CHAPTER 4

Public Service Media for Critical Times: Connectivity, Climate, and Corona

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4.1 Envisioning Real Utopias

The institutions and animating ideals of public service broadcasting have been under escalating pressure since the 1980s as neoliberal economics and authoritarian populist politics have migrated from the margins to the centre of debate and decision-making. Advocates of marketisation have argued long and hard that comprehensive public service provision is no longer relevant or needed in a media marketplace offering unlimited digital choice, whereas populist pundits complain incessantly of liberal and left bias and lack of national pride and patriotism. These assaults have fuelled a deepening sense of anxiety among defenders of public service. The open letter sent to Britain's Secretary of State for Digital, Culture, Media and Sport from supporters of the campaigning group, British Broadcasting Challenge, reaffirms the central fault line.

> […] the very principles of public service that have served us so
> well are under severe threat […] We believe that this is the time
> to stop short-sighted political and financial attacks; to provide a
> vision for the future that enables our PSB system to grow as
> a trusted, independent and worthy network of the UK, its citizens
> and the world (British Broadcasting Challenge 2021).

The sustained political and economic assault on public broadcasting from the Right has coincided with the emergence of the Internet as a pervasive presence in everyday life. The increasing concentration of control over digital connectivity exercised by a handful of mega corporations has sharpened debate on how best to construct a robust alternative, building on the base provided by public service broadcasting and using the potential offered by digital platforms to create Public Service Media. Discussions around this project have been underway for some time but under current conditions they must now confront three intersecting crises that are reshaping social and cultural life at a fundamental level; the populist destruction of deliberative democracy, the endemic threat of recurring coronavirus pandemics and the intensifying climate and environmental crises.

Addressing these challenges requires us to reimagine the pivotal role of public service in supporting the cultural resources, social relations and personal capacities that sustain a social order based on equity, justice, recognition, respect and care. Our task, to borrow the late Erik Olin Wright's resonant phrase, is to envision real utopias (Wright 2010). For many advocates of public service this will appear as an impossibly unrealistic proposal in the current political climate.

4.2. Waving Goodbye?

Faced with the continuous economic and political battering from the Right supporters of public service broadcasting in Britain are increasingly coming to share the pessimism voiced by Russell Davies in a recent interview when he admitted: "I'm sitting back thinking, I'll be 60 soon. I had the best of it, well done, bye bye" (Russell Davies quoted in Wolfe-Robinson 2021).

Davies speaks from experience having produced his best-known work for Britain's two publicly owned television services, BBC and Channel Four. One of the country's most popular and critically acclaimed television dramatists his career has coincided with the period of increasing pressure. He joined the BBC in 1985 to work for the innovative children's channel, CBBC, returning in 2005 to oversee a successful revival of the Corporation's long running time travel series *Dr Who*. In between he moved to Granada, the ITV franchise holder for the North West of England, and began mining his personal involvement in Manchester's gay community. *Queer as Folk*, his 1999 series for Channel Four was ground breaking in its celebratory portrait of youthful gay hedonism, followed over two decades later, in 2021, by *It's a Sin*, a delayed reckoning with the ravages of AIDS, again for Channel Four.

Evidence in support of his claim that he has "had the best of it" and that we may now finally be waving goodbye to comprehensive and challenging public provision is not difficult to find. Proposals to privatise Channel Four are once again under serious consideration. The BBC is caught in an intensified pincer movement, required to meet a number of additional costs from steadily shrinking funds. "By 2019, the real (inflation-adjusted) public funding of the [Corporation's] UK services had already been cut by 30% since 2010" (Barwise and York 2020, xv) while the licence fee was required to cover the cost of activities previously funded by government departments. In 2014, the BBC assumed major responsibility for supporting the World Service, previously financed by the Foreign and Commonwealth Office, followed in 2020 by the requirement to fund the Welsh language Channel 4 (S4C). 2019 saw the launch of a £60 million contestable fund to support the production of programmes for children and young people aged 4 to 18 years. The money came from sums unallocated in the BBC's 2010 licence fee settlement. The majority of payments have gone to Britain's commercial terrestrial channels, who had responded to pressures on profits by withdrawing from making children's programmes. As the government report introducing the scheme notes. "The removal of children's programming quotas for commercial public service broadcasters and

restrictions on advertising around children's television, compounded by the often limited resale value of UK focused content, makes children's television difficult to monetise for broadcasters and potential investors" (DDCMS 2018, 7).

The fund represents a direct subsidy from the BBC to advertising financed operators (ITV, Channel 5 and Channel 4), which although routinely designated as "public services" in official reports had signally failed to meet their obligation to maintain comprehensive provision. A more broadly based plan for contestable funding was central to the 2016 Government report *A BBC for the Future* which announced: "It is the government's view that […] a small proportion of the licence fee may be available to organisations other than the BBC to help deliver quality and pluralistic public service content, using competitive forces" (DCMS 2016, 71).

This would involve a further raid on the BBC's resources by directly "top-slicing" the licence fee. Alongside cuts to funding, successive governments have intervened to restrict the BBCs plans to respond proactively to the rapidly changing broadcasting environment. In 2007, the Corporation announced plans for a pioneering Video on Demand venture, Project Kangaroo, in collaboration with ITV and Channel 4. The proposal was referred to the Competition Commission for an evaluation of its market impact. Announcing their decision, the Commission Chair, Peter Freeman, declared:

> After detailed and careful consideration, we have decided that this joint venture would be too much of a threat to competition in this developing market and has to be stopped […] we expect alternatives to be much more likely to develop in the light of our decision (Competition Commission 2009, 1–2).

"Alternatives" have indeed developed but the cancellation of Kangaroo, and with it the possibility of ensuring a strong, nationally based, public service presence in a major emerging market for programme distribution, left the field open to comprehensive capture by the leading US based players. Research conducted during the first COVID-19 national "lock down" in 2020 reveals a streaming

market now dominated by three operators, Netflix subscribed to by 43% of households, Amazon Prime with 35%, and Disney with 13% (Ofcom 2020b, 25). In 2019, the idea behind Kangaroo was revisited with the launch of Britbox, an on-demand service majority owned by ITV with the participation of BBC Studios. It was too little too late with only 5% of households surveyed subscribing, although it may be more successful in overseas markets which cannot access the UK catch up services led by BBC iPlayer and More4.

4.3. Postcards from the Pandemic

For much of 2020, everyday life came to be lived increasingly online. With travel restricted, entertainment venues shut and schools and many workplaces closed, households came to rely on digital networks to access cultural resources and maintain social connectivity. Alongside the explosive growth of commercial streaming services, the virtual meeting facilities offered by Zoom and the short video productions enabled by TikTok emerged as preferred means for conducting business and demonstrating creativity remotely. These much publicised platforms are all owned and operated offshore but the conditions that have supported their rapid rise have also reaffirmed the indispensable role of public service broadcasting in addressing market gaps and limitations. During the pandemic, public service broadcasting has provided information, education and drama that spoke to the values of equity, representation, solidarity and care where market-driven provision signally failed.

