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26. Fragmented recoveries and proactive adaptability: new paradigm shifts, and theoretical directions to unpacking recovery processes and behavioural change

**Lauren Andres, John R. Bryson, Aksel Ersoy
and Louise Reardon**

In January 2023, the International Federation of Red Cross and Red Crescent Societies published the Everyone Counts Report entitled *Covid 19: Nobody is safe until everybody is safe*. While presenting and assessing how the Red Cross and the Red Crescent Societies collectively responded to the pandemic, they also reflected upon its wider impacts on societies' preparedness for other pandemics. The report's concluding paragraph stated that:

The most important message concerns equity: the fact that the experiences and situations of different people and communities are very different (and unequal) within and between countries. While some people in some countries might now be thinking that the pandemic is completely over and that it is yesterday's news, this is probably not true for anyone and certainly not for everyone. The pandemic is not over and nor is the response.

There are three important points that come from this statement. First, a concern for equity but a harsh reality of deep inequalities. Second, that the pandemic should not effectively be considered as 'over'. While it has indeed been shifting to a controlled endemic, it is worth not forgetting that many people are still at high risk and continue to adapt and adjust their approach to everyday living in response. Health vulnerabilities are often entrenched in other intersectional burdens with significant incidence on the abilities of individuals to cope and be resilient. This, of course, significantly interferes with any pathways of change and possible recovery processes. This minority cannot and should not be forgotten.

The pandemic as 'a unique health crisis event' may be over, but the pandemic as a 'catalyst for snowballing disruptions and crisis' is far from concluded.

Future pandemic preparedness needs to remain at the centre of both policy and academic discussion (Bryson et al., 2021b). COVID-19 has been a brutal event with dramatic consequences for individuals, households, organisations, and nations. Despite this, few lessons seem to have been extracted from this experience given a desperate – though inappropriate – push for a return to ‘normal’, with normality here being shaped by new economic and social urgencies and policy priorities that seem to backtrack further from acting against a major crisis and this includes climate change. To the Red Cross, global, national, and local responses remain unprepared for the eventuality of similar shock events occurring in the future. This means that a fundamental research gap remains unfilled and important policy challenges remain.

The paradigm of risk society emerged with the work of Beck who defined this new form of society as one based on the prevention, minimisation, and channelisation of the ‘risks and hazards systematically produced as part of modernization’ (Beck, 1992: 19). Nevertheless, the risk society paradigm needs to be juxtaposed by a new paradigm of *recovery society*. All societies are included in this recovery society paradigm as all are in a continual and complex process of recovering from all types, intensities, and durations of shock or hazard that occur when the risks that are central to the risk society are realised. In other words, a recovery society is the outcome of a risk society that has failed to prevent, minimise, or avoid some form of risk. The outcome is that risk is materialised in negative direct, indirect, induced, and latent impacts that then initiate some form of recovery process. A recovery society is one which is interconnected into a complex ever-changing system of global flows of people, money, data, expertise, raw materials, and products. What happens in one place – the here and now – increasingly matters to other places – the there, and this is irrespective of wherever ‘there’ and ‘here’ might be.

‘Recovery’ is central to this book’s focus with the view of examining recovery processes from the pandemic but also from other known and unknown crises. Such crises have already and will continue to affect societies, places, and economies. Contributors’ critical reflections on how to approach recovery from various lenses and settings testify to the diversity, complexity, but also highly fragmented nature of recovery processes. They also clearly highlight that one of the problems any form of recovery faces is that this is a political and individual process. People are the context within which recovery processes occur and these processes are then further complicated given differences in modes of living, forms of life and behaviours, and existing and path-dependent inequalities. The way the pandemic was mitigated, the pathways designed to move away from the pandemic, recovery processes and their wider implications, and any forms of preparedness for future crisis, are fully intertwined with political decisions. They are linked to complementary but also conflictual institutional logics (Andres et al., 2022b), with some being more dominant

than others. This means that specific policy, rules and regulations, modes of communication, but also resourcing are and will be mobilised in different ways depending on the context and these differences matter for both shock preparedness and recovery processes. Support towards specific problems is selective, leading to prioritisation processes. This often means that equity is not at the forefront of decision-making processes with wider implications for those at the margins; those whose voices are often ignored and whose exclusion results in continued fragmentation and exclusion and an intensification of existing vulnerabilities.

This concluding reflection identifies three directions for further debate. First, recovery is not a singular concept but needs to be approached pluralistically, in the context of deep fragmentation and inequalities. A recovery society is extremely complex given the inter-layering of simultaneous and sequential recovery processes as societies respond to parallel shocks and shock chains and related recovery processes. Second, any thoughts given to recovery and future preparedness require a conceptual shift, placing at the forefront the need for enhanced adaptability, particularly the cultivation of proactive adaptability; proactive adaptability is central to the recovery society paradigm. Finally, it is important to acknowledge the role improvisation, and behavioural change, play in recovery processes and the requirement for new conceptual development.

FROM RECOVERY TO FRAGMENTED RECOVERIES

Recovery and Intersectional Burdens

Throughout this book various approaches to recovery society have been provided by authors and these reflect different disciplinary perspectives and thematic interpretations. The issue here is recovery from what, by whom or where, for whom or where, and for what end or purpose? Clearly while recovery has been adopted as a generic and universal term to engage with a process of moving away from the pandemic, there is not one recovery but many; recoveries are multiple, diverse, partial, segmented, temporary, or more sustainable. In any case, they are highly contextualised and require place-based approaches accounting for the diverse discursive and practical dynamics directing actions, policy, and projects (Andres and Kraftl, 2021).

