COVID-19, shrinking homes and the challenge of homeworking

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COVID-19 remains a poorly-understood disease, with its aetiology and patho-physiology remaining the object of considerable debate. But what is clear is that the impacts of COVID-19 appear most pronounced in urban areas. In Britain, for example, London, Birmingham, and Manchester all have rates of COVID-19 infection of more than 30 people in every 1000, whereas in the more rural areas of the South West, the rate is a third of this or less (Department of Health figures, 27th April 2020). Even allowing for under-reporting and less testing in rural areas, there is a clear basis for asserting that COVID-19 is more widespread in cities, and that the larger the city, the more virulent the spread of the disease through the population (see Steir et al 2020). Given the general tendencies towards poorer health evident in cities, related to questions of diet, pollution, education, poverty and overstretched medical services, the fact that COVID-19 has subsequently been the cause of relatively more deaths per infection in larger cities can be no surprise.

A number of factors have been postulated as underpinning the prevalence of COVID-19 in larger, urban areas. One explanation is that the virus tends to touch down in those global cities which are most obviously connected to cities elsewhere, with airports being perhaps most important nodes of virus transmission in any global pandemic. Yet the faster and more widespread diffusion through cities appears to be related to questions of population density, with the virus more likely to transmit to more people in contexts where social proximity to others is part and parcel of daily life. Recognising that the key to lowering the virus' 'reproductive number' is maintaining social distance, governments around the world have then introduced measures which seek to invert urban norms: all the places that are usually busy with commuters and consumers become hollowed out, the business of the city effectively suspended. Transport hubs stand empty, shops closed and sporting venues unused.

There are then multiple challenges in fighting a global pandemic in cities where disease can spread through crowded transit systems, shopping centres and workplaces, but it seems self-evident that encouraging people to work at home if possible is the most obvious measure that can reduce the transmission of COVID-19. Homeworking quickly became the new normal for those who were able to work remotely, with only 'frontline' workers encouraged to travel to work. An April 2020 YouGov poll revealed that 52% of working age adults in Britain – over fifteen million people - were trying to work at home during the COVID lockdown, as opposed to the 1.7m who regularly work from home under normal conditions (Labour Force Survey 2019). While many of these people were no doubt better prepared than they might have been a decade or so ago - when the numbers working at home were half the current level, and online social media barely developed – anecdotal and media evidence suggests that some have been struggling to develop meaningful homeworking routines. Many have lacked the basic facilities required to work at home, and others have been juggling homeworking with the home-schooling of children. For some, however, homeworking appears to have been an easy adaptation, with IT allowing them to avoid lengthy commutes and freeing them from the distractions of office life.

Looking to explore how people are adapting to homeworking, we commissioned a 1000-household segment of YouGov's bi-weekly London Omnibus survey (completed on Thursday 23 April 2020). 501 of the respondents were adults of working age currently

employed full or part time, and of these 9.4% often or always worked from home prior to the COVID-19 lockdown. In contrast, 70% of the working age sample were working from home during COVID, a figure in excess of the You Gov national survey reported above, perhaps because the mix of jobs in London is more conducive to remote- and home-working than that found elsewhere given the relative over-concentration of computing, banking, scientific and administration jobs in the capital. In the survey we asked if people were very satisfied, fairly satisfied, fairly unsatisfied or very unsatisfied with working at home, and asked them to list what they saw as its main advantages and disadvantages. Their answers were coded into a mixture of categories, positive ones relating to more freedom over working routines, ability to see more of one's family, fewer distractions at work, and reduced commuting costs, as well as negative ones to do with lack of human contact, possession of an inadequate workstation and IT facilities, noise and interruption at home and the more thorny issue of how to draw boundaries between home and working life.

