systems terminology, Capitalism 3.0 was not working for everyone (except the super-rich) seems easier to take on board.

When the virus landed there had not yet been a full recovery from the financial crash of 2008. Austerity was still in place, and there were dark warnings of a future recession. When Trump became President of the US and Johnson became Prime Minister of the UK, the resentment of those who felt “left behind¹⁰⁷” was a key mobilising factor among those who voted for them. The old working classes who had earlier seen their worlds upended by deindustrialisation` had come to believe that the parties that traditionally represented them had moved on¹⁰⁸. They were now motivated by the interests of highly educated metropolitan and cosmopolitan voters and the ethnic and cultural minorities. What was a problem for some became more of a problem for all as good governance became hard to find once the pandemic arrived on both sides of the Atlantic Ocean.

Some trends coming through were already making people anxious before COVID-19. There was a concern that the new digital technologies would put increasing numbers of jobs at risk and destroy skills that had taken years to build, although Tim Harford advised` caution about whether mass job destruction will take place: “*will the machines take all the jobs in the coming decade? No, and that remains an unhelpful way to phrase the question. Machines encroach on tasks, and we reorganise our jobs in response, becoming more productive as a result.*”¹⁰⁹ It may in the end be that COVID-19 is a greater job destroyer than digital technologies.

Nevertheless, as we have pointed out throughout the paper, the pandemic is likely to have seen an acceleration of some of the more challenging features of the “old” normal. In particular, the new AI, robotics and internet technologies that were altering high streets and certain workplaces and the communities depending on them may well have seen their penetration accelerated. A balanced view, such as that of Tim Harford above, would suggest that the new technologies in general will in the longer run create more jobs than that they destroy.

However, in the short term, their disruptive effects might well give rise to a greater polarisation of society. The prospects are that – without some basic changes taking place – this destabilising process will increase will serious social and political ramifications. In reacting to these short-run disruptions the opportunity exists – to lay down some critical new features for the long run. Cope with the immediate issue we must, but it is

¹⁰⁵ <http://piketty.pse.ens.fr/en/ideology>

¹⁰⁶ <http://cup.columbia.edu/book/angrynomics/9781788212793>

¹⁰⁷ <https://www.bbc.co.uk/news/uk-politics-52982440>

¹⁰⁸ <https://www.ft.com/content/36abf9a6-b838-4ca2-ba35-2836bd0b62e2>

¹⁰⁹ <https://www.ft.com/content/ad0f30ac-2b1d-11ea-a126-99756bd8f45e>

vital to think and plan strategically to break out of the path dependence¹¹⁰ that was leading us into trouble in the first place.

4.2 A crisis of work and jobs

In this paper, we have been largely focused on work. Although there is a much wider agenda for futures, we shall make our contribution here. We set out in Section One what just a single day of news told us about the scale of the crisis unfolding before us. We logged 12,000 job losses reported in one afternoon. This will be probably be the first dramatic step in a process that, as furlough comes to an end, will mount up dramatically. What is abundantly clear is that the numbers of jobs available in the post pandemic economy will be drastically reduced, and even the most optimistic forecasts suggest that it will be up to two years before recovery. It would not be surprising to see that – unless we move to alter it – too many of the newly available jobs would be for low wage work and non-standard contracts.

Many of those hoping to return to their jobs will find that they have been closed out. Throughout, it seems clear that these losses will be selective by occupation, by social group and by place. Those people and places that came into the pandemic with little resilience will probably experience the most serious outfall. Young people in particular will be badly affected¹¹¹. Their education and training pathways have been brutally disrupted and the jobs they had hoped to enter for the first time will have been substantially reduced.

What is needed in the short term is a set of macroeconomic measures to boost the demand side and help the economy recover. There will surely also be some quickly assembled programs (redolent of those applied in the early 1980s) to absorb the newly unemployed (particularly the young) into ‘meaningful’ activity¹¹². But planning for the longer run, it will be important to take a strategic view that moves from firefighting to be framed around a re-envisioning of what we mean by ‘work’, its characteristics, and its purpose. While the state moves to activate those forced out of work, it is vital to take a *significantly different view of skills*. Simply to attach the young as trainees to existing businesses is clearly one way to go but in so doing we need a wider strategy for the development of flexible, adaptable, and transferable skills that existing companies may not be in a position to offer.

As we move forward through the Fourth Industrial Revolution the skills in short supply will be both technical and specific but - perhaps more importantly - what (as a classic misnomer) are called ‘soft skills’¹¹³. What we must take early steps to avoid is any further movement toward contingent and precarious work that makes people and place vulnerable and that as we have seen, can thrust high social cost on society at large. This is a lesson that the experience of COVID-19 has surely taught us – our neighbour’s physical; mental and financial health is something that has to concern us all¹¹⁴.

¹¹⁰ “Path dependence explains how the set of decisions people face for any given circumstance is limited by the decisions they have made in the past or by the events that they experienced, even though past circumstances may no longer be relevant”; Wikipedia.

¹¹¹ <https://www.ifs.org.uk/publications/14914>

¹¹² This paper was completed on the evening of July 7, prior to the Chancellor of the Exchequer making a statement to the House of Commons on July 8.

