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Digital bodies and digitalised welfare: North-South linkages in the politics of food assistance and social welfare

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Abstract

This paper examines North–South linkages in the politics of contemporary food assistance and social welfare, and in particular the normalisation of poverty and humanitarian crisis caused by increased digitalisation, privatisation and individualisation of aid or welfare. Migrants and displaced populations are considered as extreme cases and we examine how these policies and practices are leading to the growth of a global precariat who are constantly on the edge of survival (or death). We use Sudan, India and the UK as case-study countries which have seen persistently high levels of acute malnutrition or rising levels of hunger (as in the case of the UK), as well as the introduction of new digital welfare systems. Digital practices often aim to improve access to food and form a key part of humanitarian and welfare assistance, thereby creating digital welfare states. In the past decade Sudan has seen a shift from emergency food aid to digital cash interventions, including the establishment of a new national cash-based Family Support Programme (FSP). India’s Public Distribution System (PDS) has been undergoing digital transformation since 2010. In the UK, welfare has been digital by default since 2012 and from 2016 assistance for asylum seekers is provided through biometrics and debit cards. The Covid pandemic has accelerated processes of digitalisation across all three countries. In this paper, we argue that digitalisation has not addressed hunger, but instead is likely to lead to exclusions and invisibility of the already politically marginalised groups. Additionally, a number of troubling political and economic questions linked to identity, surveillance and profit have been subsumed in the larger debate about efficiency and accountability in provisioning. On the other hand, evidence of protests and organised struggles indicates a growing opposition to the digitalisation of bodies and lives.

Keywords

Food assistance, food poverty, social welfare, PDS, cash transfer, digitalisation, digitisation, Sudan, India, UK.

Digital bodies and digitalised welfare: North-South linkages in the politics of food assistance and social welfare¹

1 Introduction

Food insecurity and hunger are rising phenomena across the world, in contexts as widely varying in politics, geography and food systems and in the mix of public and private sector welfare, as in Sudan, India and the UK. Even prior to the Covid-19 pandemic, humanitarian crises were becoming increasingly protracted with a large number of countries experiencing persistently high levels of acute malnutrition (Young and Marshak 2018). In India a high proportion of the population suffers the consequences of chronic deprivation and precarious livelihoods. Populations in Sudan continue to experience conflict and displacement as well as long-term deprivation and precarity, despite the 2019 revolution that ousted President Al-Bashir's 20-year long authoritarian regime. In the UK, food insecurity and hunger have been growing steadily since the introduction of austerity measures and changes in the welfare system in 2010 (Sosenko et al. 2019). Furthermore, all three countries have experienced increasing inequality in the past twenty years.

These crises have persisted and arguably worsened despite – or perhaps because of – policy changes in the past two decades. During this period a shift was made towards resilience and austerity approaches and an increased focus on reducing the role of the state, increasing private sector and market engagement, and shifting responsibility to individuals. The 2008 food crisis, in particular, stimulated a rebirth of technocratic approaches (Moseley et al. 2015), which has included various degrees of digitalisation, individualisation and privatisation of food assistance and social welfare.

Food insecurity is a key manifestation of poverty, marginalisation and humanitarian crisis, and the aims of food assistance and welfare programmes are to address it. In humanitarian crisis contexts, food assistance is generally taken to mean in-kind food aid, food vouchers or cash vouchers to buy food, direct cash transfers, and sometimes agricultural and market support (Harvey et al., 2010). In this paper, we use a broad definition that includes interventions such as food subsidies, strategic grain reserves, and social protection or longer-term social welfare programmes which are either cash or in-kind transfers.² In

¹ An earlier version was presented in the panel on 'Governance in moments where normality and exceptionality meet' at the EADI-ISS conference 2021, held from 5-8 July 2021. The authors are grateful for feedback from the panellists and participants at the session. This paper is work in progress. Susanne Jaspars (sj43@soas.ac.uk) and C. Sathyamala (sathyamala@iss.nl) look forward to comments, thoughts, and suggestions to help in furthering the arguments presented in this paper.

² This is close to the FAO definition of food assistance: 'Food assistance is all actions that national governments, often in collaboration with non-governmental organisations and members of civil society, and with external aid when necessary,

the UK the concept ‘food poverty’ – a lack of food due to resource or other constraints, is commonly used as an alternative to food insecurity.³

In recent years, aid agencies and policymakers have been promoting the digitalisation of food assistance and social welfare to counter some of the problems in providing food aid, and to achieve greater efficiency and accountability in general. Mobile phone assessments, mobile cash transfers, electronic beneficiary cards with biometric identification (for example finger printing and iris scans), geospatial technologies, and crowdsourcing are some of the technologies that are deployed (Bergtora Sandvik et al. 2014, Weitzberg et al. 2021). The use of biometrics in humanitarian assistance is said to offer advantages in beneficiary identification and reducing fraud but risks in terms of reliability, security and exclusions (The Engine Room and Oxfam 2018). Digital technologies are used for remotely managed programmes in conflict situations and now in the pandemic, where physical access has been difficult for humanitarian organisations (Duffield 2018). The World Food Programme (WFP) has played a key role in adopting digital technologies, in particular for beneficiary registration, food security assessments and distributing assistance. However, analysis of the politics of digitalisation is rare and the implications of private sector involvement are underexplored (as pointed out by Duffield 2018, and Bergtora Sandvik et al. 2014). For example, ‘a mobile phone application brings in an application developer, a mobile phone or satellite company, an internet service provider and a data storage company ..., as well as government regulators – all of these being invisible to the beneficiary’ but will have particular political and economic effects (Bergtora Sandvik et al. 2014: 235). Issues of surveillance – both positive, as in formulating health programmes or negative in terms of political control – have been highlighted in a few refugee and humanitarian contexts but are underexplored in others (Weitzberg et al. 2021). McCully (2020) defines a ‘digital welfare state’ as one rolling out digital tools as strategies to reduce poverty and vulnerability as problems that can be solved or fixed by technological innovation.

In this paper we present some initial thoughts on the politics of food assistance and social welfare with particular reference to digitalisation, which involves varying degrees of individualisation and privatisation of assistance. Even though Sudan, India and the UK appear to be too different to be comparable, we have taken these contrasting case studies precisely because they can yield important information on processes and outcomes of the particular trends (Flyvbjerg 2006: 230). In this paper, we examine trends of digitalisation in food assistance and social welfare, its effect on political and economic processes, and possible outcomes in terms of food security. We will show that what is happening in the treatment of poor and marginalised

undertake to improve the nutritional well-being of their citizens, who otherwise would not have access to adequate food for a healthy and active life’ (FAO 1996 no page).

³ Food poverty has also been explained as: ‘... not simply about immediate hunger ... It is not just about the quantity of food ... but involves the dietary choices, the cultural norms and the physical and financial resources that affect which foods are eaten, ultimately impacting on health status’ (Maslen et al. 2013: 4).

populations (displaced populations, refugees, small-holder farmers, and labourers) seems remarkably similar despite the apparent differences. We make the case for looking at political issues of welfare globally rather than with preconceived notions of a North–South divide. As such, we also build on the work of Duffield (2018 and 2021) who suggested a blurring of North–South distinctions through digitalised welfare, and in the creation of a precariat who could function as adaptable and disposable labour. In all three countries, the Covid-19 pandemic has further aggravated food insecurity, hunger, and inequality, and has been accompanied by an increased use of digital technologies. The paper begins with a brief description of the situation in each country in terms of the digitalisation of assistance and welfare, followed by the identification of the key political issues these programmes raise that we see as North–South linkages and which need further exploration.

