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Smart gendered mobilities and lessons for gendered smart mobilities: Economic migrants in Bristol, UK

Assemblage refers to a dynamic constellation of ideas or strategies that relate to a common theme or interest group (Deleuze and Guattari 1988). This paper starts with an examination of the assemblage of mobilities undertaken by women in the UK historically and in the present, with particular attention to strategies which have enriched their participation and enabled empowerment, notably mobilising smart collective approaches to travel in order to make and maintain connections, and to maximise opportunities and affordances.

Mobilities is the conceptual framework for analysing the meaning and experience of journeys which has grown in scope and theoretical purchase over the last ten years (Urry 2002; Sheller and Urry 2006). In the same way as place is a convergence of a particular set of spatialities, experiences and meaning-making (Tuan 2001), movement 'carries with it the burden of meaning ...' (Cresswell 2006, 6) and where movement contributes to this meaningful shaping of *social* time and space, it is described as *mobility*. In turn, mobilities are embodied, contextualised, and relational: 'experienced through bodies and senses, inflected by place, practice, belief, emotion, and affect, but also by the constraints and agencies afforded by socio-economic, cultural, and political context, as well as physical capacities' (Maddrell 2011: 16). Although scientific accounts usually demur from these aspects of embodied experience, they are, nonetheless, central to individual relational migration and other mobility trajectories, practices, and their associated meanings, including engagement with cities, towns, and villages as places of habitation, work, community, and social life**.**

Gender and mobilities

Historical precedents

Mobilities, including specific forms of mobility such as international migration, are inflected by gender in a variety of ways. In my previous historical research on women's geographical work in the nineteenth and twentieth centuries, in which travel and fieldwork were major components, I argued that while examining the wider and varied contexts of any woman's

work/travel is vital, it is only by disaggregating gendered experience by situated localities, socio-economic standing, and cultural norms within countries, communities, and families that we can understand women's status and opportunities (reference?). That is to say, contextual approaches need the theoretical edge of feminist analysis, including attention to varied intersectional factors, in order to understand gendered needs and strategies. Likewise, analysis and understanding of *men's* travel/ travel writing is better for attention to particular paradigms of masculinity (see for example Driver 1994). Historical analyses of women travellers show that those of independent socio-economic means were able to transcend social barriers ascribed to gendered norms (see Blunt 1994 on Mary Kingsley). Other women (and some men) without independent wealth, such as school teachers with modest incomes and no/little experience of international travel, pooled their resources, skills, and knowledge to facilitate collective endeavours, such as national and international field studies. Mobilising these networks served to collectivise knowledge, skills, costs, learning, and resources in order to enrich their life experiences, education, and ongoing professional development, particularly for women (Maddrell 2009). They were a form of smart gendered mobility which could also enhance learning and career opportunities, and such strategies represent potential insights for contemporary gendered mobilities in relation to our understanding of migrants in contemporary smart cities, as discussed in the next section.

Contemporary mobilities: Smart cities, gender and smart mobilities

Smart technologies can be inclusive and empowering: 'New spatial media – the informational artefacts and mediating technologies of the geoweb – represent new opportunities for activist, civic, grassroots, indigenous, and other groups to leverage web-based geographic information technologies in their efforts to effect social change.' (Leszczynski and Elwood 2013: 544). Yet, feminist scholarship on digital technologies has long evidenced how information technology (IT), such as computer use and even social media-based activism, can be highly gendered and classed (see Morrow, Hawkins, and Kern 2015), and how contemporary big data projects reflect and (re)constitute gendered norms and urban inequalities (Rose 2017). Despite this awareness, discussions and representations of smart cities are dominated by men (as is common for urban studies more widely), and

this has implications: 'I'm assuming that the overwhelming dominance of men in the smart sector does have a major impact: on what tech is designed and how, on how potential markets are perceived, on what data is collected and what even counts as data, on how the smart city is imagined and therefore built.' (Rose 2016).