4.3.1. Information

Political scrutiny of public service broadcasting tends to focus concertedly and often exclusively on news. This is not surprising. News is the area of programming most centrally concerned with politicians' personalities, polices and performance, and with providing basic information resources to support participation in democratic processes. The principle of relative independence from

government and the obligation of journalists to hold power to account are under constant pressure from partisan political positions masquerading as the public interest. Intensified competition for audiences can push reporting over the line of legitimacy as it did with the use of forged bank statements to help secure an exclusive interview with Lady Diana Spencer for the BBC (see Tobill 2021). But as the early weeks of the COVID-19 pandemic confirmed, faced with conditions of national crisis and uncertainty, the BBC remains many people's first port of call for news and information. The major survey conducted by the British media regulator, Ofcom, in week 3 of the first mandatory "lockdown" revealed that BBC services were "the most used source by some margin." They were mentioned by 78% of respondents with 35% claiming BBC News as their most important source and a further 11% nominating BBC Online. In sharp contrast only 5% nominated social media. This figure rises to 10% among 18- to 24-year olds but is still less than half of the 22% in that age group who nominated BBC TV. The BBC was also the most trusted source among competing television channels with trust levels three times those of the major online platforms (Ofcom 2020a, 2,5).

The BBC's national and international news services are supplemented by its network of 39 local radio stations which have played a key role during the pandemic, not only as trusted sources of local information but as organising nodes of social action. The "Make a Difference" initiative, launched in March 2020 at the start of the first national lockdown, has, among other initiatives, co-ordinated contact between volunteers and people needing support and arranged for 46,000 digital devices, essential for remote learning, to be reconstituted and distributed to children in low-income households. In marked contrast, in the middle of the pandemic, Bauer, the leading operator of local commercial stations with a 38% market share (Media Reform Coalition 2021, 22), moved to close a number of its regional outlets and integrate them into a single national music channel, Greatest Hits Radio. A rump of local news bulletins and traffic reports remain but the sustained relations with local audiences and local issues have disappeared along with the teams of local presenters (Waterson 2020).

4.3.2. Education

With schools closed for long periods during 2020, teaching and learning was confined to the home with many parents facing the challenge of organising home schooling for their children for the first time. Throughout the pandemic, they could call on the educational resources provided by the BBC's Bitesize initiative offering engaging video, quizzes and practical activities tailored to the curriculum followed by children from four to eighteen. Material was made available both online and through daily broadcasts. This double mode of delivery was an essential support for the principles of equity and inclusion since, as successive lockdowns demonstrated with brutal clarity, a significant number of low income households had no access to the internet. Ofcom's Technology Tracker research found only 2% of households with children younger than 18 years headed by someone in a professional or managerial occupation with no desktop, laptop or tablet computer in the home. The figure for households headed by an unskilled or unemployed worker lacking these essentials was 10 times this, at 22% with 9% relying instead on a smartphone and paying more for data access (Digital Access for All 2020). I will return to this argument presently since it is central to the case for retaining broadcast programming as an essential building block for a digital commons.

The BBC's commitment to honouring the core public service principle of universal provision stands in marked contrast to the predatory behaviour of some commercial publishers who saw university campus and library closures and the move to online learning during the pandemic as an opportunity to reap excess profits. In January 2021 almost 300 academics and librarians released an open letter calling for a public inquiry into the "unaffordable, unsustainable and inaccessible" academic book market (see Fazackerley 2021). Take the case of *An Integrated Play Based Curriculum for Young Children*, ironically, exactly the potential source of ideas and advice that parents, with no teacher training, struggling to devise educational home schooling activities might benefit from. The regular print edition was priced at £36.99 but

Routledge were charging £410 for the e-book version and insisting that it could only be read by one person at a time. This is price gouging on an industrial scale.

4.3.3. Drama

On 25 May 2020, a black man, George Floyd, detained by police in Minnesota on suspicion of passing a counterfeit $20 banknote, died after the officer holding him on the ground, handcuffed and unresisting, knelt on his neck for 8 minutes and 15 seconds, failing to release him even after he had lost consciousness choking him to death. Two weeks later on 8th June, a crowd in the English port of Bristol tore down a statue of the slave trader, Edward Colson, and threw it into the harbour. Footage of both incidents circulated internationally dramatising the roots of present-day racism in the unresolved legacies of slavery and fuelling claims for recognition and respect crystallised in the demand that "Black Lives Matter".

   Comprehensive information and analysis are essential but a full understanding of events and the tangled relations between biographies and histories that animate them also requires the ability to enter other lives and see the world from their perspective. This is the essential role of fiction. In December 2020, Netflix released the historical drama series *Bridgerton*. Based on the long-standing speculation that Queen Charlotte may have had African ancestors, it presents an alternative vision of Regency England with black characters among the social elite. It trades on the instantly recognisable template of lush settings and intrigues in aristocratic England familiar from *Downton Abbey* and dramatisations of Jane Austen's novels investing it with a novel twist. It has been immensely successful becoming Netflix's most watched series to date and achieving record audiences in 76 countries, with three further series planned. It goes some way towards addressing the urgent issue of unequal representation on screen by extending opportunities for black actors but contributes little to a fuller understanding of Britain's imperial past and its continuing resonances.

The previous month the BBC had broadcast *Small Axe* Steve McQueen's sequence of five films chronicling the experiences of London's West Indian community from the 1960s through to the 1980s. They present vivid portraits of police harassment and official discrimination, struggles for recognition and respect, and community celebration and solidarity.

The screening of *Small Axe* coincided with McQueen's major exhibition at Tate Britain, *Year 3*, organised around specially shot year group photos of classes of 7- and 8-year olds in every primary school in London at a key turning point in their development as they engage with the wider world. The collection is a powerful portrait and affirmation of a multicultural, polyglot, city as it carries the past into the future. Hanging them in one of London's most prestigious cultural institutions affirms each individual's equal entitlement to be paid attention to and to participate fully in public culture. The same insistence on recognition and respect and a place in the historical record informs the films that make up *Small Axe*. As McQueen has noted, "it's brought things back, things which never got looked at before on that scale, to reflect back on you that I am, I exist. […] I am real" (quoted in Naidoo 2021, 21).

Small Axe was screened with the 2018 Windrush scandal, named after the *Empire Windrush*, the first ship bringing West Indian migrants to Britain after the War, still raw in collective memory. Despite being British citizens a number who had arrived as children, and had lived and worked in the country all their adult lives, lacked the necessary papers and under the government's "hostile environment" policy towards illegal immigrants were stripped of their legal rights and welfare entitlements. Some were deported (see Gentleman 2019). The BBC responded to the revelations with an investigative documentary series *The Unwanted* (2019) and a searing drama *Sitting in Limbo* (2020).

Interrogating the national condition in all its complexities and contradictions and detailing the forces that have shaped it is one of public service broadcasting's distinctive responsibilities. The logic informing commercial companies points in another direction,

prioritising productions that can achieve maximum international reach by combining a degree of novelty and surprise with the comforts of familiarity.

4.4. Citizenship in the Land of Knowledge

I recently came across the photo of my own year 3 class staring hopefully into the future. We were welfare state children, beneficiaries of a social contract of citizenship that presented enhanced opportunities for personal self-realisation as inextricably bound up with the quality of collective life and provision. The promise of full and equal participation in social and political life was underwritten by an extended array of material and cultural resources. The practical supports delivered by publicly funded health care, housing and transport; guaranteed holidays; and a revised benefits system were accompanied by a great arc of public cultural resources paid for collectively out of taxation and freely available at the point of use: education, public libraries, museums and galleries and public radio and television services. Growing up I was an avid reader of Charles Schulz's comic strip, *Peanuts*, printed in the *Daily Sketch* my parents' newspaper of choice. In one episode his young hero, Charlie Brown, proudly brandishes his newly issued library card declaring; "I have been given my citizenship in the land of knowledge". That phrase captures perfectly my own experience of access to publicly funded culture.

