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Temporary urban uses in response to COVID-19: bolstering resilience via short-term experimental solutions

Abstract:

Earlier research has focused on the temporary reuse of land and buildings in response to economic crises or natural disasters. This article highlights the ways in which the COVID-19 crisis has also triggered multiple examples of temporary use. It develops a framework to categorise different forms of temporary use emerging in response to COVID-19. The article highlights two challenges as the crisis evolves: how to employ temporary uses more effectively to create capacity for emergency uses and bolster resilience; and how to ensure that innovative or experimental landuses can continue to be supported in the context of future recovery.

Keywords: Temporary use, COVID-19, Coronavirus, Temporary urbanism, Resilience planning, Disasters, Health pandemic planning

Introduction: the rise of temporary uses

There is now a well-developed research literature on the temporary use of land and buildings in cities around the world. Research interest has focused in particular on experimental and inventive reuse of unused or under-used spaces, structures and infrastructure to accommodate a variety of cultural or creative activities (see, for instance, Bishop and Williams, 2012). The emergence of these new temporary uses has also provoked critical assessment, highlighting the role of short-term landuse as a tactic to entrench developer interests by stabilising land markets during periods of slack or legitimising controversial development proposals (Colomb, 2012).

Much of the previous research has focused on temporary uses during times of economic downturn. Proponents of 'meanwhile' uses have long argued that temporary solutions can play a vital stopgap role during periods of recession, offsetting diminishing demand for land, enabling innovation and ensuring that equilibrium can be quickly restored to land and property markets once local economies recover (see, for example, Oswalt et al., 2013).

Alongside this, there is a complementary tradition of research on the role of temporary uses in responding to geological, hydrological, meteorological or other 'natural' disasters (Félix et al., 2013). For example, the 2011 earthquake in Christchurch resulted in a host of temporary uses (Wesener, 2018). As well as expedient measures to provide temporary shelter for people made homeless by the disaster, these included small-scale and often innovative attempts to maintain community spirit, such as an urban living room featuring a book exchange inside a recycled fridge, or dance spaces on disused land with music from a converted washing machine (Gap Filler, 2019).

Whether in the aftermath of natural disaster or in the midst of economic downturn, temporary uses clearly have immediate, practical benefits. But as well as providing a way of responding expeditiously during times of crisis, urban policymakers have also tried to think more strategically about the role that temporary uses can play in the longer term. Cities such as Amsterdam, with its *Broedplaatsenbeleid* policy, or Berlin, with its *Raumpioniere* strategy, have tried to employ temporary use more strategically, as a systematic way of regularising volatile local land and property markets as well as promoting pioneering urban landuses that would otherwise struggle to emerge (Martin et al., 2019).

This article highlights the ways in which the COVID-19 crisis has also triggered multiple examples of the temporary reuse of land and buildings. It highlights two challenges as the crisis evolves: how to employ temporary uses more effectively to create capacity for emergency uses and bolster resilience; and how to ensure that innovative or experimental landuses can continue to be supported in the context of future recovery.

Temporary use responses to COVID-19

One consequence of the COVID-19 pandemic has been to stimulate policymaker interest in how urban land and buildings can best be used as part of the wider public health response. The result has been a surge of temporary uses in cities around the world, as well as new thinking about how and when to deploy short-term uses of urban space.

Table 1 categorises the different ways in which temporary uses have been deployed during the COVID-19 crisis. This shows the diverse ways in which temporary use can be conceptualised.

Previous research has distinguished between unsanctioned forms of grassroots temporary use, and top-down choreographed efforts to promote time-limited uses as part of regeneration programmes and real estate development strategies (Martin et al., 2019, 2020). Temporary use in response to COVID-19 broadly falls into two categories: those that relate to the provision of critical healthcare, and those intended to help fulfil social distancing requirements (Table 1).

[TABLE 1 HERE]

Temporary spaces have been used as a way of rapidly expanding critical care provision in response to COVID-19. The seven Nightingale centres established in English cities to provide an additional 8,000 overspill intensive care bed-spaces, including the remodelled ExCel conference venue in London, provide one of several international examples of temporary field hospitals (BBC, 2020). Testing facilities and mortuaries represent other widely observed examples of temporary use in direct response to increasing ill-health and raised mortality.