Understanding gender is vital to a critical examination of what constitutes 'Smart Cities', likewise, gender has been amply demonstrated as a significant factor in understanding mobilities (see Uteng and Cresswell 2008). Conventional understanding of 'Smart Cities' is closely linked to immediate and continuous access to the internet, typically via a smart phone and apps accessible on that phone, so this prompts one to ask two key questions: is access to online resources and smart phones gendered? And is this understanding of what constitutes smart cities and associated smart mobilities sufficiently inclusive? 'Smartphones can be an effective tool to empower women, as they enable women to access different mobile services for various purposes, including managing a business' (Ameen, Willis and Hussain Shah 2018: 158). However, access to smart phones can vary markedly within countries, communities, and families, and a smart phone gender gap is a key manifestation of these inequalities, especially in households where where limited economic resources intersect with gendered hierarchies and norms. Bridging this smart phone gender gap and facilitating *full access* is not only a question of literal access and cost, but also relates to the marketing of smart phones and access to training in their effective and secure use (*ibid.*).

Building on feminist critiques of earlier GIS systems, Elwood and Leszczynski (2013) argue that there is a need to apply gender analysis to developments in a period of burgeoning smart technology, in order 'to determine how it is that gender matters differently in this newly diversified, pervasive, and public context of geographic information technologies.' (Leszczynski and Elwood 2015: 12). They argue regarding new spatial media, that gender "matters" in three key aspects of social-technological life: i) new practices of data creation and curation; ii) affordances of new technologies; and iii) new digital spatial mediations of everyday life. For example, they critique the prevalence of smartphone service apps for coffee shops and bars versus the limited number designed to accommodate the more varied complexities of everyday life - such as route planners to assist parents negotiating daily multi-staged work-childcare-commuting mobilities.

From a policy perspective, Maria Sanguliano also argues that attention to gender is an important indicator of/ requirement for *inclusive* smart cities, and, that gender is a key variable for analysing urban innovation policies. For example, one European Union study has shown that that men and women's travel and consumption choices are influenced by environmental factors in different ways: 6% more women than men buy *local* products motivated by reducing carbon dioxide, and 2% more women than men choose environmentally-friendly transport *for environmental reasons*, while men score more highly than women on *car-sharing and buying cars* with eco-credentials (European Parliament, 2012; Sanguilano, n.d.). Similarly, different gendered mobility patterns have been identified in relation to key dimensions of space, time, purpose, and safety (allowing for differences in education, marital status, and income); this is evidenced in women's typically shorter journey distances, 'chain trip' models of travel, and reported sense of vulnerability at transport changeover points, as well as car use to manage/ minimise risk (European Parliament, 2012; European Commission, 2014; Ceccato, 2014). Sanguilano also highlights the often hidden gendered personal and social costs of the inability to optimise journeys, such as working women with children who reported having insufficient time for volunteering and other civic activities associated with social capital. These examples highlight the need for both technological innovation such as apps addressing the gendered needs of women and others with similar needs and concerns; urban design improvements to reduce risk (e.g. transport hubs and links); and for gender to be mainstreamed within transport-smart mobility policy and design.

Gender, mobility and meaning-making

Emerging studies of smart cities in both the global North and South 'highlight gendered and socio-economic patterns of inclusions and exclusions brought about by a digital urban age' (Datta 2019). Gender and mobility are mutually interacting: mobility shapes gender, as much as vice versa (Hanson 2010). Contemporary studies of mobilities and, more specifically, the pursuit of inclusive policies for smart mobilities and smart cities thus need to be attentive to gender in ways that: i) facilitate women's full participation in society; ii) recognise that understanding gender is not just about being attentive to 'women' as a