2 Food assistance and social welfare: Moving towards digitalisation

2.1 The Global South: Sudan’s protracted humanitarian crisis

Sudan has experienced a humanitarian crisis requiring external assistance almost every year since 1984, when the country experienced severe famine, and has received food aid even longer (Jaspars 2018). Digital assistance is relatively recent, however, although the trend towards digitalisation in humanitarian assistance is generally acknowledged (Bergtora Sandvik et al. 2014, Duffield 2018). In Sudan, in 2013, WFP tested remote food security assessments using mobile phones (Mock et al. 2016), and in 2015 introduced SCOPE, its biometric beneficiary identification and benefit management system. This enabled digital food assistance through the provision of e-vouchers and was part of efforts to better target assistance to vulnerable displaced populations (WFP Sudan 2017). Other digital techniques have been introduced more recently in the form of prepaid bank cards and plans to use mobile money for both humanitarian programmes and the newly started national cash-based Family Support Programme (FSP) (WFP 2018). These programmes build on a long history of food aid and food assistance interventions.

Sudan first received substantial quantities of international food aid in 1958, just two years after independence.⁴ US food aid in these early years was a direct bilateral loan agreement with the Sudan government and had trade, surplus disposal, and foreign policy objectives. It also formed the basis of an urban bread subsidy – arguably one of Sudan’s most important food security interventions which continues to this day (Maxwell et al. 1990). The proceeds were used to fund development projects in Sudan’s (elite) centre, reinforcing inequalities between centre and peripheral regions such as Darfur. Sudan experienced two more distinct ‘regimes’ of food assistance practices (Jaspars

⁴ During colonial times the UK provided some limited food aid as famine relief and attempted to transfer the famine codes developed in India (19th century) and the 16th century poor laws in the UK, but with little success (De Waal 1989).

2018). From the mid-1980s, Sudan saw a shift to emergency food aid in its peripheries⁵ carried out by NGOs and the WFP, in response to famine, conflict and refugees. For much of the 1990s and the early 2000s, emergency food aid was the main form of aid to Sudan (ibid.). Following the Islamist coup in 1989, Sudan received no development aid and because Sudan's government was thought to support terrorist groups, Western countries imposed a number of sanctions. Food aid became an intimate part of the country's political economy, whether as a form of government budget support, a way of maintaining or attracting political allies (including those in the private sector), to feed soldiers and government officials or to starve enemies (ibid., Keen 1994, Duffield 1994).

A massive WFP food aid operation in 2005 in response to conflict and displacement in Darfur was followed in 2008 by an overall decline in material assistance, and a shift from in-kind food aid to cash and nutrition interventions (Jaspars 2018). This included the introduction of food vouchers in selected camps for displaced populations in North Darfur in 2011. These were justified in terms of choice (and the potential improved dietary diversity), market support, and efficiency, but the nature of the contracts, limited local availability, inflation and collusion often meant control by large traders and high prices (Harrison and Wagabi 2011, Jaspars 2018). WFP introduced digital assessments in 2013, e-vouchers in 2015 and prepaid cards for cash transfers in 2016 (WFP Sudan 2017). Digital assessments collect a number of quantitative indicators by mobile phone and have been justified for reasons of speed, accuracy and access in volatile humanitarian settings (Mock et al. 2016). Vouchers, cash transfers, and mobile assessments also need to be understood in the context of declining international access to crisis-affected populations in the last decade of Sudan's previous government. The former government often denied access for international organisations and for food aid transporters (through travel permits, fees, checkpoints, in particular to rebel-held areas), and attacks on aid workers were frequent. Digital technologies can overcome these constraints because they enable remote programming.

Sudan's revolution of 2019 presents a new era but also continuities. The transitional government is composed of a civilian and a military element, and is increasingly fragile due to a severe economic, health (current Covid-19 situation), and humanitarian crisis. In 2021, 13.4 million people are estimated to be in need of humanitarian assistance (UN OCHA 2021). External support for Sudan's political transition has led to a number of potentially new forms of aid and trade, but with conditions. Removal from the list of terrorist-supporting countries required paying \$335 million to US victims of terrorist attacks. Potential access to World Bank and IMF loans required floating the Sudanese pound on the international market and the removal of state subsidies (mainly fuel and wheat) (Baldo 2021). These international institutions also suggested a targeted Family Support Programme (FSP) to replace state subsidies, claiming that this would assist the poor more effectively (Thomas

⁵ The peripheries include Darfur, Kordofan, Red Sea State and southern Sudan (until the latter became a separate country).

and Ghizouli 2020). The FSP was launched in February 2021, implemented by the Ministry of Labour and Social Development, and is funded by the World Bank and a Multi Donor Trust Fund. It aims to provide the equivalent of \$5/person/month for 80% of the population but was only half-funded at the start (Radio Dabanga 2021a). Even if fully funded, the Prime Minister has stated that \$5/month is only a symbolic gesture (Hendawi 2021). Others have argued this will make households more vulnerable to volatile markets (Thomas and Ghizouli 2020). It also does not solve a key aspect of the economic crisis which is that many economic enterprises are in the hands of the military (including food import/export, transport, agriculture, telecommunications, and banking) and do not pay tax (Baldo 2021, Jaspars and El-Tayeb 2021). High food prices are thought to be in part due to speculation and intentions to undermine the transitional government (Fewsnet 2020, 2021).

With government prioritising peace negotiations, constitutional reform and tackling corruption, WFP has become the main aid actor in food and cash assistance. It sets policy for assessments, registration, targeting, transport/financial transfers, and monitoring of food assistance. This remains mostly in-kind food aid, with much actually purchased in Sudan. However, from 2016, in the Darfur camps for protracted displaced populations, cash transfers were introduced, using SCOPE cards as prepaid debit cards. WFP also assists the Sudan government with imports of wheat and in the establishment of the FSP.

Digital technologies in food assistance and in the FSP include the use of biometrics, bank cards and mobile phones, which in turn require local banking agents, moneybrokers, and telecommunications companies, as well as traders and shopkeepers. These approaches have been justified because of cost efficiency, speed of data collection, and access to remote and otherwise inaccessible populations. WFP promotes its SCOPE system because it can store biometrics and a range of demographic and food security data, can be linked to a range of interventions from different actors, and removes the possibility for duplicate registrations, thus reducing fraud and corruption. It is also said to enable rapid adjustment of assistance when needed (WFP 2016, Clausen 2021). Analysis of potential risks are relatively rare, for example on the possibility that the data gathered is used for commercial or security purposes (Duffield 2016). Digital technologies also fundamentally change the relationship between aid workers and beneficiaries, and aid organisations' understanding of the problems faced by conflict-affected populations (Jaspars 2018: 51). Remote or digital technologies create an emotional as well as physical distance which can make it easier to withdraw assistance (ibid.).

Duffield (2016) links digital humanitarianism to the neoliberal governmentality of resilience approaches in which crisis-affected populations are given information to promote adaptation rather than material assistance and protection. Potential risks can also be identified from studies in other humanitarian crisis contexts. For example, connectivity problems have led to delayed payments in Kenya (Bergtora Sandvik et al. 2014) and the network connection in Sudan is notoriously unstable. Cash transfers may need an entirely new payment infrastructure, including the provision of ID cards to

populations who did not previously have one, thus creating the notion of consumers and citizens (Donovan 2013). The need for ID cards, when most Sudanese have never owned one, is likely to be highly controversial. Identity and settlement (or landownership and occupation) are highly contentious political issues, particularly as part of the population is still living in rebel-held areas and altering population demographics have been key political strategies. Because of all these factors, exclusions through digitalisation are more than likely. Current voucher and cash transfer programmes in Darfur already appear to lead to unintended as well as intended exclusions (through targeting strategies) and need further exploration (Jaspars and El-Tayeb 2021).