   BBC radio and television programmes were a constant presence throughout my childhood and teenage years. The entirely admirable drive to democratise specialist knowledge and expertise and debate on pressing issues relied, rather too often, on officially mandated opinion but it was cross-cut by critique and subversion. Kenneth Clark's unashamed celebration of the accepted cannon of western art in *Civilisation* (1969, BBC2) was undercut by John Berger's brilliant deconstruction of dominant modes of representation in *Ways of Seeing* (1972, BBC). Official claims of unprecedented opportunity and mobility were subverted by social realist dramatisations of poverty and dispossession. Dashed hopes

of betterment were dissected in the comedy of *Steptoe and Son* (1962–1965, BBC1). Satirists and comedians buried deference to authority with jokes and sketches propelled by disrespect bordering on contempt.

Public broadcasting introduced me to ideas, issues, viewpoints, experiences and aspects of creative expression and the human condition I would never have otherwise encountered, prompting me to want to discover more. My searches took me to my local library on a weekly basis and to London's free museums and galleries but also to the grassroots activity in my local area. There were accomplished photographers and artists, dedicated astronomers and naturalists, community choirs, skilled potters and quilt makers, tinkerers with machines and electronic equipment, and committed groups campaigning on social issues. All these activities were self-organised. Participation was voluntary and unpaid, combining collaborative support for developing personal skills and self-realisation with the production of resources and services circulated and shared within the community. They were practical enactments of citizenship's invitation to contribute to public life.

They did not fit entirely comfortably with institutionalised public broadcasting's historic mission to construct a "common culture" around symbols of national identity however (Murdock 2020a). These all too easily favoured officially mandated valuations in pursuit of an imagined community of national unity and exceptionalism. The result was a formation inclined towards the marginalisation of dissent, the suppression of difference and dismissal of the vernacular. Alternatively, as Raymond Wiliams argued, the search for solidarity can promote "culture in common", working with a conception of collective meaning making taking place across multiple spaces of representation and expression, open to all, but continually modified "under the pressure of experience, contact and discovery" (Williams 1989, 4).

In response to mounting pressure for greater popular access and representation in April 1973 the BBC's newly formed Community Programming Unit launched *Open Door* offering underrepresented groups from across the political spectrum, from black

teachers to anti-immigration campaigners, the opportunity to make their own programmes. In 1991, the Unit introduced *Video Diaries* taking advantage of the new easy-to-use portable video equipment to enable selected individual participants to tell their stories with minimal editorial interference. However, the intervention of arguably most relevance to the argument I wish to make here was the Domesday Project that ran between 1984 and 1985. Designed to celebrate the 900th anniversary of the Domesday Book, it invited mass participation in assembling a thick description of the nation. Published by BBC Enterprises in November 1986, the assembled material was stored on two discs, the map-based Community Disc showing "Britain as seen by the people who live there" and a topic-based national disc providing and provides an overview of Britain (The National Archives 2021). The combination of professional and amateur contributions marshalled 200,000 images alongside video clips from the BBC and ITV, and covered a huge range of contemporary events including the miners' strike and pit closures.

4.5. From Digital Spaces to the Digital Commons

The choice of the Philipps' laser disc as the storage format almost consigned the Domesday archive to oblivion when the disc was discontinued. Fortunately the archive was later retrieved and reconstituted. Recalling the project prompted me to think about possible ways of combining resources produced by professional programme makers with materials generated by grassroots participation to pursue Raymond Williams' conception of a culture in common animated by discovery and contact. My speculations coincided with a major conceptual revision to the critical political economy framework I had been working with up until then.

Political economy emerged as a field of inquiry in the late 18th century as part of the wider intellectual endeavour to conceptualise capitalism as a material and moral order and specify the role of the new forms of government developing within the emerging political formation of the nation state. Adam Smith's defence of the

Table 4.1: Three moral economies of the media.

Spheres	Capital	Government	Civil society
Goods	Commodities	Public goods	Gifts
Arenas	Markets	Polities	Networks
Payments	Prices	Taxes	Reciprocities
Relations	Personal possession	Shared access	Co-creation

primacy of markets, the *Wealth of Nations*, appeared in 1776 within months of the American Declaration of Independence. From that point on political economy centred around capital-state relations with the critical tradition pressing for public ownership of core resources, including communication systems, and for stringent regulatory controls to curb corporate exploitation and prioritise public over private interests. Faced with accelerating corporate concentration and the regulatory retreat from principled defence of the public interest, these arguments have remained indispensable. But I increasingly came to see the binary division they worked with excluding the multiple voluntary transactions that operated outside prices and payments and sustained the networks of care, co-operation and mutual aid central to much everyday activity. I added these gift economies as a necessary third term generating the tripartite schema of political economies shown in Table 4.1.

I presented them as moral economies (Murdock 2011) to underline the argument that all transactions entangle us in the lives of others and entail responsibilities for their welfare. Some we know as family members, friends, neighbours and colleagues, but most are strangers. As the COVID-19 pandemic and the climate emergency demonstrate, reconnecting our everyday activities to the lives of distant others is an essential first step towards a just and equitable response. I will unpack this argument a little more presently.

The ascendency of aggressive marketisation, propelled by neoliberal economic orthodoxy since the 1980s, has been a forcible reminder that the history of capitalism is a history of progressive enclosure, as more and more of the resources held as public goods or gifts are translated into profit-generating assets. Observing

this posed an obvious question. Was it possible to arrest the commercial enclosure of public communication by building a robust countervailing force that combined the moral economies of public goods and gifts?

The opportunity to develop the argument came in 2004 when I was invited to give the annual memorial lecture in Canada in honour of Graham Spry, who was instrumental in resisting colonisation by US commercial operators and championing public service. It was less than a decade since Tim Berners Lee had launched the World Wide Web as a public utility in April 1993. There were signs of the drive towards commercial enclosure but Facebook's opening to users beyond its original student base and Google's acquisition of YouTube were both 2 years away. Activity was expanding rapidly in the alternative economies of public goods and gifts, however. Public libraries, museums and galleries were digitalising their collections, liberating access from set times and fixed locations and making their holdings and expertise generally available. Self-organised collaborative ventures were proliferating. Wikipedia, compiled entirely from on voluntary contributions, had launched in 2001, and was rapidly heading towards becoming the world's most comprehensive encyclopaedia. I saw these developments offering public service broadcasting the chance to reassert its indispensability by becoming the central node in a network of non-commercial connectivity conceived as a digital commons (Murdock 2005).

Later commentary built on this idea to propose incorporating "a public service social networking platform – one freed from the commercial imperatives […] and a well-crafted public service search engine whose algorithms are driven by the goal of creating a more informed citizenry, rather than one more likely to click on advertising links or visit commercial sites" (Andrejevic 2013, 130).

My decision to include public goods in my conception of the digital commons met with objections from commentators who insisted that only forms of self-organised, collectively administered activity, independent of both markets and states, properly qualify as true commons. This is a misreading of history. The state has been integral to the constitution of the commons from the

outset. Disputes over access and use of the original agricultural commons in England were settled in the manorial courts. Grassroots activity and activism in the urban commons depended on hard won legal rights to public assembly and protest and was supported by public resources. Marx would not have been able to develop the devastating critique of capitalism that played such a central role in the working-class movement without the reader's ticket giving him access to the unparalleled public collection of books and papers in the newly constructed reading room in the British Museum (Murdock 2018).