monolithic category, but being attentive to diverse gendered experiences of women, men, and LGBTQ+ groups, as well as diversity *within* these broad gender categories; and iii) mobilise smart technologies to facilitate knowledge/resource sharing and other collective *modus operandi* to create 'smart' cities and mobilities in the *broadest* sense. Part of that breadth of approach includes being attentive to migrant mobilities, including identifying and understanding nuanced gendered migrant mobilities. Within migration studies, Feminist geographers have emphasised the need to 'examine gender-differentiated power geometries at work in the labour market and the workplace, as well as patriarchal ideologies and the gendered power relations within the household and the reproductive sphere in shaping who moves and who stays' (Yeoh and Huang 2011: 682). Drawing on Hanson's (2010) discussion, the next part of this chapter explores the assemblage of gendered smart mobilities enabled by, but not limited to, digital technology within the diverse mobilities and work-seeking practices of a cohort of international economic migrants in Bristol, UK. Bristol is a city with a population of approximately 450,000 residents, where the largest migrant communities are Polish, Spanish, Somali, South and South East Asian. A sample of 33 recent 'economic' migrants who had settled in the city in the previous five years, and representing a range of countries of origin, were interviewed or participated in focus groups; this data was supplemented by 'Top Tips' from over 100 'established' migrants who had lived in Bristol for at least five years. Balance was sought between EU and Non-EU migrants (Third Country Nationals (TCNs)) by gender and age, as well as occupation, including highly qualified professional migrants. Nineteen of the participants were women, 14 were men; 14 were from the EU, 19 from beyond the EU (TCNs); 14 were White and 19 were from Black and Ethnic Minorities. Overall, the participating migrants had a range of educational and professional backgrounds, countries of origin, ethnicities, and migration experiences, as well as varying expectations, aspirations, and intentions in relation to living and working in Bristol. In addition to these interviews and focus groups, the project team also consulted several migrant support groups in Bristol and a job coaching agency for migrants, and surveyed residents (not discussed here). Analysis of this qualitative research provides insights to aspects of intersectional gender in relation to particular constructs and alternative models of smart mobilities within the context of smart cities.

Bristol economic migrants (BEM) study 2016: Lessons for gendered smart mobilities

Migrants are heterogeneous. Even subcategories such as the broad (and critiqued) classification of 'economic migrant' is extremely varied, including highly motivated entrepreneurs, highly qualified multilingual professionals who are head-hunted to work in UK firms and services (e.g. universities, media and aerospace industries), and other graduates and skilled workers, as well as those who migrate without a job offer and may need guidance on finding work. Each migrant/ migrant cohort will have a different relation to IT, as well as local services and communities, but these differences may be less distinct than previous scholarship has suggested. Indeed, even international 'talent' migrants who have typically been represented as having border-free and frictionless mobilities, are often more socially and culturally embedded than migration studies allow, e.g. their mobilities being shaped by familial ties as well as the mechanisms of 'Talent' recruitment and financial reward (Leinonen 2012; Yeoh and Huang 2015).Thus, just as international migrants vary in their skill sets, employability, and relation to the places they live and work, there is no 'one size fits all' approach to meeting migrants' differing needs (Integration Up North, (IUN) 2015). Nonetheless, when established migrants in the Bristol study were asked to share their 'Top Tips' for new migrants seeking to settle and find work in the city, several common themes emerged, namely, i) the role of the internet as a vital source of information (ranging from government sites to job opportunities, to accessing public services and accommodation); ii) country-of-origin expatriate communities as sources of information, including social media feeds; and iii) the need for English language proficiency to achieve the best match between an individual's skills and training, as well as the ability to confidently navigate rights and obligations without fear, including online and paper-based information and applications in order to access services, training, and any entitlement to benefits. While the first point supports conventional notions of smart cities, the latter indicate broader ways of smart migrant practices.

Figure 1. Top tips for new migrants: Best sources of information for jobs and business

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'Facebook groups of fellow nationals already resident here, community groups, employment agencies, but Facebook groups are much better' (Female, 35+ years, EU, (A8))

'There is information and support on setting up a business in the UK by EU-funded organisations and many organisations offer advice to migrants [on the] internet' (Female, 35+, EU)

'Internet, libraries, employment agencies, Bristol, City Council' (Male, 35+, EU)

'Use social media (Twitter, Facebook, [Gumtree]) where companies advertise and where communities of foreigners are offering support. Actually LinkedIn is very useful' (Female, 35+, EU)

'Local council, CAB, Business LINK, local parish council' (Female, 35+, SE Asia)