Potential risks associated with WFP's SCOPE system has attracted little or no attention from the aid community (it was hardly mentioned in WFP Sudan last evaluation – see Brewin et al. 2017). Despite an audit criticising WFP for poor data handling (Parker 2018) the roll-out of the system does not appear to have slowed down. WFP also appears to have received little resistance against its holding of biometric data. An exception is in Yemen, where Houthi rebels refused for WFP to hold this data because they considered it a challenge to their sovereignty (Weitzberg et al. 2021). This could well become an issue in Sudan. Furthermore, they accused WFP of being political and of gathering intelligence, which was given credence by the recent controversy over WFP's partnership with Palantir, an algorithm intelligence firm (Clausen 2021). In situations of conflict, breaches of privacy can literally be a matter of life and death (Clausen and Martins 2021). In Sudan, the Security Services are major shareholders in the telecommunications companies (Gallopín 2020) that are planned as partners for mobile cash transfers. Given their past role in surveillance (and detention) of political opponents, this should be a cause for concern.⁶

Finally, issues of profit are little discussed. Both vouchers and cash transfers create business opportunities for traders, shopkeepers, banking agents, brokers, telecom and money transfer companies, and those who manage digital platforms. Somalia provides a good example of how much power telecommunications companies can gain through involvement in cash transfer programmes. Mobile cash transfers as aid massively increased the power of one telecom and money transfer company – who is now investing in every part of the food chain (production, processing, trade, import/export). Arguably companies involved in digitalised aid can become more powerful than governments (Jaspars et al. 2020).

2.2 The Global South: India, a developing country?

Compared to Sudan, India is considered a more advanced, lower middle-income country. Since late 2010, India is transforming into a digital welfare state, which is apparent in the way its largest welfare service, the Public

⁶ Note the recent case of UNHCR's sharing of data on Rohingya refugees with the Myanmar government and the issues of consent and risks that this raised (Holloway and Lough 2021).

Distribution System (PDS) is being digitalised. The PDS in India is a national food security programme which ensures that certain essential commodities, including food items, such as cereals, lentils and oil are distributed at highly subsidised prices to specified populations.

Its precursor was the rationing system of food in 1939 by the British during World War II which was discontinued in 1943 (Nawani 1994). Later, post-Independence, the Indian state revived it in 1950 primarily to stabilise food prices and to provide some basic measure of food security, and the programme came to be known as PDS. In 1965, the Food Corporation of India and Agricultural Prices Commission were created, and procurement rates for paddy and wheat were established to build buffer stocks of grains (ibid.). Thus, PDS became an important welfare policy measure that provided subsidised food grains to the vulnerable sections of the population as well as stabilised open market prices.

The PDS has undergone several changes in the last decades and its operationalisation is not uniform throughout the country. In 2013, the National Food Security Act was passed which, according to Indian government, shifted the approach to food security from welfare to a rights-based approach (National Food Security Portal, n.d.). Under this Act, PDS became a targeted system with eligible beneficiaries receiving five kilograms of food grains per person per month at subsidised prices.⁷

The same year, the Indian government launched the Direct Benefit Transfer (DBT) programme covering 34 central schemes (Government of India).⁸ DBT is built on a technological platform linking bank accounts, unique identification numbers (Aadhaar cards)⁹ and mobile phone numbers (Sharma and Nair 2016). The electronic transfer of money is allegedly meant to reduce delays in payments and accurate targeting of beneficiaries, curbing leakage (Ministry of Finance, n.d.). However, lack of banking infrastructure, enrolment in the Aadhaar registry, poor network connectivity and lack of grievance redressal have been identified as some of the major shortcomings (Sharma and Nair 2016).

In August 2015, the government brought the PDS under DBT by passing the 'Cash Transfer of Food Subsidy Rules,' through a Gazette notification.

⁷ Currently the state of Tamil Nadu is the only one with universal system of PDS available to all households irrespective of their economic status. A study in rural Tamil Nadu found that the universalising meant that the poorest of the poor households were reached, whereas, whenever there was 'targeting', the service was appropriated by the wealthier households (Sathyamala 2016).

⁸ Currently, there are 429 schemes routed through 56 Ministries (Gupta 2020: 132). These include scholarship schemes, women and child welfare, and labour welfare, including the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

⁹ 'Aadhaar: Universal scheme under which a 12-digit unique ID is issued to all residents after collection of their demographic information and biometric identification markings (fingerprints and iris scans). The Unique Identification Authority of India (UIDAI), who stores this in an online cloud-based database, collects this data.

Under this, the cash equivalents of subsidy amounts were to be transferred directly into the bank accounts of eligible households to enable them to purchase food grains from open markets. This was launched in a few territories on an experimental basis. In May 2018, the government of India launched a *Handbook for Implementation of Cash Transfer of Food Subsidy* that had been jointly developed with the WFP. The Reserve Bank of India (RBI) however cautioned against the DBT expansion in PDS because of ‘inadequacy of transfers to maintain pre-DBT consumption levels, insufficiency of last-mile delivery mechanisms and weak grievance redressals’ (Reserve Bank of India 2018: 31). The RBI further advised the states with lower literacy levels, higher percentages of below poverty-line populations and relatively high child malnutrition to ‘first strengthen the existing PDS through Information and Communication Technologies (ICT)-based in-kind transfers before embarking on ICT-based DBT cash transfers.’ Using data from the National Sample Survey, it was pointed out that the PDS was in any case already functioning like a cash transfer and that ‘neither an efficient, corruption-free PDS nor cash transfers can be relied on to increase food consumption in poor Indian families’ (Balasubramanian 2015: 656). A study carried out in three states of India implementing DBT found that households preferred in-kind transfer over cash for food subsidies (Satapathy et al. 2021). In 2018, in one of the experimental territories, people went on a protest march against the continued implementation of DBT and demanded that the in-kind food transfer be reinstated (Byatnal 2018).

In June 2019, the Indian government ushered in the proposal of ‘One Nation One Ration Card’ (ONORC) system giving a one-year deadline for its implementation throughout the country as part of the digitalisation of PDS. This proposal was, however, opposed by some of the state governments as being against the spirit of federalism (PTI 2019). By August 2020, the PDS had been fully digitalised under the ONORC system, covering 650 million citizens in 24 states and Union Territories (Haq 2020). The system currently enables 80% of all ration-card holders under the National Food Security Act to withdraw their entitled quota of food grains from specific fair-price shops in the country (ibid.). This is projected as being an advantage for migrant workers, particularly in the aftermath of the first wave of Covid-19 pandemic which witnessed them leaving the cities *en masse* to return to their villages. Under the ONORC, migrant workers can now withdraw their share of the quota of subsidized grains (or cash) from the family ration card anywhere in the country. On 21 June 2021, the Supreme Court of India, in a Public Interest Litigation questioning the move, observed that “no excuse will be considered and that the state must implement ONORC scheme” (Mathur 2021: no page). A study assessing the impact of digitalisation in Jharkhand, one of the states implementing the programme, concluded that,

[b]y itself, requiring biometric authentication to transact did not reduce leakage, slightly increased transaction costs for the average beneficiary, and reduced benefits received by the subset of beneficiaries who had not previously registered an ID by 10.6%. An event study of subsequent reforms that made use of authenticated transaction data to determine allocations to the program shows

that these coincided with large reductions in leakage, but also significant reductions in benefits received. Our results highlight that attempts to reduce corruption in welfare programs by making ID requirements more stringent can also generate non-trivial costs in terms of exclusion and inconvenience to genuine beneficiaries. (Muralidharan et al. 2020)

It is not just the PDS that has been digitalised. The foundation of PDS which rests on the procurement of food grains directly from the Indian farmers at minimum support prices is also a part of the digitalisation drive. In September 2020, the Indian government passed three farm laws: Farmers Produce Trade and Commerce (Promotion and Facilitation) bill, the Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, and the third, the amendment to the Essential Commodities Act, 1955, according to which, cereals, pulses, oilseeds, edible oils, onions, and potatoes were to be deregulated. These laws will lead to the dismantling of the government-held buffer stocks of food items now distributed through the PDS (Pani 2020). Farmers are also encouraged to use smart technology to play the market. Allegedly to increase farmers' income, the plan is to create online platforms to provide 'both farmers and traders with direct, electronically enabled channels delivering timely information about local prices, supply, [and] counterparty records' (Ministry of Electronics and Information Technology, n.d.: 238). These actions will allow the hoarding of essential commodities by private actors and will destabilise the market by bringing in the corporate sector, particularly agribusiness and supermarket chains, as national and transnational actors. Importantly, it will lead to further land consolidation by forcing the smallholders out of the market (Varghese 2020).