Ellen Goodman and Anne Chen's expansive definition of public service is useful here. As they note:

> Sometimes public service media is produced by public broadcasters; sometimes by museums, libraries, and community groups; and sometimes by individual citizens. What [they] share is not membership in an organization but the principal mission of […] improving lives as lived in particular communities and shared polities. To be clear, what is distinctive about this mission is that it eschews the agendas of profit-making (Goodman and Chen 2011, 86).

4.6. Enterprising Proposals: From the Digital Commons to Digital Space

The project of reimagining public service broadcasting as the central node in a network of digital connectivity, linking public cultural institutions together and providing resources and spaces for vernacular creativity, was pursued within the BBC by Tony Ageh, one of the prime movers in developing the BBC's successful catch-up service, iPlayer, following his appointment as the Corporation's Controller of Archive Development. His proposal for a Digital Public Space, sketched out in a series of speeches, overlapped in crucial respects with the idea of a digital commons but with one crucial difference.

It shared the same ambition to position the BBC as the central node in a network offering access to the full range of digital resources held by the major public cultural institutions. As

he explained to an audience at Royal Holloway, University of London, in February 2015.

> In a nutshell, the 'Digital Public Space' is intended as a secure and universally accessible public sphere through which every person, regardless of age or income, ability or disability, can gain access to an ever growing library of permanently available media and data held on behalf of the public by our enduring institutions. Our museums and libraries; our public service broadcasters (all of them); our public archives; our government services. Every person in this country, whether adult or schoolchild, should be able to use the Digital Public Space […] for research or for amusement, for discovery or for debate, for creative endeavour or simply for the pleasure of watching, listening or reading (Ageh 2015).

This central aim of democratising access to professionally assembled and curated public goods was accompanied by the commitment, also central to the idea of a digital commons, to provide an extended platform for vernacular expression and creativity. His proposed Digital Space, would, he argued "permit, encourage and even require contributions from the whole of our society […] a place where the national Conversation thrives, where all contributions are welcomed, where every story, no matter who tells it, matters" (Ageh 2012).

As that expansive phrase "no matter who" suggests commercial providers were also welcome to contribute. As he explained: "I'm not excluding profit-making enterprises. […] I […] mean a Space that enables companies of every kind to build value, not just the few – contributing to the greater good of the UK as a whole" (Ageh 2012).

Extending hospitality to profit-generation marks a fundamental break with the idea of a digital commons which is defined precisely by its ambition to combine the moral economies of public goods and gifts to create a strong countervailing force to the progressive annexation of public culture by corporate interests, commodification and consumerism.

As mentioned at the outset, the continuing COVID-19 pandemic and the deepening climate and environmental crises have demonstrated that building the digital commons under current conditions now faces three major challenges: repairing deliberative democracy; countering hyper consumerism; and addressing the mounting social and environmental costs of the communications infrastructures and devices we currently rely on.

4.7. Digital Citizenship: Repairing Deliberative Democracy

Democratic politics depends on two fundamental rights: to a vote and to a voice. Elections to the legislative assemblies that devise and debate the laws governing collective life are spaced years apart. Deliberation on pressing issues is integrated into the flow of daily life across a range of locations. Some, from town meetings to meal time discussions take place face-to-face, others are organised on media platforms. Taken together, all the spaces where citizens assemble to talk about issues that affect them make up what Jurgen Habermas, in his landmark book *The Structural Transformation of the Public Sphere* (Habermas 1991) designates as the political public sphere. This is not an arena of debate where contenders with already set positions compete to win support. It is, in Habermas' influential conception, a space of deliberation that participants enter prepared to change their position when confronted with new evidence or superior argument. In deliberative fora rights to speak are matched by responsibilities to listen attentively, and in good faith, to rival claims. The aim is to arrive at provisional agreement on options for intervention and change.

Habermas' account of the public sphere's emergence in 18th century Britain presents London's coffee houses as pivotal nodes in an emerging network of deliberation. They offered access to the reportage and commentary in the collections of newspapers, pamphlets and journals of opinion they kept for customers combined with convivial spaces for discussion. They welcomed tradesmen

alongside landowners and members of the new bourgeoisie but excluded women and workers.

Discussions of Habermas' argument have tended to focus on the role of news and analysis in organising deliberation around political choices but he also emphasises the vital contribution of fiction and drama. Imaginative expression cultivates the essential ability to view the world from multiple perspectives. It also sparks contending interpretations and valuations that inevitably raise wider questions. As Habermas notes, "critical debate ignited by works of literature and art soon extended to include economic and political disputes" (Habermas 1991, 33).

COVID-19 and the accelerating climate crisis present fundamental choices that touch on every aspect of the ways we live now and might live in future. Addressing them, as citizens with shared responsibility for collective well-being, requires universal and equal entry to spaces hospitable to deliberation combined with access to comprehensive and accurate information on unfolding events; analysis of their underlying causes and likely consequences; and expressive forms that foster recognition, respect and empathy for those adversely affected by prevailing arrangements.

The digital commons, as I have sketched it here, has the potential to create contemporary coffeehouses without walls and social exclusions, combining access to the full range of imaginative and information resources that support effective participation with new spaces of encounter and deliberation. The resurgence of authoritarian populism invests this project with added urgency.

By the time the original German edition of Habermas' book appeared in 1962 he had already detected clear signs of a retreat from deliberation. Politicians, he argued, display a "showy pomp" and project an "aura of personal prestige and supernatural authority" reminiscent of feudal lords, and hereditary kings (Habermas 1991, 195). In place of "issue-oriented arguments" voters are presented with "calculated offers" designed "according to carefully investigated and experimentally tested 'psychological parameters'" that "call forth predictable reactions without placing any obligation whatever on the very persons who in this fashion

secure plebiscitary agreement" (Habermas 1991, 217). Donald Trump's presidential campaign and time in the White House and the Brexit campaign in Britain lend these observations a remarkable prescience.

Authoritarian populism is the antithesis of deliberative democracy. It operates by erecting an absolute opposition between "the people" and those in positions of authority who seeks to denigrate them or do them down. Capitalist exploitation is deleted from this account since contemporary authoritarian populism champions neoliberal conceptions of "free" markets (see Murdock 2020b). Ire is directed instead at public servants who administer laws and regulations limiting individual choice and at intellectuals, and news media that question or fail to endorse foundational beliefs. Trump's characterisation of the mainstream US media as "fake news" spoke to a generalised populist dismissal of dissent and the pursuit of uncomfortable truths. Faced with radical disagreement on the veracity of foundational information and evidence and a refusal to engage with alterative viewpoints deliberation became impossible.

Trump took full advantage of a US media landscape transformed by two key suspensions of regulation. In 1987 the Fairness Doctrine, introduced at the start of the television age in 1949 requiring broadcasters to provide a balance of viewpoints, was abolished opening the way for partisan channels. Rupert Murdoch's Fox News, launched in 1996, proved the most effective. Tapping into the constituency mobilised by the Tea Party on the right of the Republican Party it provided Trump with a ready-made repertoire of populist themes and imagery and a welcoming platform with national reach. 1996 also saw the passing of Section 230 of the Communications Decency Act in the United States. This classified Internet platforms as neutral carriers, such as telephone networks, rather than publisher, like newspapers and broadcast channels, absolving them from editorial responsibility for content posted by users.