'Government support services, internet, local religious and other community groups' (Male, 35+, SE Asia)

Council, shopping centre information points, advice centres' (Male, <35, W Africa)

'HMRC website for setting up a business' (Male, <35, Asia Pacific)
'Job centre, friends, mosque' (Male, <35, S Asia)

"Job Centre, Government website to understand Visa requirements and permission to work here" (Female, 35+, S Am)

'Community groups of fellow nationals to share experience and advice' (Female, 35+, East Africa)

The indicative selection of 'Top Tips' in Figure 1 above, identifying key sources of information on work and business from established migrants living in Bristol, highlights the role of IT sources. Both female and male migrants originating from other European Union (EU) countries identify a mixture of websites, social media channels, such as Facebook or the business-focused LinkedIn site, and official local and national government or EU support services, job agencies, and libraries. The utility of these online sites was also reported by migrants from outside the EU, but this group was more likely to identify *physical* points of information such as job centres, shopping centres, and physical community groups, such as places of worship and other community meeting points.

Interviews and focus groups with recent economic migrants showed a clear difference between those arriving to pre-arranged jobs or business ventures (engineers, medical staff, entrepreneurs, and those joining family businesses) and those without jobs in place on arrival. Outside of those joining family businesses, highly qualified, English language competent and IT savvy migrants were most likely to have pre-arranged employment or interviews soon after arrival, having made applications or submitted CVs online in advance of migration. Educated EU migrants, male and female, expressed confidence about accessing professional jobs using customized online searches. One German female migrant stated: 'Don't be shy about contacting people directly, even if no job is advertised … Online - 'Google' companies, find directors, find information about directors, write to them about something of interest to get foot in the door. Need to know the industry well to do this' (Female, 35+, EU). However, this confidence reflected a confluence of English language fluency, education, and the ability to navigate the internet, compile an electronic CV etc. As one TNC highlighted: 'Citizen Advice Bureau [is] very useful; UK.gov website - *but people may not know about this or [their] English may not be good enough to navigate through the website, it's pretty complicated*' (Male, <35, South East Asia). The majority of new migrants arriving without employment already in place, both EU and non-EU, relied on personal networks and/or web-based information as sources of information about jobs, the latter often being extensions of personal networks such as Facebook pages, especially those linked to country of origin networks, which could be used to arrange accommodation or find out about potential jobs.

The role of the internet in finding work, accessing services and social integration

The availability of online job portals, including online job application procedures offered by large employers, and employment opportunities of all types advertised on social media enable migrants to access a wide variety of jobs, prior to and on arrival in Bristol. Internet access is therefore key in these developments. As noted above, conventional understanding of 'Smart Cities' is grounded in assumptions of immediate and continuous access to the internet, usually via a smart phone. Whilst many Bristol economic migrants, especially those with limited resources, do rely on their phones for internet access, not all have immediate access to smart phones and a full range of apps associated with smart cities, e.g. Li (Female, 18-25, Vietnam) reported how she had to get paid work in order to afford a new UK sim

card, which propelled her into low paid work in fast food services, despite having Honours and Master's degree qualifications. Mai (Female, 26-34, China) similarly testified that "it takes some [Chinese] migrants months before they can get a mobile phone [and in the meantime] they can't find accommodation, don't know which area is good in Bristol" etc. This underscores the fact that not all migrants have equal access to the internet and therefore the resources of Smart Cities.

However, relatively unsophisticated internet access will allow engagement with information about jobs and accommodation on Facebook or Gumtree, particularly if migrants are aware of and trust, established networks such as 'Polish in Bristol', 'Spanish in Bristol' or the 'Bristol Somali Forum', all present on Facebook and which can be accessed before and after arrival. Established communities have also established specialist sub-channels on social media, such as the 'Bristol Somali Homeswap' group, which facilitates apartment and house swaps, especially within the social housing sector. These familial and community-based strategies, long deployed by migrants settling near people who share country of origin or heritage, underscores alternative ways of thinking about smart cities, that are as much about identity-based groups and community networks as the IT which facilitates some migrant communication and might signal opportunities for face-to-face exchanges, as the following examples testify.