Perhaps unsurprisingly, those who had experience of working at home previously were least likely to list negative impacts of home-working, and were significantly more likely than those who had not worked before to report overall satisfaction with homeworking (chi-square, 60.87, df =9, p=0.00). Predictors of dissatisfaction with homeworking included whether the individual trying to work at home was also caring for a responsible adult (chi-square 7.837, df =3, p=0.049). Women reported less satisfaction than men (chi-square 7.011, df =3, p=0.071), as did people with children (chi-square 7.299, df =3, p=0.063) – especially young children aged 0-4 (chi-square 8.01, df = 3, p=0.046), suggesting the continuing existence of a gendered division of domestic labour at a household scale.

But from an urban planning perspective, one of the more interesting findings was that those living in detached homes in London were four times more likely to report being very satisfied with homeworking than those living in flats or apartments in purpose-built blocks (chi-square = 23.744, df= 17, p =0.070). 64% of those living in properties with four rooms or fewer reported being very dissatisfied with working at home as opposed to 35% of those living in properties with five or more rooms. 70% of those in smaller properties reported difficulties in drawing boundaries between home and working life, as opposed to 30% in larger one (chi-square = 4.994, df = 1, p = 0.025). All of this implies that those living in smaller flats are less happy to be home working than those living in larger homes, even allowing for other factors such as social class, gender, age or the presence of children in the home.

In many ways these results are not unexpected, especially in situations where multiple people are working at home in a small property. As one respondent recounted:

> "We are both trying to work from home in a one bed flat with no garden. There's only one table and we both make calls during the day and so one of us works in the kitchen/living room area and the other in the bedroom. Neither of us are comfortable and working sat on a bed is not ideal for multiple reasons. We are both still very busy at work and so there is no time to enjoy the day or get out for a walk until we have finished for the day" (female, 25-34 age, ABC1 respondent).

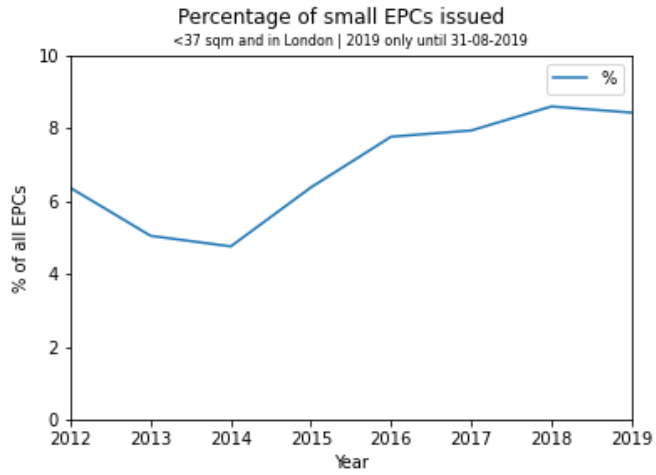
Overcrowding was clearly an issue for many living in smaller flats, but many people living alone also reported they lacked a suitable workstation or desk space, and many resorted working from a sofa or bed, experiencing back pain and general discomfort.

The fact that those working in smaller properties report dissatisfaction with homeworking could then be related to ergonomic issues related to posture, thermal comfort, poor light and air circulation, and ambient noise, but a large number of responses revealed more existential dilemmas of dividing work and home spaces: most of the advice on effective homeworking suggests the need to establish an effective workspace separate from social and leisure spaces in the home, and for many living in smaller properties this was simply not possible. Unlike those living in detached or semi-detached homes, smaller properties tend to lack private gardens where relaxation can be had, making it very difficult for residents to escape from a space where the distinctions of work and leisure become blurred. In periods of lockdown, when stir-crazy home-workers cannot access collective workspaces, public parks or local cafes, separating home and work life is then impossible for those living in smaller homes.