In addition, digital technology is being ushered in, to advise farmers on 'precision agriculture' on inputs, soil health, weather forecasts and recommendation for crops to be sown (Kaka et al. 2019). 'Additional advice is provided based on real-time data from internet-connected sensors in the field and GPS-enabled equipment that delivers the optimal amount of inputs at the individual crop level' (ibid.: 76). In a country where basic literacy is at a 73% with only 8.3% being graduates (Rukmini 2016), it is not difficult to imagine the negative impact on Indian agriculture which consists mostly of smallholder farms.

Taking advantage of the lockdown strategy during the Covid-19 pandemic, these three farm laws were passed without any debate in the parliament. However, it has been met with unprecedented protest by farmers across the country who have been camping at the border of Delhi, the capital city, since December 2020 (Tricontinental 2021). Specifically, the farmers are against the new laws because by liberalising and deregulation, digitalising agriculture, and opening up the market by loosening state control, the stage is being set to corporatise Indian agriculture. On 12 January 2021, the Supreme Court of India put a break to the implementation of the three laws by a stay order and set up a four-member expert committee to make recommendations on the basis of feedback from the farmers (Rajagopal 2021).

2.3 The Global North: the United Kingdom, a developed country?

The UK's welfare state has an even longer history and dates back to the 20th century. It was intended to improve health care, education, employment, and social security for its citizens. However, it was not until the Second World War and immediately thereafter, that food and health care systems were established with the aim of providing equal access for all. During WW2 a Ministry of Food ensured that everyone was adequately fed by implementing a strict food rationing system. National kitchens ('British restaurants') were set up locally, where inexpensive meals were available (Caplan 2020). Like other aspects of the welfare state, in particular the National Health Service, the aim was to provide comprehensive universal and free services for all. In recent decades, this system has been gradually dismantled and privatised, and access to food has become highly unequal, with responsibilities shifted to individuals and the market. This section will focus on social security for its citizens and assistance for non-citizen asylum seekers.

From 2010 onwards, a 'Universal Credit' (UC) system was introduced to reform and combine all forms of social assistance. Since 2012, this system has been digital by default, as all procedures and services, including applications, are done online and digitally assessed. According to the UN High Commissioner for Human Rights, the system may exclude some of the most vulnerable people (Alston 2018). First, many poor and vulnerable people are offline and without digital skills. As shown by the Lloyds Bank Consumer Digital Index, 16% of the population cannot complete an online form (ibid.: 8). Many more do not have access to broadband at home. Furthermore, the application can only be done in English although it is used by people whose first language is not English, for example those newly granted refugee status. One third of claims fail in the application process (ibid.: 9). Exclusions also occur through the use of algorithms that work out the level of benefits using data on past income. People considered 'high risk' by an algorithm are subjected to further scrutiny. Errors often result in incorrect benefit levels or exclusions that are difficult to challenge.

The UC system is part of the Conservative government's austerity measures and is designed with the belief that being on benefits should entail hardship (Alston 2018). In addition to making it difficult to access the system, drops in income are built into the system: a five-week wait for benefits to be received, changes or reductions in health-related benefits, in rent, benefit caps and the use of sanctions (Sosenko et al. 2019). Given these obstacles, it is not surprising that its introduction has coincided with an increase in hunger and food insecurity, and a growth in food bank use (Alston 2018, Sosenko et al. 2019). The rise in food insecurity has also been linked to low wages and an increased precarity in employment (Caplan 2020). In response to rising hunger, the number of charitable and volunteer organisations providing food aid has increased. The Trussel trust, the UK's main food bank network, grew from 65 food banks in 2011 to over 1,200 in 2019 (Sosenko et al. 2019).

Hunger and food insecurity increased further during the Covid-19 pandemic (Goudie and McIntyre 2021). By March 2020, one month into the lockdown strategy, one million newly poor had already signed on to UC and more than 1.5 million were going for days without food that same month (The Food Foundation 2020). In response, the government introduced its furlough scheme (providing loans to businesses to retain staff) and increased UC by £20/week. Supermarkets introduced rationing and provided food and funds to food banks. A footballer successfully lobbied for meals for schoolchildren when schools were closed. But food banks struggled to meet demand. The number of people in need increased, buying food in bulk was more difficult, and food banks had to cope with reduced staffing because of social distancing regulations, and some volunteers could not work because they were vulnerable and shielding (Caplan 2020). Although the government frequently made comparisons with WW2 in terms of national actions, food systems during the pandemic did not provide universal access. Feeding people and rationing became in large part the responsibility of individuals, food banks and supermarkets. The latter made huge profits, and as food banks received donations from supermarkets and food retailers, they too became corporatised (ibid.). The increase in food insecurity and inequality in the UK also came to the attention of Human Rights Watch (Human Rights Watch 2020). Food sector workers and black, Asian and minority ethnic (BAME) groups were amongst the worst affected (Goudie and McIntyre 2021).

Those in ‘food poverty’ in the UK often have a migration background (O’Connell and Brannon 2021). As part of the hostile environment, ‘destitution is built into the asylum system’ (Alston 2018: 19), which aims to deter migrants from coming to the UK. Asylum seekers are banned from working and receive a ‘derisory level of support’ that guarantees they will live in poverty (ibid.). In the past five years, their assistance has been digitalised – enabling close surveillance. In 2016, the Home Office introduced a debit payment card for asylum seekers. Prior to this, asylum seekers collected cash from the post office. Reasons given for this change include increased convenience and access for users (Privacy International 2019). Payment is currently £8/week for hotel accommodations (‘full-board’, used particularly during the pandemic) and £39.63/month for those in other type of housing provided by the Home Office (HO) (usually several months after arrival). Food provided as part of ‘full-board’ arrangements is generally of poor quality and quantity and being left for months without being able to prepare food is deeply dehumanising (Jaspars 2021). With the debit payment card (called the Aspen card), asylum seekers can withdraw cash or buy goods in specified shops. Acceptance of the card is, however, conditional on surveillance (Tillyard 2019). The HO is explicit that expenses are monitored – and the way asylum seekers spend their money can be used against them. Asylum support can be stopped based on invisible and arbitrary rules (Right to Remain News 2019, Privacy International 2021). For example, asylum seekers could be questioned if it is found that they had not been spending money (but in fact they might have been saving for a more expensive item such as warm clothes) or if they had travelled to outside their ‘authorised city’ (for instance to meet friends)

(Tillyard 2019). If asylum seekers cannot justify their expenditure or movements, access to cash can be suspended, which means all expenditure are monitored. This is also done if an asylum claim is rejected but while an appeal is in progress. Forcing people to live on such minimal amounts of money, and then monitoring them is a form of slow violence, involving – amongst other things – limiting consumption to be able to meet other basic needs (Mayblin et al. 2020). When recently the HO changed the company providing the debit cards, thousands went hungry because they did not receive their card on time (Taylor 2021a).