¹¹³ https://www.oecd.org/education/2030-project/teaching-and-learning/learning/skills/Skills_for_2030_concept_note.pdf

¹¹⁴ <https://www.ft.com/content/a22d4215-0619-4ad2-9054-3a0765f64620>

4.3 Building new skills for the future out of the crisis

A strong approach to securing employment under the Fourth Industrial Revolution is to build new skills into the population at large and to make provision for people to transition to new work roles¹¹⁵. But education (apart from schools opening questions) has been hardly visible on the government agenda for recovery. What needs to be thought through for the long term is; what sort of skills, in whose interests, and how can those who acquire them have some prospect for progression and decent wages?. This needs to be regarded as an investment proposition with at least as much weight as Green Energy. We need to take note, while doing this, that work in the contingent and precarious labour market offers little scope for progression and learning. This is helpful neither to the employees involved nor for the wellbeing of the nation.

Allowing the open, globalised marketplace to determine how labour is used and rewarded may fit with liberal economic theory but it also allows the externalities that derive from it to be transferred to the public domain – especially in times like the present. The conditions of the “key workers” is not so much a matter of skills but of terms and conditions and wages. Privatisations – particularly in the care sector – need closer scrutiny where using this method to achieve public sector cost savings can turn out, in times like the present, to be a dangerous false economy where public service workers are transferred to the low paid, contingent labour market.

Looking forward, the debate about skills in general needs to move from the specific (such as the engineers’ domain), to the general, to those so-called ‘soft skills’. In doing this, education should move to be recognised as the “*gold standard*” and enhance creativity in young people¹¹⁶. In the technological sphere, hybrid skills are going to be at a premium. Bringing together AI, Machine Learning and Human Intelligence is the way to go for a world where even Microsoft suggests that; “*65 percent of students today will be doing jobs that currently do not exist*”. We must do more to use the capabilities of the new technologies to teach and learn differently. This is something that the experience of COVID-19 has presented us with as a positive. The virus has provoked a move to transfer learning of all kinds into online and blended forms.

In the same way, *communication skills* – vital in a rapidly changing information and communication world – are being comprehensively re-learned in association with the new technologies¹¹⁷. Once again, the pandemic has taken us into new communications methodologies. People across the board have had to step up to use video conferencing, social media, blog, vlog and so on – not just the young. The world of publication has shifted sharply – what was the ‘grey’ literature has become the online source for following a fast-moving set of events forcing the slower publishing methodologies to respond (faster peer review turnaround times). The internet connectivity of the globe has had its upside in enabling us quickly to learn the lessons from others. The impact of the virus has, then, like any disaster, led to innovative opportunities

¹¹⁵ The World Economic Forum Paper “*Towards a Reskilling Revolution: A Future of Jobs for All*” suggests breaking down jobs into a series of relevant, measurable, component parts in order to then systematically compare them and identify any gaps in knowledge, skills, and experience. They use this to look at how “transitioning out of a particular job will be able to bring those capacities into any new roles. The idea has a complex matching methodology to support it identifies 958 types of jobs arrayed across a “job fit” matrix to produce “job zones” as clusters of cognate, transferable skills as a way of “maximizing productive re-deployment opportunities for workers”.

http://www3.weforum.org/docs/WEF_FOW_Reskilling_Revolution.pdf

¹¹⁶ Listen to Andreas Schleicher, the head of Education at OECD, talking about this issue

https://www.youtube.com/watch?v=VRkf6pDEyA4&index=1&list=PL1zMD_kTXdxNKUnVq3Dk4ZXgUuZHWItP

¹¹⁷ Gaming has emerged as a powerful means to support skill building for wider behavioural skills. People need to be put in a *convivial space to come together and learn together* to make a difference. Teachers need to be provided with the tools to add gaming and group communication skills to the curriculum. (Minecraft is an early exemplar of what can be achieved and enthusiastically adopted by young people as a game and learning tool).

– after all, there is little to be gained by returning to a ‘former normal’ if it means inviting another pandemic in through open doors by failing to learn.

The skills people should have - or should be able realistically to aspire to have - need to be those that have some meaning beyond the hope of a pay cheque in a local context where jobs are poor quality and wages are low. We now know to our cost where that can lead. For future jobs under the digital transformation, an educated; flexible and adaptable workforce ready to step up is essential. Now, in the challenging short term as we have to spend public funds to activate a pool of the unemployed after the pandemic, is the time to raise the game. Activate *with open learning* has to be the leitmotif. This is something the state education and training policy schemes have a golden opportunity to set in place.

An essential feature of moving in this direction is that it must be put in place *locally*. One of the clear failures of governance in lockdown has been an obsession with central remedies applied centrally and with recourse to private companies to deliver geographically dispersed outcomes. If the failed “track and trace” experiment has taught us anything it was that an understanding of the *local context is critical for effectiveness*. The same should be true for the policies that seek to cope with sharply rising (particularly youth) unemployment.