Taken together these two interventions created a self-reinforcing circuit of misinformation allowing unsubstantiated claims to move rapidly from the outer reaches of right of centre opinion to major Web sites and Fox News and on to President Trump and

senior figures in his administration, lending them renewed credence and circulation. During the early phases of the COVID-19 pandemic a number of conspiracy theories purporting to reveal its "true" origins and purposes followed this trajectory attracting considerable support. They included variants of the claim that the virus was produced in the Wuhan virology laboratory and either leaked accidently or purposely released (see Murdock 2021).

British broadcasting channels remain bound by statutory requirements to ensure that news is reported with due accuracy and impartiality but these rules allow discussion programmes to take partisan positions. The regulatory authority Ofcom has recently granted licences to two avowedly right-of-centre channels, UK TV operated by Rupert Murdoch, owner of Fox News and GB News two of whose major investors, John Malone and the Legatum Institute, have connection with major American right wing think tanks, the Cato Institute and the Koch Foundation, a leading supporter of climate change denialism (see Barnett and Petley 2021). As Ofcom's head of standards and audience protection has noted, although both channels "are seeking to come from a right-of-centre perspective […] there's nothing in the code that prohibits a broadcaster from coming from a particular perspective" (quoted in Sherwin 2021).

Supporters of the channels see them pluralising provision by offering a platform to voices and positions that are disregarded or denigrated by the "liberal" consensus they see dominating mainstream media in general and the BBC in particular. Militant advocates of this perspective cast themselves as combatants in a "culture war" determined to ensure "that plurality of voices and freedom of speech are maintained […] against a quasi-Marxist movement on the liberal left to snuff out conservatism" (Sunderland and Maddox 2021, 28). Breaking up the BBC "to allow different positions" with "different perspectives" into the marketplace is an essential first step (Sunderland and Maddox 2021, 38). This argument conveniently ignores the fact that two right-of-centre titles, the *Daily Mail* and Rupert Murdoch's *Sun*, account for 44.7% of the daily newspaper market and have major web

presences and that the majority of other daily titles are right-leaning (Media Reform Coalition 2021, 5).Hardly a conservative culture on the verge of being "snuffed out".

There is a pressing case for opening news and actuality programming to a wider range of voices but again, public service platforms offer a more egalitarian way forward than partisan commercialism. As Dan Hind has argued: "We can imagine an alternative structure for BBC news and current affairs, in which the people who pay for the BBC, the citizenry, are able to direct some share of the money they contribute to journalistic endeavours they support" with the "BBC's online platform" making universal "the kinds of activity we currently associate with private sites like Kickstarter" (Hind 2015).

However, pluralising the provision of information and commentary is not enough in itself. It needs to be matched by renewed spaces of deliberation. The years following Habermas' original account of the public sphere saw the emergence of a range of new social movements, including campaigns on the environment. Their success in forcing issues onto the political agenda persuaded him to revise his conception and argue that from "the perspective of democratic theory, the public sphere must […] not only detect and identify problems [and] […] furnish them with possible solutions, [but also] dramatize them in such a way that they are taken up and dealt with by parliamentary complexes" (Habermas 1996, 359). "In periods of mobilization" he added "the structures that actually support the authority of a critically engaged public begin to vibrate [and] the balance of power between civil society and the political system then shifts" (Habermas 1996, 379).

Reactions to the British government's openness to introducing genetically modified (GM) crops and food offer an instructive case study of this shift in action and the challenges of organising effective public deliberation in a complex mediated environment. From 2000 onwards protestors destroyed crops growing in trial fields, dramatising the claimed risks of GM technology by dressing in decontamination suits or as The Grim Reaper, the Christian harbinger of death (Murdock 2004). In response

the government launched a month-long public debate, *GM Nation*, in June and July of 2003. Focus groups organised as deliberative fora and national and local meetings were supplemented by broadcast programmes examining the main positions in the debate. However, the formats employed left comparatively little space for contributions from the audience. An official Web site was opened for comments but research found that "the most extensively used site was the BBC Science message board attracting "a considerable volume of contributions across a wide range of GM-related issues" (Horlick-Jones et al. 2007, 157). However, possible ways of connecting live, broadcast and Web-based fora remained unexplored. This neglect has been repeated with recent interventions around the climate emergency.

In November 2018, British supporters of Extinction Rebellion (XR), the international movement campaigning for urgent action on the climate emergency and species extinction, blockaded five major bridges across the Thames in London bringing traffic to a halt. The numerous professionals and pensioners involved made the protests difficult to dismiss. As research on participants concluded; "XR's strength has been to create a new public agency amongst people who are not 'natural' protesters […] but who were already persuaded of the rightness of the climate cause, and frustrated with the inability of 'politics as usual' to bring about the kind of transformative political change that the climate emergency demands" (Saunders, Doherty and Hayes 2020, 2).

Following 11 days of protest, on 1 May 2019, the Westminster parliament endorsed Extinction Rebellion's demand, tabled by the then leader of the Labour Party Jeremy Corbyn for the country to declare a state of environmental and climate emergency. In January 2020, the government acceded to another of XR's core demands, for "A Citizens' Assembly" to provide "us, the people, with a way to decide what's best for our future, even if that requires radical changes in the present […] because they are informed and democratic, the Citizens' Assembly's decisions will provide […] public pressure for politicians to set aside the usual politicking and do the right thing" (Extinction Rebellion UK 2021).

A representative sample of 108 members of the general population was recruited to participate in intensive weekend meetings during which they were provided with comprehensive and authoritative information and asked to evaluate options for action and decide on priorities for meeting the government's legally binding commitment to reach net zero emissions by 2050. The process demonstrated the practical viability of Habermas's ideal model of a deliberative public sphere confirming that "amid often polarised political debate, ordinary people were able to judge evidence and ideas against their own experiences [arriving] at judgements that balanced competing values, such as freedom of choice and fairness to different social groups (Smith 2020).

Speakers' presentations to the Assembly were live streamed and, together with other resources, made openly available on the Assembly's website (see https://www.climateassembly.uk /resources/index.html) but there was no concerted attempt to direct users to them or to convene wider public discussion on the issues under discussion.

Mobilising these possibilities points once again to the pivotal role of public broadcasting in organising popular participation. Christian Fuchs has pointed to the *Club 2* format developed by the Austrian public broadcaster ORF as one possible starting point. Running for almost two decades, between 1976 and 1995, and later taken up by Channel 4 in the UK as *After Dark* and briefly revived by the BBC in 2003, the format reproduced the intimacy of discussion around a dinner table. Between four and eight people with differing positions and experiences gathered in a comfortable room to explore the issues raised by a contentious topic. Discussion was live with no audience to play to and no set time limit, finishing when participants decided. Fuchs proposes to integrate this format with the participatory possibilities offered by the Internet. The live broadcast would run alongside an invitation to audience members to post their response as short videos on a public service video platform. A selection of these would then be incorporated into the programme at regular intervals contributing to the studio discussion (Fuchs 2021, 14–16).

Faced with the urgency of the climate and environmental crises and the scale of the political choices they pose finding new ways of encouraging public participation must be at the core of public broadcasting's response. Another possibility is for public broadcasters to host a series of citizens' assemblies on issues directly relevant to everyday life starting with food, housing, transport, clothes and digital devices. These would follow the established pattern of informing discussion by presenting the range of relevant research and knowledge on the environmental and social impacts and harms of current practices and the actions currently being taken, or not taken, to address them. These professionally filmed contributions would be broadcast and posted on catch-up channels but deliberation would take place online. Inviting contributions from anyone who wishes to comment however, immediately raises the question of how to avoid the abuse generated by polarised positions familiar from commercialised platforms.