"There are websites where you can upload your CV, head hunters will phone when you are still in Poland, they interview you via phone. If they are happy then they pass your details onto companies that are looking for such people, then you are contacted by such company, you are interviewed by them and if they are happy, they invite you to here and then if they are happy after this face to face interview, they will offer you a job." (Ania, Female, 35+, Poland, sports instructor). Other Polish participants in a focus group highlighted how opportunities for migration have changed with the rise of internet based networks in the previous five years and how this is helping new generations of migrants. Online social networks inlcuded Moja Wyspa - My Island, Polemi UK: observing that "the awareness is much higher…. Polemi UK, there was nothing like that when I came here. Now, we have it, so a lot of information for a person who wants to change a country and wants to come here,

is accessible now...." (Jola, Female, 35+, Poland, Financial Services). The quality of online information and opportunities are carefully scrutinised by many migrants. The Bristol Somali Forum, with its website, Facebook page and Twitter feed seen as a good network and a way for others to reach the Somali community: "We use the community as a channel. This community [Somali Forum Facebook] is more easy to trust than the [wider] internet; they can tell there are 2 jobs in NHS, you must do this and this, for this date' (Basel, Male, <35, Sudan). By contrast other migrants, as was reported in the case of some Italians, were sceptical of country of origin networks and information (Maddrell et al 2016), in these and other scenarios (e.g. simply a desire to be immersed in the host city's culture) an ability to access to local authority, employer websites and city-wide social media channels such as Gumtree maximise work and social opportunities.

It is worth noting that some migrant communities, notably Somalis, have a strong cultural preference for oral rather than text-based communication: 'We are [an] oral community' (Anwar, Male, 35+, Somalia, part time security guard). Amal highlighted the two-way relational nature of knowledge exchange within the Somali community e.g. 'Sometimes you can see a paper [with information] running around and no one will read it … the Somali community is a very oral community, they don't [like to] read, they talk a lot ….' (Amal, Female, 40-49, Somalia). A co-owner of a small business herself, Amal also stressed that Somali socio-economic discourses, particularly masculine discourses, favoured self-employment and this was seen as better business sense – economically *smarter* - than working to provide profits to someone else. This is evidenced in the high proportion of Somali men operating a taxi service in Bristol. Google Maps and similar smart phone apps or SatNav systems, make on-the-ground knowledge of the city unnecessary, if not redundant, allowing kin-based co-ownership and networks of drivers to include even relatively recent migrants.

 A focus group of five women who had migrated from Pakistan in the previous 2-10 years illustrated a confluence of similar gendered migrant journeys and destination, but varying social, cultural, and economic trajectories, reflecting different educational attainment, English language proficiency, and familial narratives. One woman had attained Honours and Masters degrees prior to migration; two had no qualifications but were attending English

language classes; and two were unable to read or write in any language and spoke very little English. Three were currently looking for paid work and two intended look for jobs when their children started school; one was able to undertake occasional paid beauty therapy work in her home. Only one of the five women was learning to drive a car and also had a smart phone, giving an indication of varied mobilities within and beyond the city, as well as relative access to smart city tools associated with apps.

The group stressed the importance of access to regular English language classes within walking distance of their homes, which also provided a *free crèche* facility: 'The big problem is to speak English. The problem is for women staying at home – there are not so many activities for women outside the home. When they come here the [biggest] problem is to speak English; they need small activities, learn English in their own areas nearby' (Bina, Female, 35+ Pakistan, education worker). As Laila articulated through a translator: 'I am sure I would get a job if I could speak English' (Female, 26-34, Pakistan, housewife); Parveen (Female, 26-34, Pakistan, housewife) reported looking for part time work since her children went to school, but has to rely on her children to read job adverts in local shops or the community centre. The two women who needed basic literacy and numeracy skills reported being unaware of, but expressed willingness to try, classes or online teaching tools in their local library with the help of their children, as they currently take their children to the library for them to access resources, but do not it use themselves. Laila commented proudly 'my children are very clever [with reading and computers]' (Female, 35+, Pakistan, housewife). Another spoke admiringly of her mother-in-law who spoke no English on arrival to Bristol, established friendships with neighbouring women, and learnt English through regular social interaction. 'I really appreciate her, she is speaking English very much, she lives here 40 years, she interacts with ladies, her neighbour, an old English lady used to interact with her over tea, speaking English', but also noted the limitations of this approach: '…. Now she speaks English very well, even though she can't read or write' (Bina, Female, 35+, Pakistan, education worker).