Temporary uses have also played a key role in the facilitation of social distancing, ranging from regulatory reforms to extend permitted landuse on a temporary basis, to short-term street closures. Some of these – like road closures – are pragmatic and restrictive, but there are also examples of more imaginative re-designations of landuse. In cities like Bogotá and Philadelphia, a by-product of restrictions on car use has been to generate additional road space to accommodate temporary expansion of urban cycle path networks (Laker, 2020). The rationale here has been partly the short-term one of minimising overcrowding on public transport to limit viral transmission, but also the longer-term ones of promoting better health and well-being and encouraging sustainable modes of transport. Thinking about the latter is

especially important if, as Batty (2020) speculates, a consequence of COVID-19 is to deter the use of public transport as commuters seek the sanctuary of private cars.

[FIGURE 1 HERE]

In addition to sustainable alternatives to public transport, temporary public realm works are providing low-cost ways of encouraging social distancing. A simple yellow line on a pedestrian thoroughfare has been added to promote safe use of a shopping street in Aalborg, Denmark (Figure 1). Likewise, a 1.8m gridded social-distancing system has been designed to reopen a public square in Vicchio, Italy.

Two challenges for temporary use in the context of COVID-19

The scale of the challenge presented by COVID-19 is reflected in the variety of innovative temporary uses that have emerged. As with previous responses to economic emergencies or natural disasters, there is obvious uncertainty about whether these innovations will prove either necessary or durable once the immediate crisis subsides. In that context, we discuss two challenges which relate to the response categories shown in Table 1: first, how to create capacity for emergency uses, bolster resilience and improve future disaster readiness; and second, how to nurture and protect innovative temporary uses in the context of future recovery.

Resilience and disaster readiness

It is already obvious that preparedness for a global health pandemic, and the ability to minimise or mitigate the effects of COVID-19, varies substantially. Countries with previous experience of public health crises – notably those close to the epicentre of the SARS outbreak

of 2002-04 – appear to be have been better equipped in their response to COVID-19 (Connolly et al., 2020). An urgent research priority to inform future pandemic response planning is to assess the effectiveness of attempts to deploy temporary reuse of land and buildings in reaction to the crisis, and to gain a better understanding of best practice.

While the relationship between the governance of urban areas and the control of infectious disease is important to risk planning and mitigation, there is little existing research specifically on temporary use as a response to health crises (Ali and Keil, 2006). Previous studies show how the spread of pathogens is affected by a range of environmental, economic, political and social variables, posing important challenges for public health and disease containment (Ali and Keil, 2006; Connolly et al., 2020). However, the role of critical temporary health infrastructure for treatment, testing and containment remains poorly understood. In response to Connolly et al. (2020), research in this area could be extended to understand more clearly the temporary uses that are most effective as part of different phases of infectious disease management, from prevention to suppression and mitigation.

Long-term legacy of innovative adaptation

A second challenge concerns the longer-term prospects of innovative temporary uses and how to sustain them when the COVID-19 crisis eases or ends. Lessons from the 2007-08 financial crisis suggest that a challenge will be to allow ground-breaking adaptations to continue when something approaching normality resumes. A recurring difficulty highlighted by previous studies has been the susceptibility of innovative or creative temporary uses to displacement by mainstream development once crisis conditions subside (among many examples, see Zhang, 2018).

This is important because earlier research suggests that crises can help to breed creativity. Research using planning applications data in England's core cities showed that the volume of innovative and experimental temporary uses doubled in the aftermath of the 2007-08 financial crisis (Martin et al., 2020). When macro-economic conditions recovered, however, these more creative and imaginative temporary uses were particularly vulnerable to dislocation. And for those that were able to continue, many were co-opted by established corporate interests, in doing so often subverting their pioneering objectives (Martin et al., 2019). As Haughton et al. (2020: 140) note, the assumption that effective emergency responses will precipitate longer-term changes is refuted by the atavistic tendencies evident in the wake of past crises:

> 'crises… do not automatically lead to a period of reflection and change, regardless of how flaws in current processes and practice are revealed. The almost automatic response [is] to get back to 'normal' […] or restore previous practices, rather than create new ones…'.