An alternative is offered by the Polis software programme. Developed in Seattle in the wake of the Occupy Wall Street, to replicate the movement's openness in searching for collective agreement, it has been adopted in Taiwan where is it integrated into political decision-making. Users are invited to respond to statements posted by others by registering whether they "agree", "disagree" or "pass" and to contribute their own questions and ideas. There is no reply facility so no opportunity to insult or demean. Instead machine learning constructs a visual map of emerging clusters of opinion giving greater prominence to statements that secure support across clusters. As Audrey Tang, a former hacker, who pioneered the integration of digital systems into Taiwan's political decision-making has noted:

> [Social media] mostly divides people. But the same technology can also be designed in a way that allows people to converge and form a polity. People compete to bring up the most nuanced statements that can win most people across […] rather than going down a rabbit hole on a particular issue [...] Invariably, within three weeks or four, we always find a shape where most people agree on most of the statements (quoted in Miller 2019).

Ideas and concerns expressed on Polis are regularly responded to by politicians and scholars on the broadcast talk show *Talk To Taiwan*. In December 2018, Extinction Rebellion called on the BBC to make "the severity of the climate and ecological emergency, and the urgent action needed to address it" and enable "the transformative change" required its "top editorial and corporate responsibility" (Farrell 2018). The BBC's central role in addressing the current emergencies arises from its unique position as the only major broadcast channel with universal reach, funded out of public money, and anchored in an ideal of shared citizenship and responsibility. In contrast, advertising funded broadcast and Internet platforms are fuelling a culture of hyperconsumerism that undermines responsibility for the collective good and actively conceals the ecological and human costs of everyday commodities and the need for transformative change.

4.8. Destructive Desires: Digital Connectivity and Hyperconsumerism

Politics in Britain, in the years between 1945 and 1975, was marked by an increasing tension between the social contract of citizenship and the promise of personal pleasure and convenience delivered by an expanding consumer culture. Rising real incomes allowed increasing numbers of households to acquire major items: refrigerators, washing machines, television sets, and cars. They were expected to last for some years, to be "durable". Faults were fixed by local mechanics and repair shops. Replacement was relatively infrequent.

By the mid 1970s mass consumption of "big ticket" items had reached a limit point. There were pockets of dynamism, most notably in the more fashion-oriented youth market, but elsewhere expansion was slowing down feeding into the structural crisis of advanced capitalism that was gathering momentum. One response to regenerating growth was to create new markets by privatising public assets. The other was to intensify and accelerate consumption cycles by encouraging people to consume more, more often,

and to throw items away and replace them more quickly. Like hyperactivity this new regime of hyperconsumption is characterised by constant movement with major consequences for climate and earth systems.

Damage has been gathering momentum since the beginning of industrialisation in the late 18th century. Increasing reliance on the energy released by the compacted carbon stored in fossil fuels, initially coal and later oil and gas has resulted in steadily accumulating emissions of carbon dioxide (CO_2), the main greenhouse gas contributing to global warming and climate disruption. The capitalisation of agriculture and food production and the resulting increase in "deforestation, and intensive animal husbandry, especially cattle holding" have also made significant contributions to levels of both CO_2 and the methane discharged by farm animals, the second major greenhouse gas (Crutzen and Steffen 2003, 252). But the years of neoliberal ascendency have witnessed a sharp acceleration, prompting researchers to identify the period since 1970 as "decisive in further deepening human influence on the climate" (Gaffney and Steffen 2017, 4). The normalisation of hyperconsumption is a major contributory factor.

Britain was the first major European country to introduce advertising funded terrestrial television services with the launch of the ITV network in the mid 1950s. Every innovation since then has been organised on a commercial basis. New cable and satellite channels have created major additional promotional spaces but the primary impetus driving hyperconsumption has come from the mass adoption of digital devices.

The business model devised by the dominant Internet platforms, Facebook and Google, trading unpaid access in return for monopoly ownership of the personal data users generate as they navigate Web sites and apps, has massively extended opportunities for advertising and marketing. The increasingly sophisticated machine mining of user data to identify micro markets allows promotional appeals to be targeted with unprecedented precision. The relative lack of regulation has opened space for new forms of promotion. Advertising is no longer an identifiable persuasive

intervention, clearly demarcated from the editorial and expressive content that surrounds it. Commodities, logos and promotional messages are seamlessly integrated into narratives, conversations and presentations. Advergames produced by corporations for children and young "influencers" paid to talk about products have been added to the established techniques of sponsorship and product placement to insert commodities and consumption ever more securely at the centre of everyday communication. The gap between desire and acquisition has been progressively closed by the rapid expansion of contactless payment. Instantly registering purchases using a smartphone abolishes the time available for reconsideration provided by the need to count out cash or insert a credit card and pin number.

Consumer culture has always presented market choices as the primary guarantors of enhanced convenience and pleasure and the preeminent arenas of self-expression. It has always championed possessive individualism over the collective contract of citizenship. Hyperconsumerism retains this defining orientation but places renewed emphasis on the need to take advantage of innovations immediately they become available. It requires continual migration to the latest versions of favoured products and the adoption of new ones. It projects attention relentlessly forwards, to the benefits and pleasures of possession and use. The social and environmental damage embedded in the chain of production remain invisible and unremarked.

Promotional campaigns around smart phones have played a key role in normalising hyperconsumerism. Their basic functions have remained the same but rising sales have been driven by a continual stream of minor modifications: larger, brighter screens, fingerprint recognition security, more versatile camera facilities, bendable casing – exhortations to upgrade have been underwritten by compulsion. Previous models resist repair and installed software is no longer supported. The emphasis on replacement and novelty positions existing models as never entirely satisfying, always incomplete, and deficient in ways that the next iteration promises to address.

The human and environmental costs of hyperconsumerism are demonstrated with particular clarity, however, by the chain of connections linking fast foods to pandemic diseases and health risks and deforestation.

4.9. Corona Connections: Forests, Fast Foods and Fatalities

"What kind of times are they and when/A talk about trees is almost a crime/Because it implies silence about so many horrors?"
Bertold Brecht 'To Those Born Later', 1939
(Brecht 1976, 318)

The period of neoliberal ascendency has seen a marked change in diets. Fast foods, ready-made meals and processed foods, high in fat, sugar and salt (HFSS) have become staples. These "junk foods" combine low nutritional value with additives designed make them addictive. They are quintessential exemplars of hyperconsumption. They are never entirely satisfying. There is always the impetus to reach for the next one, the exhortation to try new flavours or novel combinations. Their proven contribution to rising rates of childhood obesity and increased risks of later chronic health conditions has prompted the British government to propose extending the present ban on junk food advertising on children's television to all broadcasts before 9 p.m. and all online content where more than 25% of the audience are younger than 16 years.

A US study of the five most watched YouTube channels featuring child influencers (aged between 3 and 14 years) found that promotions for food and drink were viewed one billion times with McDonalds featuring in more than 90 of postings (Airuwaily et al 2020). Fast foods also appear prominently in advergames with US research recording a million children playing them over the course of a month with measurable gains in their consumption of junk meals and snacks (Orciari 2012). As the British government's initial consultation document conceded, however, the lack of independent audience measurement and the proliferation of

promotional forms makes effective policing of online content virtually impossible. As they note; "the complexity of the online advertising landscape, which incorporates content which has the effect of advertising (e.g. influencers), as well as more traditional forms of advertising such as banner or video ads" produces a "near limitless advertising inventory with low barriers to entry" making "the task of effective monitoring […] more difficult" (Gov UK 2019, 11).