These women stressed that their husband's attitudes to their socialising outside the home are crucial to their wider social and economic mobilities, including accessing work, classes, and social interaction beyond kin. Women who migrate principally for marriage may only be

expected by their husband /husband's family to find temporary work before starting their own family. The case of the Master's graduate in the group, who was an experienced school teacher and highly proficient English-speaker, retraining as a play group assistant appears to exemplify migrant de-skilling reinforced by normative community gendered roles, but must be put in the context of a positive desire to become a parent and similar strategies which are not uncommon amongst non-migrant professional women who wish to combine family care roles and local flexible part-time work in the short to medium term.

However, the examples above illustrate the ways in which gendered differences in accessing work can *in part* be explained by socialised cultural gender norms. In the case of migrants, this includes the gender norms in the migrant's country of origin and host community, as well as the access to information about, and the confidence to negotiate and capitalise on, wider work and training opportunities available in the UK.

Smart strategies: the role of social interaction and collective action

While EU and non-EU status represented a common differentiator between migrants, this was less relevant for highly skilled Tier 2 migrants, e.g. those recruited to work in Bristol's hospitals, aerospace industries, and universities. These migrants were typically tech-rich and able to access Smart City resources, as well as using community social media platforms to connect with other migrants form their country of origin e.g. 'Spanish in Bristol'. Regardless of job type, economic migrants across the study who were operating 'smartly' grasped opportunities for relevant education and training within and beyond their workplace. However, in Soledad's case (Female, 25-34), EU status did not guarantee equal access to opportunities. Soledad described how she had applied to do a course at the hospital where she employed, but because the course was oversubscribed, she was turned down on the grounds that she was not English; she has taken the matter to the union which prompted investigation, exemplifying her ability to contest discrimination as a highly qualified EU citizen who is aware of her rights and the methods necessary to mobilise collective support. Anwar (Anwar, Male, 35+, Somalia) likewise reported Muslim men utilising union support to challenge their employer's (changed) expectations that Muslim employees should be prepared to handle alcohol and pork. However, both of these scenarios are dependent upon

a unionised place of work**,** which does not apply to employees with insecure zero hours contracts.

Smart integration

In the UK, under the headline 'The costs of *not knowing*' (my emphasis), the Integration Up North (IUN) (2015) study in Yorkshire highlights how investing in providing basic information in accessible forms to migrants can reduce pressure on public service support teams as well as reduce stress and uncertainty for the migrants themselves. As the Bristol-based Bristol and Avon Chinese Women's Group (BACWG) noted, "Many Chinese people don't realise they have to register for a GP. In China, they go straight to the specialist, so the system is different here and they may not be registered when they need to see a doctor urgently" (Interview, BACWG). Similarly, all migrants need to understand the UK tax regime and know how to find to migrant support groups, voluntary organisations such as Citizens Advice Bureau, and legal support, should they need it. "[semi or unskilled] Chinese migrants who come to BACWG need help with tax, especially when they change jobs, they don't know they need a P45 and they overpay on an Emergency tax code or underpay because a new employer re-uses their tax allowance and they don't know what to do"(Interview, BACWG). Tax information available online in Chinese could prevent these problems and additional work for the workers, employers, and Tax Office. Such insights informed Bristol City council's online and print version *Ways2Work Welcome Pack* for newcomers to the city (see Maddrell et al (2016) and https://ways2work.org.uk/welcome-to-bristol/).