It remains to be seen whether innovative temporary uses emerging in response to COVID-19 will prove to be more durable. This is partly because the intensity and extent of the health crisis may require temporary uses to continue for an as yet indeterminate period. If social distancing measures become the 'new normal' as 'unlockdown' unfolds, then temporary reuses may endure. For example, efforts to encourage sustainable commuting and ease crowding on public transport could conceivably persist, at least to some degree. Maintenance of emergency overspill capacity for public health provision may be a longer-term feature of future strategy, as public concern about further viral epidemics lingers.

Conclusion

This viewpoint article has provided some examples of the ways in which temporary use has been deployed as part of the wider response to the COVID-19 coronavirus pandemic. We have also suggested a framework for understanding these different temporary use responses. From this, we have argued that there is a need to improve understanding of the role and effectiveness of temporary uses, in two principal respects. The first relates to how reserve capacity for critical health care can best be maintained. As Batty (2020) notes, there is an opportunity here to act upon repeated warnings, many of them disregarded, about the need to think strategically in order to prepare for a pandemic in a globalised world of hyper-connectivity. Systematic assessment of the effectiveness of temporary uses in contributing to standby health care capacity should be an urgent priority in efforts to build resilience and develop strategy.

Second, there is a need to assess the longer-term experiences of innovative interim uses conceived in a context of crisis. We have highlighted evidence demonstrating the vulnerability of innovative temporary uses when crisis conditions abate, and the consequent need to intervene to protect those that engender wider social, environmental or economic benefits. Equally, there is also evidence from the aftermath of the global financial crisis to suggest that creative temporary projects can have important demonstration effects, helping to influence future urban development policy and practice agendas. It is important in all of this to document the creative thinking that has underpinned temporary uses forged in the inauspicious context of a public health crisis.

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Table 1: Typology of temporary use responses to COVID-19: critical care and social distancing

Purpose	Approach *	Response type	Examples
Critical care	Top-down	Disease management, mitigation and control: extending emergency capacity and providing backup health care	▪ Temporary hospitals in stadiums, conference centres and arenas worldwide {BBC, 2020) ▪ Conversion of shipping containers to intensive care backup in Italy {Beech, 2020) ▪ Temporary mortuaries in ice rinks and air hangers in the UK {Wainwright, 2020) ▪ Drive-through testing stations in car-parks worldwide {Wainwright, 2020) ▪ Re-use of hotels and property in the US to move people from overcrowded homeless shelters {Smith, 2020).
Social distancing	Top-down	Permissive regulatory reform to facilitate temporary repurposing of land and buildings	▪ Relaxation of English planning regulations to allow temporary changes of use to enable business continuity {MHCLG, 2020).
	Top-down/ bottom-up	Restrictions on landuse to provide space for communities during lockdown	▪ Deter car use via temporary street closures and open/play street initiatives in US cities {Vance, 2020).

	Top-down/ bottom-up	Lifestyle and behavioural incentives to enable safe movement while minimising virus transmission	▪ Encouragement of active mobility as an alternative to public transport:
			  - £250m for pop-up cycle lanes, pavement widening, junction safety improvements and dedicated bus lanes in England {Department for Transport, 2020)
			  - Extensions to pavements, temporary bike and running lanes in Colombia, Germany, North America, Australia and New Zealand {Laker, 2020).

	Top-down	Low cost public realm works to promote social distancing in key locations	▪ Installation of gridded 1.8m social-distancing system for reactivating a public square in Italy {Hitti, 2020) ▪ Safer public places agenda in England – 20 temporary interventions for high streets and town centres {HM Government, 2020).
	Top-down	Appropriation of public spaces for open-air cafes/dining	▪ Reusing public space in Lithuania to accommodate physically-distanced outdoor seating {Henley, 2020).

Note: * Top down refers to formally adopted initiatives applied by government bodies; bottom-up refers to informal/tactical approaches initiated by communities/residents.

Figure 1: Low cost public realm works help facilitate safe use of Algade, Aalborg during COVID-19 (source: authors)