The Active Labour Market Policies (ALMP) of the European Union during earlier phases of mass unemployment were successful because they were conceived centrally but articulated *locally*. As part of this, the needs of local employers should be met but not where there is a danger of simply feeding the “low level skills equilibrium”¹¹⁸ that traps some places into being a dominantly low skill environment. There needs to be a direct programme alongside the business-led agenda to raise skills; confidence and aspirations in the workforce¹¹⁹ regardless of the shape of the local economy.

The gloomy scenarios for the future of jobs; work and employment that post-pandemic commentators might offer us should not stand in the way of policy interventions to invest in high level skills. People generally should be given the chance to defeat the doom-mongers’ views of their prospects. This demands more than employment-centred efforts – seeking to expand the wider capabilities and capacities of all the people to make something of their lives (regardless of the job or caring role they currently occupy). The more challenging the future - not just of work but of good living - the more important it is that from early years to adulthood, people should be encouraged and helped to acquire and continue to acquire more education, skills and competencies. *Lifelong learning* is essential to this - not just as an empty slogan - but as a practical policy mission. The McKinsey Report gives this its strong emphasis as a policy recommendation:

“The old model of front-loading education early in life needs to give way to lifelong learning. Training and education can no longer end when workers are in their twenties and carry them through the decades”¹²⁰

¹¹⁸ <http://www.oecd.org/cfe/leed/Skills%20for%20Competitiveness%20UK%20report.pdf>

¹¹⁹ The standard England and Wales approach to policy intervention for employment and skills leaves only limited scope for the local perspective. Policy (as well as data) is generally designed to work from top down: National policy preferences (national curriculum, STEM, PISA-following, supply side skills measures, apprenticeships); Sector focus (sector skills councils, sector employment forecasting) and cascaded funds and prescribed measures downwards (college and school funding streams, LEP skills priorities etc). The local input is prescribed as being primarily business-led - attached to skills shortages and future needs as the existing cohort of private sector enterprises sees it. Intervention will need to be much more refined and genuinely bottom up-informed if we are to avoid places and their people suffering alienation and the political consequences that arise from it.

¹²⁰ <https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-in-america-people-and-places-today-and-tomorrow#>

The workers of the post-pandemic period will need continuous support to navigate a fast-changing future labour market. Going forward, we clearly need a new kind of supportive infrastructure *with a significant degree of local sensitivity* that enables workers generally to have some confidence in their future economic circumstances.

Taking this wider view of skill and ‘work readiness’ must also impact on attitudes for access to welfare benefits¹²¹. Training those out of work to access the sort of jobs and work that the least favoured places have at present and will most likely have in the post virus future (contingent, dependent, low wage, low skill, low sustainability) makes less sense than ever (and punishing them for failure is scandalous)¹²². A policy for lifelong learning and human centred skills development is required that is an *end in itself*. In work, out of work, aspiring to work, finished with work – all should be participants in the drive for personal and social betterment in the search for the ‘Good Society’. There is much current talk of Universal Basic Income¹²³ or of the Minimum Income Guarantee¹²⁴ – either or both should be pursued *in the context of a strongly linked lifelong learning framework*.

Thinking out of the box is essential. Imagine, for example, that “*human-centred*”, “*environmentally sustainable*” and “*socially empathic*” were raised to the status of key design principles for education and skills training. Imagine that they were given the same order of importance in driving the system as being “*business-led*” has been since the Thatcher-Reagan era. We would be looking at work and employment from a very different philosophical starting point. The evidence of this moment is that things are increasingly being turned upside down by forces about which we seem to have only partial understanding – let alone have control over. Why not try a little ‘turning upside down’ on behalf of society at large – beginning from principles like human dignity, freedom, democracy, equality, the rule of law and respect for equity citizen rights¹²⁵? Why not consider the post pandemic digital transformation as a golden opportunity¹²⁶ to design a *human-centred* future as well as an engine for personal and corporate wealth creation? Changing the context for the debate would be a vital first step.

¹²¹ <https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2019/08/economic-safety-net>

¹²² Responses to what has just been said about the risks to democracy and society that come from having large portions of society suffering alienation and exclusion and being cut off from the world of work, are being framed in some quarters. The idea of Universal Basic Income (UBI) is being increasingly widely promoted – major experiments in Norway and Finland and being piloted in Scotland). This is a form of unconditional income offered to every citizen as a component of social security as part of a welfare regime. Significantly for us here, payment does not require the recipient to work or look for work and is independent of any other income.

¹²³ <https://www.dailymail.co.uk/news/article-8128807/EVERY-Briton-paid-universal-basic-salary-regardless-means-coronavirus-cash-crisis.html>

¹²⁴ <https://neweconomics.org/uploads/files/MIG-new.pdf>

¹²⁵ Amartya Sen is clear about this “*A concern with equity in crisis management would lessen suffering in many countries now and offer new ideas to inspire us to build a less unequal world in the future. Since we are less than halfway into the crisis, dare we hope this can still happen?*” <https://www.ft.com/content/5b41ffc2-7e5e-11ea-b0fb-13524ae1056b>

¹²⁶ For example <https://www.ft.com/content/f35db8c6-a02f-11ea-b65d-489c67b0d85d>