As this admission confirms, regulation, however organised, cannot deliver communicative spaces open to a comprehensive range of perspectives and ways of seeing. The urgent need for a digital commons as a robust alternative is pointedly illustrated by the wider social and environmental harms associated with fast and convenience foods.

Their rapid expansion has required significant increases in meat production for beef burgers and chicken pieces, in soya for animal feed, and in palm oil, used in a wide range of foods from pizza dough and instant noodles to chocolate and ice cream (World Wildlife Fund 2021). To meet these demands increasing areas of the world's forest have been cleared for livestock and poultry faming and plantations. The consumption habits of each resident in the G7 group of rich countries is estimated to require the felling of 3.9 trees a year (Hoang and Kanemoto 2021). This loss is escalating. In the 12 months between 2019 and 2020 primary rain forest destruction increased by 12% eradicating a total area the size of the Netherlands (Global Forest Watch 2021). Forest cover provides a vital carbon sink that absorbs CO_2. Its progressive clearance intensifies the climate emergency. Its cumulative loss also erodes vital biodiversity and accelerates species extinction while significantly increasing the risks of animal borne, zoonotic, pandemic diseases.

The origins of COVID-19 remain open to dispute but the likeliest explanation on current evidence remains transmission from bats to intermediate animal hosts to human, a chain of connections followed by the two other recent coronavirus pandemics, MERS and SARS (Afelt, Frutos and Devaux 2018). Destroying forest

habitats and erecting new residential and infrastructure complexes on cleared land significantly increases the chances of contact between displaced species, people and their domestic animals. As the leading authorities on zoonotic transmission point out:

> Rampant deforestation, uncontrolled expansion of agriculture, intensive farming, mining and infrastructure development […] have created a 'perfect storm' for the spillover of diseases from wildlife to people […] a virus that once circulated harmlessly among a species of bats in Southeast Asia has now infected almost 3 million people, brought untold human suffering and halted economies and societies around the world (Settele et al. 2020).

Commercialised communication severs these links. Time set aside for advertising in every broadcast hour is time denied to other voices, ensuring that commercial speech is ubiquitous and insistent. The orchestrated integration of branded commodities into dramas, conversations and games through paid product placements constrains expressive choices. Sponsors and advertisers seek "positive selling environments". Burgers, French fries and chicken nuggets unfailingly appear in brightly lit interiors and convivial social settings. Devastated forests, dispossessed peoples and displaced wildlife are confined to darkness and silence. The conclusion is clear but continually avoided or denied. Comprehensive engagement with the most pressing issues of our time requires communicative spaces free from the pressures of product promotion and hyperconsumerism and open to critical explorations of all the ways we live now, the social and environmental harms these may entail, and how these might be addressed. Public service provision, reimagined and reconstructed as a digital commons, is indispensable.

  This project poses a number of urgent practical choices around financing, organisation and control but it also points to a fundamental underlying tension. The digital commons cannot simply piggyback on the existing array of communication infrastructures and devices since the processes involved in their production, operation, use and disposal are themselves making substantial contributions to carbon emissions and the climate emergency.

4.10. Breaking the Chain: Countering Climate Crisis

Countering the role of commercially saturated broadcast and Internet platforms in promoting a culture of ecologically damaging hyperconsumption remains an essential task but proposals for intervention must avoid privatising responsibility by focusing too concertedly on personal choices. A comprehensive approach to tackling the climate and environmental emergencies must also address the carbon emissions generated by the infrastructures and devices produced and deployed by communication corporations and organisations, including public service broadcasting and digital communing.

The range and reach of digital technologies have expanded rapidly over the last two decades with the increasing take-up of multifunction smart phones, the introduction of digital personal assistants, the shift to video streaming and the expansion of the internet of things. One recent estimate predicts that by 2030 communications technologies as a whole will account for 51% of global electricity demand and 23% of total greenhouse gases (see Andrae and Edler 2015). Public institutions, committed to enhancing the quality of collective life have a particular responsibility to lead by example and move towards eradicating their emissions. As the BBC's 2018 manifesto for sustainability, *Greener Broadcasting*, noted: Since "[e]nvironmental issues affect us all […] as a publicly funded organisation we have a responsibility to act to limit our impact" (British Broadcasting Corporation 2018, 4).

The Corporation has pursued this project in a series of initiatives. Its landmark software, *Albert*, introduced in 2011, enabling production teams to calculate their carbon footprint from pre- to postproduction is now mandatory for all programmes. Adopted by BAFTA it has become the industry standard, widely used by commercial operators, including Netflix. Commitments to decarbonisation were extended in 2017 with the *Creative Energy* initiative, enabling production companies to switch to suppliers offering energy from 100% renewable sources, followed in 2019 by the *Green Rider* project encouraging a range of practical shifts, from plant-based catering to low-energy lighting. Minimising emissions

and pollution at the point of use while absolutely necessary is not sufficient. A comprehensive approach must also take account of the carbon generated by the prior chain of production.

Between 1990 and 2016, with the reorientation of the economy around services and the growth in renewable energy, greenhouse gases generated within Britain's territorial borders dropped by 41%. Because Britain had outsourced its emissions along with its manufacturing capacity the country's overall carbon footprint only fell by 15%, however. Increasing reliance on production in the low-wage economies opened up by market-led globalisation has meant that 46% of the total carbon emissions embodied in imported manufactured goods have been generated before they arrive in the country (World Wildlife Fund 2020). By 2007 the UK was the largest net importer of CO_2 among the G7 economies, with emissions per head rising from 1.7 tonnes in 1992 to 5.1 tonnes (Office of National Statistics 2019). The greatest volume of imports were products of China's coal-driven industrialisation. By 2018, China had overtaken the United States as the world's leading emitter of CO_2 (Union of Concerned Scientists 2020). By 2019, telecommunications equipment made up 16% of Britain's imports from China, the largest single category (House of Commons Library 2020, 8). Research suggests that emissions embodied in digital products are considerably higher than the average for manufactured goods as a whole. Apple suppliers of the iconic iPhone that are heavily reliant on Chinese labour calculate that 77% of the carbon footprint of their devices is generated "offshore" (Compare and Recycle Blog 2020).

Figures for embodied carbon conceal an extended trail of environmental destruction and social exploitation. Indigenous peoples dispossessed by corporations commandeering land and raw materials. Child miners scavenging for essential minerals in unsafe open cast pits. Young women working in regimented assembly plants. Mariners on container ships flying flags of convenience with minimal safety provisions. Insecurely employed van drivers delivering them to retail outlets.

Public Service Media must break this chain by switching to technologies that avoid environmental and social harms. The

Fairphone, committed to responsible material sourcing, workers' welfare and rights to repair, has provided a counter to the standard smartphone for some time and has recently joined with a range of partners to develop FairTEC, "an alternative ecosystem that addresses numerous parts of the smartphone value chain from the hardware to the operating system, from the network to its business model" (Fairphone 2021).

The BBC has a long history of pioneering technological innovation from the radiophonic workshop's contribution to the development of electronic music to the iPlayer and the Corporation's decisive role in pioneering popular computer use in Britain. In addition to broadcast programming the computer literacy project, which ran between 1979 and 1983, supported the production of a specially commissioned microcomputer, manufactured by Acorn, and a pioneering programming language BASIC (Beginners All Purpose Symbolic Instruction Code). The project was a huge success with Acorn computers becoming the de factor standard in British schools and pupils learning to write their own programs.