As such, a digital welfare system performs as a tool for disciplining the poor and altering their social behaviour (Foucault 1977 and 2007, de Laat 2019). Behaviour can be altered not only through state actions on the basis of surveillance – e.g., monitoring expenditure and issuing sanctions on the basis of this – but also just by the thought of being surveilled (panopticism) and the shame attached to being seen to claim social welfare payments (Alston 2019). It can influence what people buy with their welfare payments and, as we have seen, it impacts mobility (people have to stay in one place and are therefore easier to control). For asylum seekers, it functions as part of the hostile environment.¹⁰

An important critical element is the issue of private sector involvement. The digitalisation of welfare in the UK (and elsewhere) is closely associated with its privatisation (Alston 2019). The government has outsourced the design and management of the technological infrastructure to private sector partners or corporations. The administration of the system for asylum seekers was first managed by Sodexo and since May 2021 by Prepaid Financial Services, both of whom have been mired in controversy; the former because of disregard for privacy and wellbeing when managing the probation service (amongst other issues) (Tillyard 2019), and the latter for breaking competition rules and money laundering (Asylum and Refugee Network 2021). The transfer has already been controversial. Many asylum seekers did not receive the new card on time and more than two weeks later, at least one third of asylum seekers had not received or had not been able to activate their card (ibid.). Tillyard (2019) remarks ‘as the Aspen programme gradually expands, it would be short-sighted not to wonder whether similar systems may be rolled out to other benefit claimants in the UK in the future’. Testing these digital technologies on asylum seekers in the UK could well be a pilot before rolling out on general populations globally.

¹⁰ In other refugee contexts, the use of digitalised assistance to restrict mobility has been used as a form of containment, for example in Greece, where only people who claimed asylum received debit cards, thus penalising onward movement (Tazzioli 2019).

3 Some key political issues

The use of digital technologies is a political choice, not the inevitable result of scientific progress. (Alston 2019)

Our preliminary review of the three-country case study has shown remarkable similarities between the UK welfare system and its treatment of asylum seekers, and food assistance and social protection programmes in countries like India and Sudan. In all three cases, new digitalised approaches are justified because of increased convenience, access, efficiency, and the potential to overcome corruption or diversion in previous food or welfare systems. Digital welfare is supposedly meant to increase access to food, through cash assistance or increased production and farmers income in India and reduce hunger and malnutrition. All these have been questioned and found to create problems for the beneficiaries. It is also interesting to note that in the UK the digital welfare state is seen as part of austerity measures and the hostile environment, but that in Sudan it is part of development and humanitarian assistance, and in India it is presented as progress and improvement of its national food distribution system.

A number of previous studies highlight the need for in-depth exploration of the politics of digital assistance, addressing issues such as how technology and humanitarian policy influence each other, what power these technologies represent, and how they affect power relations (Bergtora Sandvik et al. 2014). There is also a need to examine the positive elements of digitalised practices and surveillance, its scope for political control and serving particular interests (Weitzberg et al. 2021), and the full array of threats represented by the emergence of the digital welfare state (Alston 2019). Duffield (2018 and 2021) has gone furthest in analysing the political effect of digital technologies, their role in drawing the world together in terms of welfare systems, and in creating and governing a global precariat. Our brief analysis adds to these studies and shows the following to be areas of concern needing further exploration.

3.1 Exclusions and making invisible (or disappear)

All three case studies identify the potential for exclusion of vulnerable populations from digitalised systems, the very group it is supposed to protect. In the UK, a large proportion of the population is not able to complete online applications and another proportion may be incorrectly excluded through the use of algorithms. A recent change in debit payment cards for asylum seekers left about one third without access to financial assistance. In India, more stringent ID requirements – including biometric identification – have shown to lead to exclusions. In Sudan, indications are that exclusions from highly targeted cash transfer programmes occur for a number of reasons but are yet to be examined. Moreover, the need for national ID documents (which many people currently do not have) could lead to a number of new exclusions, including those in opposition-held areas.

Alston (2019) describes ‘big tech’ as a driver of inequality leading to the creation of a vast digital underclass. The elimination of human interaction and

compassion that digital, or remote, technologies entail also makes it easier to withdraw assistance or make those that need it invisible. Digitalisation has led to a shift from material assistance to provision of information – for example on food and hygiene habits to improve nutrition (Duffield 2018, Jaspars 2018), or on prices of agricultural goods to allow farmers to engage in the global market. As such it also represents a shift from state or international organisations to individual responsibilities and resilience (ibid.). The move to digital identities and digital assessments contributes to a loss of compassion and visibility of suffering. The Covid-19 pandemic has increased digitalisation and remoteness globally.

It may be argued that the exclusions, and their associated invisibility of a digital underclass, are intended. In a country like India and Sudan, with their low literacy levels, and the testing of new digital systems on asylum seekers in the UK, unleashing digitalisation could only mean that there is a more than tacit acceptance that large populations will be ‘let to die’ in the Foucauldian biopolitical sense. As the UK case study shows, the digital divide has also been observed in ‘developed’ western countries where large numbers of people are falling below the poverty line due to austerity measures, including cuts in benefits, exacerbated by income and job losses in the Covid-19 pandemic shutdowns.

3.2 Changing behaviour and disciplining populations

Each one of these case studies also highlights the potential for digital technologies to discipline populations and influence behaviour. A range of practices can be identified. In most welfare states, or humanitarian crises, surveillance of health indicators (and other indicators of well-being or risk) is necessary to plan assistance programmes, and a formal identity enables access to resources or assistance (Weitzberg et al. 2021). In many contexts, proof of identity is now a biometric ID card.

Surveillance is, however, also a tool for disciplining and control (ibid.). The direct disciplining through surveillance of asylum seekers in the UK is one example – people’s expenditures and movements are monitored, and benefits removed if these are considered not authorised or inappropriate. Even more sinister is that financial assistance is conditional on being monitored in this way. The surveillance of asylum seekers in the UK may seem an extreme case but the potential exists everywhere, with possibly even worse consequences. Another example is the Aadhaar identification system in India, which has become ubiquitous and the PDS is only one of the welfare services where it is used. If taken as a technology, it is a surveillance technology which identifies an individual as a citizen (therefore deemed worthy of certain benefits and rights), whose identity is reduced to a bare number; the data that the number represents would be at the fingertips of the person who is transcribing it, hence the danger of its use and misuse in highly polarised contexts. In Sudan, any involvement of the Security Services in the digital welfare system – even if only as shareholders in the telecommunications firms contracted to transfer cash aid – also spells danger. These same security services have been involved in the

surveillance, detention, and torture of political opponents in the past. On the other hand, WFP ownership of data in Sudan may be seen as an infringement on Sudan's sovereignty.

Restrictions or influences on mobility through digital systems can also be noted in other contexts. People usually have to redeem their allowance in specified places. These are often urban locations, thus potentially shifting assistance from rural to urban areas (e.g., in India where the One Nation One Card system is justified as benefitting migrant workers), or in the case of political insurgencies (Sudan and Somalia) from rebel-held to government-held areas. It also has implications for keeping displaced populations in camps or towns. Restricting the mobility of migrants or asylum seekers functions as a tool for control or containment. In Greece, for example, bank debit cards for cash transfers are only provided to those who claim asylum there – thus excluding a large proportion who wants to move to another EU country (Tazzioli 2019). This also links to the theme of exclusions above.

People's food habits are also streamlined and controlled through observation and surveillance; even just the expectation of being observed is bound to change behaviour as part of governmentalised 'self-care'. In other studies, beneficiaries have been noted to buy what they think they are expected to buy with assistance, in the assumption that if they act as responsible consumers, they can maintain a low profile and not come under the eye of surveillance (Vogel et al. 2020). The same holds in the case of debit cards when surveillance is expected. In places like Sudan, cash transfers are sometimes conditional on attending classes in child feeding and hygiene practices. Providing people with below-subsistence levels of assistance forces them to behave in certain ways – having to make impossible choices between food, clothes, health care, legal assistance, transport, social contact, etc. Being constantly pre-occupied with the day-to-day survival in isolation reduces the potential for resistance and protest and is therefore also a tool for disciplining and containing dissent.