The implication here is obvious: if working at home is to be the new normal, especially for the 'creative' class who can most readily work from home, it seems prudent to create homes where there is sufficient working and personal space. Likewise it would seem sensible not to design flat and apartment blocks where lifts, stairwells and service areas are shared by large numbers of people, and social distancing is difficult. But this is the inverse of what has actually happened: the last decade has witnessed headlong rush to fill London and our core cities with 'micro-apartments' aimed at young professionals and students. The average size of new build flats and apartments is declining rapidly: nationally, the average had fallen to just 65 square metres by 2014, prompting new space standards in 2015 stipulating a one bed, one room flat needs to be a minimum of 37 square metres. Even so, one retrofitted scheme in an office block in Croydon has since made national headlines for offering single studios of 13 square metres, and former council estates across the capital are being renewed and redeveloped at higher density, with the public housing of the 1960s and 1970s being replaced with new apartment blocks that offer residences often much smaller in size: in 2018 London mayor Sadiq Khan provided £25m funding for Pocket Living, a company that provides housing of half that size, with up to 200 flats in a single block.

Figure One shows the proportion of flats constructed since 2012 in London which are less than 37 square metres in size, with a clear upward trend evident. This Figure is based on the figures in Energy Performance Certificates, which, on average, over- or under-estimate property size by around 8%, but which nonetheless represent an uniquely useful source for exploring the geography of 'shrinking homes'. This shows that these are more prevalent in inner London where land is at a premium, but that they also represent more than one in 20 mew properties in outer London. Figure Two suggest another worrying trend, with the average floor space for these sub-37 square metre properties seen to be declining over time to nearer 25 square metres.

Clearly, a compact living space of 25 square metres can barely function as a home space, let alone as a space where home and work can be effectively combined. Yet there are clear policy drivers favouring the development of such smaller homes. One is the desire to improve the supply of housing in the capital's over-heated property markets, reducing floor space to ensure increased supply of 'affordable' homes for young, professional workers. Another is the idea that compact living is desirable from an environmental perspective, with dense, vertical cities deemed more walkable and energy-efficient. Globally, many urban governments are now exploring how taxation regimes and development constraints might actively discourage development at the suburban margin, and are simultaneously encouraging densification by up-zoning and relaxing height restrictions in the inner city.



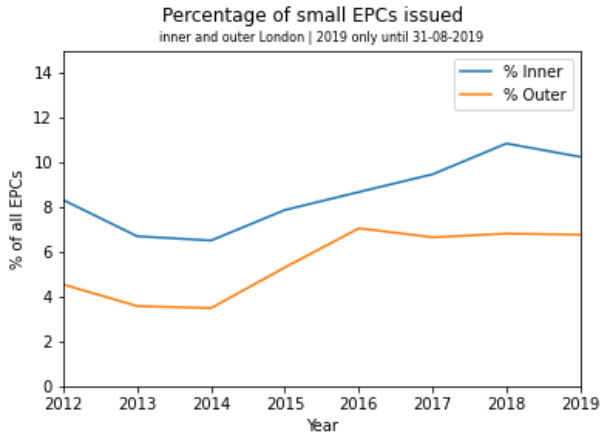


FIGURE ONE caption

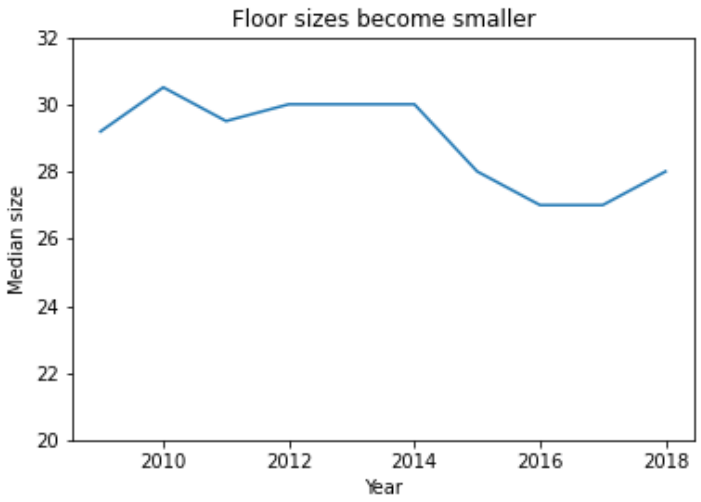


FIGURE TWO caption

The onset of COVID-19 seems an opportune moment to question the assumptions underpinning this drive towards compact urban living. As many commentators are now asserting, COVID-19 shows that the environmental advantages of densification can be outweighed by the public health disbenefits of encouraging populations to pack ‘sardine-like’ into compressed homes, neighbourhoods, clubs and bars. Micro-apartments, like micro-pubs or small-footprint gyms, do not facilitate social distancing, nor do they facilitate the effective