Since 2018 the Corporation's Research and Development Department has been working with the open software provider Mozilla, the Open Data Institute and other organisations "concerned about the public good", to revisit the central backbone of digital communication and explore how "today's internet can be re-imagined, changed, or perhaps even re-invented in ways that better support the delivery of public benefits and reduce its potential for harm" (BBC R&D 2021). As Rachel Coldicutt, who was involved in the early development of the BBC's Web site has argued, however, intervention is not simply a matter of tinkering with the technologies. It must be based on a clear "definition of what good technology and responsible innovation look like", securely anchored in a refusal to follow "big business and think back to the social contract" (Coldicutt 2019). As I have argued, under conditions of global pandemic and climate and ecological crisis this contract extends beyond national borders to recognise a general duty of care for the lives of the strangers and environments that support our conditions of life.

This commitment necessarily involves engaging with the emerging technologies that will shape the future digital landscape. It was public investment that funded the risky foundational research that produced the initial wave of core digital technologies including the Internet, global positioning and touch screen navigation. They were only taken up by private entrepreneurs once they proved viable. As Mariana Mazzucato has pointed out, Apple's iPods, iPhones and iPads have appropriated and capitalised on clusters of "technologies that the State sowed, cultivated and ripened" at public expense but have returned only minimal payments to the public purse (Mazzucato 2018, 182).

Involvement in fundamental research is essential. The choice of avenues to explore the purposes envisaged and images of the eventual users are written into projects from the outset, marginalising alternatives and limiting later options. Innovative technologies designed to advance public service ideals require public service engagement in fundamental research into every area, from alternative materials, to design and reuse. Proposals to raise the minimum rate of corporation tax and compel the major digital platforms to pay tax in the countries they operate in, rather than in the locations they are registered in, would generate substantial sums that could be directed to funding public research.

It could also be used to address structural problems of digital exclusion. As mentioned earlier, the COVID-19 pandemic has thrown a harsh light on the disconnection of substantial sections of Britain poorest households. Many elderly citizens are also excluded. More than half (51%) of over 75s and 30% of those aged between 65 and 74 have no home access to a computer, compared to only 2% of those between 16 and 24 (Ofcom 2020c, 10). During the pandemic those lacking access have been doubly disconnected: from personal contact and digital networks. The closure of public libraries and community centres has locked down shared facilities. These inequalities have far-reaching social impacts. Children in poor families without a computer have been unable to access the online learning resources that have replaced teaching in schools while buildings have been shut for long periods. Missing months of education will further widen existing class inequalities

in educational achievement confirming the exclusion of the poor from occupations requiring approved qualifications. Adults being unable to maintain social contacts remotely has compounded the sense of isolation during lockdowns fuelling rising rates of depression and mental illness.

The digital commons can never be a true commons if current levels of digital exclusion continue. The principal barrier remains the cost of both broadband connectivity and access to a home computer. One option is to redefine connectivity as a public utility, an essential support for a decent quality of life, like clean water and electricity, funded out of taxation. Free access to public broadcasting could be combined with free access to the broadband connection needed to access the wealth of public resources provided by the digital commons in a new composite connectivity payment. How this might be organised will require careful discussion.

Another option for universalising access to home computing is to introduce a public rental system requiring a minimal payment or no payment at all for those on benefits.

4.11. For a Liveable Future

In his 2018 memorial lecture for Hugh Cudlipp, the legendary editor of the *Daily Mirror*, James Harding argued that we have arrived at a decisive moment of choice in the way we use media technology. In the early days of broadcasting debate centred on how best to organise the then revolutionary communicative potential of radio. Contemporary debate is focussed on the Internet. The answer he argues, now, as then, is strong public service provision.

> "I know how annoying the BBC can be. But if the BBC hadn't been created in 1922 to ensure the enormous power of radio was used to give the best of everything to everyone, today you'd create the BDC – the British Digital Corporation – to serve, just the same, the public good in the internet age. If we want to strengthen the system of freedom and choice, both in our country and around the world, we should strengthen the BBC" (Harding 2018).

Coming from a former Head of BBC News, this can easily be dismissed as special pleading but the general case for Public Service Media commands increasing support. Jeremy Corbyn, while still leader of the Labour Party, enthusiastically supported the idea of a British Digital Corporation, but mistakenly presented it as a separate "sister" organisation to the BBC, when Harding had clearly intended it as an extension and reinvention of the Corporation. Corbyn's sketch for the BDC however incorporates key elements of the digital commons as outlined here.

> […] one of the more ambitious ideas I've heard is to set up a publicly owned British Digital Corporation as a sister organisation to the BBC. A BDC could develop new technology for online decision making and audience-led commissioning of programmes and even a public social media platform with real privacy and public control over the data […] It could become the access point for public knowledge, information and content currently held in the BBC archives, the British Library and the British Museum (Corbyn 2018).

The idea of starting afresh, with a new institution for altered times, is attractive but mistaken. Any new proposal for public funding would be caught in the same crossfire of economic and political pressures that has systematically eroded public cultural provision over three decades. Democratising the BBC's forms of governance and accountability, strengthening its insulation from political pressure and guaranteeing an appropriate level of funding, remain issues of contention requiring urgent attention but as the core public service broadcaster it offers the best available starting point for a digital commons, for five main reasons:

- *Firstly*, it is already integrated into everyday life as a familiar presence which continues to command high levels of trust.
- *Secondly*, it produces an unprecedented range of programming, local as well as national, for radio as well as television, tackling a huge range of topics, and employing a diversity of expressive forms.

- *Thirdly*, as I discovered growing up, programmes often spark an interest in knowing more. Digital connectivity allows programs to move from being events to becoming gateways, linked to a continually expanding global wealth of professional and vernacular online resources and spaces of encounter, freely accessible without the need to travel.
- *Fourthly*, the hostile caricature of the corporation as a remnant of a by-gone age ill adapted to a rapidly changing technological environment is comprehensively contradicted by its long record of innovation. Its recent ventures beyond broadcasting, the iPlayer, the Web site and podcasts, are all widely used.
- *Fifthly*, from the Domesday project to Open Door and Video Dairies the BBC has pioneered ways of using new technologies to create universally available spaces for vernacular expression, establishing a tradition that can be reinvigorated.

Neoliberal economics and authoritarian populist politics have combined to ignore and discredit these arguments in favour of promoting profit-seeking alternatives. The mounting social, economic and environmental costs imposed by the COVID-19 pandemic and the accelerating climate and environmental crises force us to confront the role of commercialised media in fuelling current emergencies. When we do we see that their assertive promotion of hyperconsumerism and their continuing reliance on socially and environmentally destructive chains of production are intensifying problems rather than providing solutions.

Critics of public broadcasting repeatedly point to declining youth audiences as proof of its future irrelevance. Continuing youthful support for urgent climate action, inspired by the school strikes and Fridays for Future movements, points in another direction. The present moment of global pandemic and environmental crisis offers an unprecedented chance to engage young people by curating open and participatory explorations of the challenges facing us and shaping their futures, based on an ethos of collective care for planetary resources and the lives of others. We urgently need to build the digital commons, not only to reinvigorate the ideals and practice of public service, but as an essential contribution to a liveable future.

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