3.3 Profit

In all three case studies, much of the digital infrastructure is outsourced to private companies, whether by governments or by the WFP. This may include companies such as Mastercard for banking and debit card services, and financial service providers like Sodexo to handle the administration of the beneficiary data. WFP has developed its own beneficiary identification and management system through SCOPE, but still needs partnerships with banks and mobile phone or satellite companies, and perhaps internet service providers, traders, and shopkeepers in some contexts. Each of these may also have particular political affiliations within the countries concerned. Global connections are also important – companies such as Mastercard and Sodexo (involved in digital assistance to asylum seekers in the UK and with WFP in India) are vast multinational conglomerates that require as much attention, if not more, as was the case in the global grain trade in the 1970s (see for

example George 1976).¹¹ The Aadhaar Unique Identification System of India was proposed and helmed by a co-founder of Infosys Technologies. These companies will be interested not only to provide the contracted services but also, because digitised cash transfers create consumers, to open up new possibilities for capital accumulation (Tazzioli 2019). In India, the concept of ‘smart agriculture’ or precision agriculture on the one hand makes all traditional knowledges of farming unsmart and redundant. But most importantly it is yet another neoliberal solution to the problems of ecosystem and climate change, themselves brought on by neoliberal capitalism. Digital technology is a new frontier being opened up for capital accumulation and the Covid pandemic has created conditions conducive for its legitimisation (Sathyamala 2020). Global financial industries linked with national power structures may be interested in a status quo in which a level of crisis and precarity is maintained but with enough targeted social assistance to prevent insurgencies.

3.4 *Survival and protest*

It appears that digital technologies are consolidating the emergence of a new global precariat, governed by restrictions on movement, closely monitored, positioned to be easily exploitable, neglected, or done away with. Little is known about how the people that make up this global precariat actually survive, or even whether they do survive. What is the scope for resistance, activism, and protest to reverse this situation? What does it take to protest rather than focus on survival? Farmers in India clearly feel their survival actually depends on protest against the farm laws that would deprive them of their land and livelihood. Protests against the selective provision of debit cards in Greece is yet another example: 120 asylum seekers occupied the UNHCR building in Athens (in 2018), to claim the debit cards they were entitled to. The protest about cards acted as a catalyst for other struggles (Tazzioli 2019). Protests in Darfur’s displaced camps have been linked to the shift to vouchers and greater targeting (Radio Dabanga 2021b), and recent looting of warehouses could also be linked to changes in assistance (Jaspars and El-Tayeb 2021). Furthermore, in urban areas, the young people who ousted Al-Bashir’s authoritarian regime have continued to protest against corruption or the slow progress towards democracy and justice, as well as high food prices. Limited knowledge or information on the digital transformation happening in their country would naturally limit dissent. In the UK, possibilities of resistance are limited. Asylum seekers on a constrained budget are focused on survival – unable to contact family and meet friends (or pay for transport or necessities for social gathering) and disempowered through their isolation (Mayblin et al. 2020). Moreover, they are told that protesting may negatively affect their

¹¹ Susan George (1976) critically examined the global food system and the use of food aid as a political tool and to promote consumption and export of US-grown food. She also argued that the speculation of multinational grain traders, the expansion of agribusiness and the increased inequality resulting from the introduction of modern agricultural technology contributed to the 1974 world food crisis.

asylum claims. When fires were started in the military barracks, where overcrowding and dismal sanitary conditions had led to an outbreak of Covid-19 infections amongst asylum seekers, they may have felt – like the farmers in India – that they had to protest as their actual survival was at stake (Taylor 2021b).

4 Concluding remarks: Consolidation of a North-South class divide?

In this paper, we raise serious questions about the ability of digital food assistance and social welfare technologies to address food insecurity and hunger. Promoted in the name of efficiency and accountability, even a brief review of information on three widely varying countries underlines the need to further explore the threats represented by digital technologies, specifically to those it is said to serve, and its North–South linkages. Digital technologies have the potential to lead to exclusions and invisibility – or even disappearance – of politically marginalised groups. The surveillance it entails can have benefits for managing the health and welfare of populations but can also be a means of political control. Forcing people to live on below subsistence-level aid while giving a cosmetic appearance of helping them further influences behaviour. These are forms of slow violence, which suppress political dissent and undermine people’s ability to live with dignity, or even to live at all.

Our review has also highlighted the global nature of digital assistance or welfare, and that perhaps rather than talking about a North–South divide, we should be talking about North–South linkages, and a class divide irrespective of where the precariat resides. Governing through digital technologies has become a global phenomenon. By making invisible, and enabling ‘letting die’ without resistance, digital technologies may facilitate the normalisation of humanitarian crisis or extreme poverty amongst sections of the population. As such, they can also enable their continued promotion by business and aid actors leading to globalised financial and surveillance benefits. Each of these issues needs further exploration.

References

- Alston, P. (2018) *Statement on Visit to the United Kingdom, by Professor Philip Alston, United Nations Special Rapporteur on extreme poverty and human rights*. London: United Nations.
- Alston, P. (2019) *Report of the Special Rapporteur on extreme poverty and human rights, Philip Alston, submitted in accordance with Human Rights Council resolution 35/19*, New York: UN.
- Asylum and Refugee Network (2021) ‘Aspen cards and surveillance of people in the asylum system’, available at <https://qarn.org.uk/aspen-cards-and-surveillance-of-people-in-the-asylum-system/>, accessed 28 June 2021.
- Balasubramanian, S. (2015) ‘Is the PDS already a cash transfer? Rethinking India’s food subsidy policies’, HKUST IEMS Working Paper No. 2015-16, HKUST Institute for Emerging Market Studies, Hong Kong.

- Baldo, S. (2021) *Sudan's Exchange Rate. How to Sustain Progress and Pre-empt Risks*. The Sentry.
- Bergtora Sandvik, K., M. Gabrielsen Jumbert, J. Karlsrud and M. Kaufmann (2014) 'Humanitarian technology: a critical research agenda', *International Review of the Red Cross*, 96(894): 219–42.
- Brewin, M., H. Khogali, K. David, A. Khojali, N. Mohamed and N. Horst (2017) *Operation Evaluation. Sudan Protracted Relief and Recovery Operation 200808*. Rome: WFP.
- Byatnal, A. (2018) 'India Is Confronting a Cash Transfer Failure', available at <https://deeply.thenewhumanitarian.org/malnutrition/community/2018/05/10/harnessing-public-private-partnerships-to-improve-diets>, accessed 23 June 2021.
- Caplan, P. (2020) 'Struggling for food in a time of crisis: Responsibility and paradox', *Anthropology Today*, 36(3): 8-10.
- Clausen, M.L. (2021) *Piloting Humanitarian Biometrics in Yemen*, Mideast Policy Brief 1. Oslo: PRIO.
- Clausen, M.L. and B. Martins (2021) 'Humanitarian biometrics in Yemen: The complex politics of humanitarian technology', available at <https://www.humanitarianstudies.no/2021/06/30/humanitarian-biometrics-in-yemen-the-complex-politics-of-humanitarian-technology/>, accessed 11 July 2021.
- De Laat, P.B. (2019) 'The disciplinary power of predictive algorithms: a Foucauldian perspective', *Ethics and Information Technology*, 21(4): 319-29.
- De Waal, A. (1989) *The Sudan Famine Code of 1920. Successes and failures of the Indian model of famine relief in colonial Sudan*. London: Action Aid.
- Donovan, K. (2013) 'Infrastructuring Aid: Materializing Social Protection in Northern Kenya', CSSR Working Paper No. 333. Capetown: University of Capetown.
- Duffield, M. (1994) 'The political economy of internal war: Asset transfer, complex emergencies, and international aid', in: J. Macrae and A. Zwi (eds) *War and Hunger. Rethinking international responses to complex emergencies*. London: Zed Books. Pp. 50-69.
- Duffield, M. (2016) 'The resilience of the ruins: Towards a critique of digital humanitarianism', *Resilience*, 4(3): 147-65.
- Duffield, M. (2018) *Post-Humanitarianism. Governing Precarity in the Digital World*. Cambridge: Polity Press.
- Duffield, M. (2021) 'Warfare on Welfare in the Age of Emergency' in: J. Fiori et al. (eds) *Amidst the Debris. Humanitarianism and the end of liberal order*. London: Hurst.
- FAO (1996) 'Food security and food assistance', Rome Declaration on World Food Security and World Food Summit Plan of Action, World Food Summit, 13-17 November, Rome. Technical background document, Executive Summary, available at <http://www.fao.org/3/w2612e/w2612e13.htm>, accessed 25 July 2021.
- Fews Net (2020) *Sudan Food Security Outlook. February to September 2020*, Khartoum: Fews Net.
- Fews Net (2021) *SUDAN Food Security Outlook. February to September 2021. Conflict and a macroeconomic crisis drive above average needs through September 2021*, USAID.