maintenance of the intimate space necessary to maintain personal dignity and well-being. And while they are favoured because they provide seemingly affordable accommodation for younger professionals, workers and students who are integral to 'creative' cities, whether they provide genuinely affordable accommodation is moot. Linking EPC data to Land Registry Sales Data, Figure Three shows the sale price of flats in four quartile bandings, the lowest including flats priced from £50,000 to £70,000 but the upper quartile including flats priced from £390,000 to £1,306,000 (the most expensive). Clearly not all micro-apartments are affordable by any stretch of the imagination, and not all of the most expensive flats are in 'prime London'.

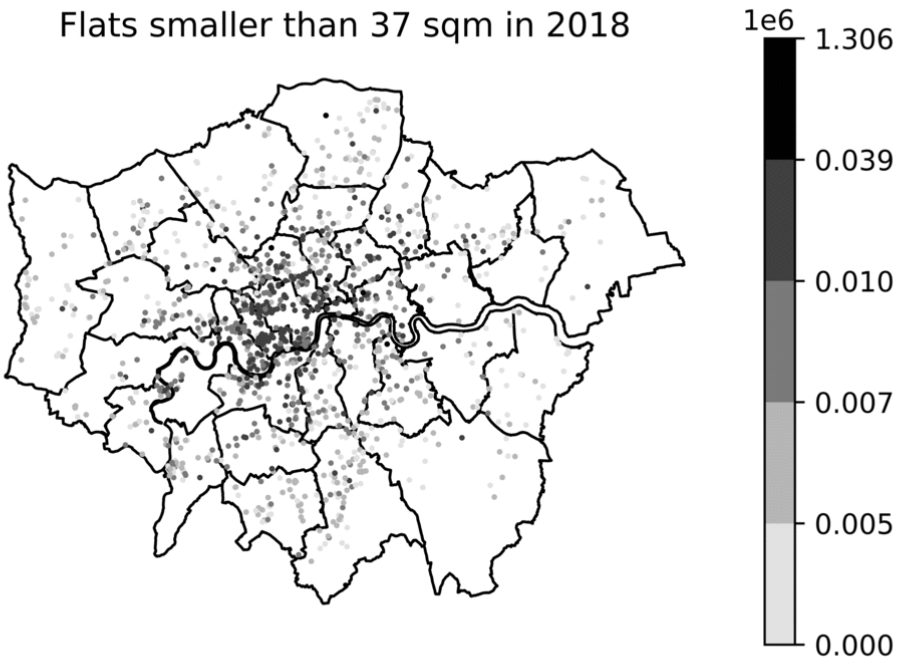


FIGURE THREE Caption

In many ways, the coronavirus pandemic of 2020 might then represent a turning point in current urban planning orthodoxies. The fact that COVID-19 has spread so effectively through densely-populated urban centres, requiring lockdown and serious social distancing, suggests that, in the longer term, less dense living arrangements might be preferable. But this does not necessarily imply a regressive move from inner city, vertical living back to the models of suburban sprawl that dominated in much of the twentieth century. Rather than being located in London and other core cities, more and more of the city's workers might instead prefer to live in more distanced 'village' communities, telecommuting and routinely working at a distance whilst living in decent-sized homes which are surrounded by communal green spaces and parks. More fancifully, perhaps, new, smaller communities might be constructed containing new forms of co-operative housing boasting dedicated office spaces, roof gardens and communal spaces that allow for a healthier working and living environment.

Whatever, the time is surely right for thinking about how we can best provide the generous and healthy living and home-working spaces required for life after COVID-19, turning our backs on the 'shoe box' homes that blight our cities.

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