Conclusion

This study has evidenced that smart strategies for migrants include use of conventionally understood smart technology in order to access employment, training, services, and recreational opportunities through online resources, including official websites, apps, and social media platforms such as Facebook, Gumtree, What's App and LinkedIn. Indeed, IT services such as Google maps and SatNavs, which can be accessed via smart phones or ipods, allow even relatively recent migrants to work or start their own business as drivers.

However, not all migrants have immediate or equal access to the internet for eight key reasons: 1. the expense of a smart phone; 2. the expense of a UK sim card on arrival; 3. the expense of data connection via mobile phones; 4. lack of knowledge of free access to the internet via public libraries; 5. a lack of confidence in knowledge of and evaluating the trustworthiness of online and social media sites; 6. insufficient proficiency in the English language; 7. literacy issues – including different levels of competence in *speaking* and *reading* English; and 8. a gendered distribution of resources within families or couples, reflecting the gendered norms, expectations of need and priority.

Despite this uneven access to smart technology, including gendered technology gaps within particular migrant community groups and/or those with limited socio-economic capital, the interview and focus group data discussed above evidences a continuity of creative strategies for finding work, accommodation or second hand goods which echoes the collective efforts of earlier migrants and travellers. For those without, or with only limited access to, IT, low-tech material information networks such as family, religious, and other identity-based community groups, as well as traditional physical sites of information and exchange, such as noticeboards and corner shop advertisements, can represent smart resources, which can be both mirrored and supplemented by the relatively familiar online spaces of Facebook and Gumtree.

Moreover, like people, truly smart cities are more than IT and app–driven. Women capitalising on opportunities for social interaction to improve their language skills and knowledge of local culture; women and men's mobilisation of collective action networks, such as unions; and mothers' second hand learning via their children's formal education, each represent everyday examples of *being smart* in the city. Smart leaders of cities will seek to maximise the benefits of the knowledge and skills offered by migrant residents, and invest in providing and promoting services, such as public library resources and accessible English language classes and/or online tools. Accessing information on jobs and services doesn't guarantee employment or access to the services themselves, but information is the necessary starting point, one which can facilitate the mobilisation of knowledge and skills for employment and entrepreneurial job creation, as well as for voluntary work, social engagement, and public service. Accessible and up to date information is particularly important for both those seeking and offering work in the context of social, economic and

political flux such as the UK's 2016 EU Referendum, the impact of which has already been felt by EU migrants and employers of those workers.

The Bristol study highlights new economic migrants' need for smart information, whether in order to access basic requirements such as work, accommodation, health and education services, or facilitating full enjoyment of and participation in the city's life, landscape and culture. Respondents reported that this information is most accessible and effective when available online in a mobile phone-friendly format, which recognises the varied needs of different migrants (e.g. those seeking work and those setting up businesses, those wanting private health care, and those wishing to register with a National Health Service doctor, those looking for an art exhibition, knitting group or five-aside football team). To be inclusive of varied migrant needs, key information on smart platforms should preferably be multi-lingual and available in vlog formats for those with limited knowledge of English or literacy skills, and/or those with learning or cultural preferences for visual or oral information.

Furthermore, migrant-receiving cities should also be alert to the needs for and benefits of gender-specific support services for some migrants, such as local single gender language classes at family-friendly times with crèche facilities, as well as gender-specific opportunities for enhancing employability skills and community involvement, such as through library-based IT classes and appropriate volunteer roles/ posts. Understanding different cultures of communication in key migrant groups also allows 'smart' communication e.g. the relative efficacy of a face-to-face women in business networking event, website or vlog, compared to a printed booklet. To reference Michel Foucault (1980), 'knowledge is power'. Smart technologies are not a panacea, but – if inclusive - can contribute to facilitating physical, employment, and social mobilities for diverse women and men through varied high and low tech smart mobilities maximises access to resources and skills, effective employment and business ventures. These processes in turn have the potential to bridge gender divides and facilitate individual fulfilment, and both community and cross-community networks, enhancing the socially, culturally and economically sustainable character of cities, in a globalised world where so many of us are regional and transnational migrants.

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