- Flyvbjerg, B. (2006) 'Five Misunderstandings About Case-Study Research', *Qualitative Inquiry*, 12(2): 219.
- Foucault, M. (1977) *Discipline and punish. The birth of the prison*. London: Penguin Books.
- Foucault, M. (2007) *Security, Territory, Population. Lectures at the College de France 1977-78*, Senellart, M. Basingstoke: Palgrave (translated by Burchell, G.).
- Gallopín, J.-B. (2020) *Bad Company: How Dark Money Threatens Sudan's Transition*. European Council on Foreign Relations.
- George, S. (1976) *How the Other Half Dies. The Real Reasons for World Hunger*. London: Penguin Books.
- Goudie, S. and Z. McIntyre (2021) *A Crisis Within A Crisis: The Impact of Covid-19 on Household Food Security*. London: The Food Foundation.
- Government of India (no date) List of 34 Central sector/centrally sponsored schemes amenable to direct cash transfers. Available at: <https://www.techeduhry.gov.in/sites/default/files/documents/3-List-of-Schemes-under-DBT.pdf> accessed 15 July 2021.
- Gupta, A. (2020) *Public Financial Management System - User manual*. Controller General of Accounts. Government of India. <https://welfarepension.lsgkerala.gov.in/DBTDocs/DBTusermanual.pdf>. Accessed 15 July 2021.
- Haq, Z. (2020) 'Food rationing system digitised in 24 states: Centre', *Hindustan Times*. Available at <https://www.hindustantimes.com/india-news/food-rationing-system-digitised-in-24-states-centre/story-xLidpADiyJlwAMD3kKxt4I.html>. Accessed 22 June 2021.
- Harrison, C. and C. Wagabi (2011) *Operational Review of ODS Voucher Programme in Sudan*. Khartoum: World Food Programme.
- Harvey, P., K. Proudlock, E. Clay, B. Riley and S. Jaspars (2010) *Food aid and food assistance in emergency and transitional contexts: a review of current thinking*, HPG Commissioned Report. London: Overseas Development Institute.
- Hendawi, H. (2021) 'Sudan launches cash transfer scheme for low-income families amid economic crisis', available at <https://www.thenationalnews.com/world/africa/sudan-launches-cash-transfer-scheme-for-low-income-families-amid-economic-crisis-1.1174055>, accessed 2 July 2021.
- Holloway, K. and O. Lough (2021) 'Although shocking, the Rohingya biometrics scandal is not surprising and could have been prevented', available at <https://odi.org/en/insights/although-shocking-the-rohingya-biometrics-scandal-is-not-surprising-and-could-have-been-prevented/>, accessed 11 July 2021.
- Human Rights Watch (2020) 'UK: Hunger is Visible Tip of Child Poverty Iceberg UK's Children's Rights Record is Under Review', available at <https://www.hrw.org/news/2020/11/24/uk-hunger-visible-tip-child-poverty-iceberg>, accessed 24 June 2021.
- Jaspars, S. (2018) *Food Aid in Sudan. A History of Power, Politics and Profit*. London: Zed Books.
- Jaspars, S., G. Adan and N. Majid (2020) *Food and Power in Somalia: Business as Usual? A scoping study on the political economy of food following shifts in food assistance and in governance*. London: London School of Economics and Political Science.
- Jaspars, S. and Y. El-Tayeb (2021) *Caught in transition: food aid in Sudan's changing political economy*. Khartoum: Saferworld Conflict Sensitivity Facility.

- Jaspars, S. (2021) 'The Everyday Cruelties of the UK Asylum System', available at <https://www.law.ox.ac.uk/research-subject-groups/centre-criminology/centreborder-criminologies/blog/2021/06/everyday>, accessed 12 July 2021.
- Kaka, N., A. Madgavkar, R. Kshirsagar, J. Gupta, K. Manyika, S. Bahl and S. Gupta (2019) *Digital India: technology to transform a connected India*. McKinsey & Company.
- Keen, D. (1994) *The Benefits of Famine. A political economy of famine and relief in southwestern Sudan 1983-89*. Oxford: James Curry.
- Mathur, A. (2021) 'States must implement 'One Nation, One Ration Card' scheme: Supreme Court', *India Today*, 12 June. Available at: <https://www.indiatoday.in/law/story/states-one-nation-one-ration-card-scheme-supreme-court-migrant-workers-1813815-2021-06-12>, accessed 23 June 2021.
- Maslen, C., A. Raffle, S. Marriott, and N. Smith (2013) *Food Poverty*. Bristol City Council. <https://bristolfoodpolicycouncil.org/wp-content/uploads/2013/08/Food-Poverty-Report-July-2013-for-publication.pdf>, accessed 13 July 2021.
- Maxwell, S., J. Swift and M. Buchanan-Smith (1990) 'Is food security targeting possible in Sub-Saharan Africa? Evidence from North Sudan', *IDS bulletin*, 21(3): 52-61.
- Mayblin, L., M. Wake and M. Kazemi (2020) 'Necropolitics and the Slow Violence of the Everyday: Asylum Seeker Welfare in the Postcolonial Present', *Sociology*, 54(1): 107-23.
- McCully, J. (2020) "Explainer: What is the "Digital Welfare State"?", available at <https://digitalfreedomfund.org/explainer-what-is-the-digital-welfare-state/>, accessed 22 June 2021.
- Ministry of Electronics and Information Technology (n.d.) *India's trillion dollar digital opportunity*. Delhi: Government of India.
- Ministry of Finance (n.d.) 'Direct Benefit Transfer', available at <https://pfms.nic.in/NewDefaultHome.aspx>, accessed 22 June 2021.
- Mock, N., G. Singhal, W. Olander, J.-B. Pasquier and N. Morrow (2016) 'mVAM: A new contribution to the information ecology of humanitarian work', *Procedia Engineering*, 159: 217-21.
- Moseley, W., M. Schnurr and R. Bezner Kerr (2015) 'Interrogating the technocratic (neoliberal) agenda for agricultural development and hunger alleviation in Africa', *African Geographical Review*, 34(1): 1-7. <http://dx.doi.org/10.1080/19376812.2014.1003308>.
- Muralidharan, K., P. Niehaus and S. Sukhtankar (2020) *Identity verification standards in welfare programs: Experimental evidence from India*. NBER Working Paper Series. Working Paper No. 26744. National Bureau of Economic Research.
- National Food Security Portal (n.d.) 'National Food Security Act (NFSA)', available at <https://nfsa.gov.in/portal/NFSA-Act>, accessed 22 June 2021.
- Nawani, N.P. (1994) 'Indian experience on household food and nutrition security, FAO Regional expert consultation FAO-Un Bangkok', available at http://www.fao.org/3/x0172e/x0172e06.htm#P1406_137724, accessed 22 June 2021.

- O'Connell, R. and J. Brannon (2021) *Families and food in hard times*. London: UCL Press.
- Pani, N. (2020) 'Farm Bills and the PDS conundrum', *The Hindu Business Line*, 3 November, available at <https://www.thehindubusinessline.com/opinion/columns/farm-bills-and-the-pds-conundrum/article33015693.ece> , accessed 25 July 2021.
- Parker, B. (2018) 'Exclusive: Audit exposes UN food agency's poor data-handling', available at <https://www.thenewhumanitarian.org/news/2018/01/18/exclusive-audit-exposes-un-food-agency-s-poor-data-handling>, accessed 9 June 2021.
- Privacy International (2019) 'Big Brother says 'No': Surveillance and income management of asylum seekers through the ASPEN Card', available at <https://privacyinternational.org/long-read/3259/big-brother-says-no-surveillance-and-income-management-asylum-seekers-through-aspem>, accessed 9 June 2021.
- Privacy International (2021) 'What is an Aspen Card and why does it need reform?', available at <https://privacyinternational.org/explainer/4425/what-aspem-card-and-why-does-it-need-reform>, accessed 9 June 2021.
- PTI (2019) 'DMK opposes Centre's "one nation, one ration card" scheme', *The Indian Express*, 30 June. Available at: <https://indianexpress.com/article/india/dmk-opposes-centres-one-nation-one-ration-card-scheme-5807721/>, accessed 23 June 2021.
- Radio Dabanga (2021a) 'Additional funding for Sudan's Family Support Programme', available at <https://www.dabangasudan.org/en/all-news/article/additional-funding-for-sudan-s-samarat-family-support-programme-1#:~:text=The%20World%20Bank%20and%20the,a%20total%20of%20%24820%20million>.
- Radio Dabanga (2021b) 'Darfur displaced suffer from severe food crisis', available at <https://www.dabangasudan.org/en/all-news/article/darfur-displaced-suffer-from-severe-food-crisis>, accessed 10 March 2021. accessed 16 April 2021.
- Rajagopal, K. (2021) 'Farmers' protest: Supreme Court stays implementation of 3 controversial farm laws' *The Hindu*, 12 January. Available at: <https://www.thehindu.com/news/national/sc-suspends-implementation-of-three-farm-laws/article33557081.ece>, accessed 17 July 2021.
- Reserve Bank of India (2018) 'State Finances: A Study of Budgets of 2017-18 and 2018-19', available at <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/3CHAPTERC1F22FCD83C5484293753726B2CD4F6E.P>, accessed 22 June 2021.
- Right to Remain News (2019) 'Home Office tracking use of Aspen card by people seeking asylum', available at <https://righttoremain.org.uk/home-office-tracking-use-of-aspem-card-by-people-seeking-asylum/>.
- Rukmini, S. (2016) 'Only 8.15% of Indians are graduates, Census data show', available at <https://www.thehindu.com/news/national/only-815-of-indians-are-graduates-census-data-show/article7496655.ece>, accessed 1 July 2021.
- Satapathy, J., N.C. Nayak and J. Mahakud (2021) 'Investigating preferences between cash and in-kind transfers among the food subsidy beneficiaries of India', *Journal of Public Affairs*, <https://doi.org/10.1002/pa.2592>.

- Sathyamala, C. (2016) *Nutrition – contested meanings: A theoretical and empirical enquiry*. Unpublished PhD thesis. International Institute of Social Studies, Erasmus University Rotterdam, The Hague, The Netherlands.
- Sathyamala, C. (2020) *Covid-19: The Biopolitical Odyssey*, ISS Working paper, General Series 667. <https://repub.eur.nl/pub/132250>
- Sharma, M. and S. Nair (2016) ‘Digital Social Payments in India: Can the challenges be overcome?’, available at <https://www.cgap.org/blog/digital-social-payments-india-can-challenges-be-overcome>, accessed 22 June 2021.
- Sosenko, F., M. Littlewood, G. Bramley, S. Fitzpatrick, J. Blenkinsopp and J. Wood (2019) *State of Hunger. A Study of Poverty and Food Insecurity in the UK*. London: The Trussel Trust.
- Taylor, D. (2021a) ‘Thousands of asylum seekers go hungry after cash card problems’, available at <https://www.theguardian.com/uk-news/2021/jun/02/thousands-of-asylum-seekers-go-hungry-after-cash-card-problems>, accessed 10 June 2021.
- Taylor, D. (2021b) ‘Napier barracks staff feared asylum seekers might die from Covid’, available at https://www.theguardian.com/uk-news/2021/jul/11/napier-barracks-staff-asylum-seekers-die-covid-health?CMP=Share_iOSApp_Other, accessed 19 July 2021.
- Tazzioli, M. (2019) ‘Refugees’ Debit Cards, Subjectivities, and Data Circuits: Financial-Humanitarianism in the Greek Migration Laboratory’, *International Political Sociology*, 13(4): 392–408.
- The Engine Room and Oxfam (2018) *Biometrics in the Humanitarian Sector*, Oxford: Oxfam.
- The Food Foundation (2020) ‘COVID-19: latest impact on food’, available at <https://foodfoundation.org.uk/covid-19-latest-impact-on-food-2/>, accessed 11 July 2021.
- Thomas, E. and M. Ghizouli (2020) *Sudan’s Grain Divide. A revolution of bread and sorghum*. Rift Valley Institute.
- Tillyard, G. (2019) ‘Big Brother says “No”: surveillance and income management of asylum seekers through the UK ASPEN Card’, available at <https://www.opendemocracy.net/en/digitaliberties/big-brother-says-no-surveillance-and-income-management-of-asylum-seekers-through-the-uk-aspens-card/>, accessed
- Tricontinental (2021) ‘The Farmers’ Revolt in India’, 14 June, Dossier 41, available at: <https://thetricontinental.org/dossier-41-india-agriculture/>, accessed 23 June 2021.
- UN OCHA (2021) Humanitarian Needs Overview Sudan. Khartoum: UN OCHA.
- Vogel, B., Tschunkert, C. and I. Schläpfer, (2021) ‘The social meaning of money: Multidimensional implications of humanitarian cash and voucher assistance’, *Disasters*, <https://onlinelibrary.wiley.com/doi/10.1111/disa.12478>.
- Weitzberg, K., M. Cheesman, A. Martin and E. Schoemaker (2021) ‘Between surveillance and recognition: Rethinking digital identity in aid’, *Big Data & Society*, <https://doi.org/10.1177/20539517211006744>.

- Varghese, S. (2020) 'India at a turning point', Institute of Agriculture and Trade Policy. 14 December. <https://www.iatp.org/blog/202012/india-turning-point>. Accessed 9 July 2021.
- WFP (2016) *WFP SCOPE. Know them better, to serve them better*, Rome: World Food Programme. <https://documents.wfp.org/stellent/groups/public/documents/communications/wfp258555.pdf>.
- WFP Sudan (2017) *Cash-based Transfers*. Khartoum: World Food Programme.
- WFP (2018) *Sudan Country Strategic Plan 2019-2023*. Khartoum: WFP.
- Young, H. and A. Marshak (2018) *Persistent Global Acute Malnutrition. A discussion paper on the scope of the problem, its drivers, and recommendations for policy, practice, and research*. Boston: Feinstein International Center.