There is a danger in assuming that the pre-pandemic context was better than people and place experiences that occurred during the pandemic and post-pandemic periods. These periods might not be better or worse, but just different. In any case, different places and cohorts experienced different forms of advantage and disadvantage. It is important to remember that the pre-pandemic phase was saturated with all types of multi-scalar shocks and related recovery processes. While this acknowledgement is arguably

true for most people and places, there is also a risk of over-simplifying and over-generalising. It is important to recognise that, for some, the pandemic may have had positive outcomes. For the most privileged, with the right skills (Andres et al., 2022b) the pandemic enabled new lifestyles involving working from home and spending more time with their families. However, for many others, recovery may never exist as struggles, coping, and surviving are part of their ordinary everyday experience or form of life (Bryson et al., 2021a, 2021b). A question then is ‘recovering from what?’ as the pandemic was ‘only’ an additional supplementary burden that was added to pre-existing vulnerabilities and challenging living conditions. This casts light onto intersectional burdens that must be central to any thinking about coping, resilience, survival, and recovery. This is to highlight that individuals and households experience many different interrelated burdens and this bundle of burdens impacts on the ways in which shocks are received and recovery processes experienced or enacted. There is an interesting paradox here; recovery is a process of transition from a pre-shock, during shock to post-shock phase, but this process may reflect stasis combined with transition. Thus, there are changes, but the stasis continues or endures.

Health inequalities affecting people and places were amplified during the COVID-19 pandemic with ethnic minorities at the highest risk of infection due to poverty, social disparities, gender, age, and place-based disadvantages and inequalities (Iacobucci, 2020; Wenham et al., 2020). The correlation between COVID-19 infections and deaths has been widely linked to the correlative impacts of intersectional inequalities and were unfortunately predictable (Pineo, 2022). The issue of people’s health and wellbeing here resonates with community resilience and social justice across cities as ‘low-income and minority ethnic residents are more likely to live in neighbourhoods with high environmental burdens and they are also more likely to have non-communicable disease (NCDs), partly attributable to the poorer quality of their environment’ (Pineo, 2022: 236). Several scholars have called for intersectional disadvantages to be addressed not only to deliver a more equitable and effective response to COVID-19 (Hankivsky and Kapilashrami, 2020), but more importantly to minimise the impacts of future pandemic episodes (Ho and Maddrell, 2021) and other forms of shock. This is about developing a recovery society that is much more inclusive; inclusivity would reduce vulnerabilities and would enhance recovery processes. These intersectional disadvantages are far from being achieved, with various chapters from this book highlighting the fragmented nature of everyday living.

Fragmentation and the Infra-ordinary

Processes of recoveries are eminently complex and connected to deeply fragmented local contexts. The fragmentation of contemporary societies takes us back to the ‘infra-ordinary’ nature of shocks but also to resilient dynamics that were explored in Chapter 1. Along with how the pandemic has been handled (Bryson et al., 2021a and b), the way recoveries have been shaped and experienced has mostly failed to fully tackle the ‘everyday ordinary’, particularly when this ordinary is highly fragmented, unequal, but also place-based. There is a real danger of a policy disconnect between the visions held of society by politicians and officials and the everyday lived experiences of citizens.

Back in 2002, Robinson referred to the ordinary when she highlighted the place-based bias that existed in urban theory. She argued that for too long the diversity of cities was reduced to a simplistic separation between ‘global cities’ in rich and developed market economies and other ‘third world’ cities located in poorer countries and in emerging economies (cited in Bryson et al., 2021d). Taking a post-colonial view, she defended the idea that urban theory should learn from a much broader range of urban contexts, based on some form of cosmopolitan comparatism, that embraced more ‘ordinary cities’ rather than focusing on extraordinary global cities. In other words, ‘theoretical insights should emerge from all types of cities and that differences between and within cities should be considered as examples of diversity rather than representing some form of global urban hierarchy’ (Bryson et al., 2021d: 2). The same argument can be applied to research that focuses on recovery and resilience. There is a tendency for this literature to focus on extraordinary shocks and related recovery processes and to ignore more ordinary shocks that are experienced daily by the most vulnerable people and places.

Such a critical reading of the ordinary/extraordinary resonates with pandemic/recovery debates. These are largely driven by WHO guidance and by a strong rationale based on moving away from the pandemic and ‘recovering’, founded upon uniform and non-diverse responses and policies based on responding to emergency and mitigation needs, and supporting economically led recovery strategies. To Massey (2005) space is co-constitutive and always under construction involving an accumulation of the outputs of many intimately tiny interactions. This resonates with the emphasis Perec ([1973] 1999) places on the ‘infra-ordinary’ compared to the ‘extra-ordinary’. This concept of the ‘infra-ordinary’ highlights the importance of the

accumulation of everyday activities and encounters in the creation of urban living, lifestyles, and economies. These infra-ordinary activities and encounters reflect the diversity of people living within a place and linked to other places. It is these everyday activities that shape urban routines and the ways in which people negotiate

the interrelationships between liveability, livelihoods, and place. (Bryson et al., 2021d: 12)

The ordinary everyday, or Perec's infra-ordinary, is something that was disturbed and disrupted during the pandemic. The danger is that these disruptions result in long-term changes that might reduce the ability of a household, individual, or place to respond to additional shocks of a similar scale, intensity, and duration as the pandemic. In any case, pandemic impacts and related recovery processes are still ongoing. Some individuals have experienced pandemic impacts for which there is no recovery and all that is possible is acceptance that life has changed with no possibility of a return to any form of pre-pandemic living. It is in this regard that a local and place-based approach is useful to counter any attempts to shape the universal dynamics of recoveries along with lessons for future pandemic preparedness not only when applied to less developed contexts but also to primary versus much smaller (urban) settings; this is also the case when it is applied to individuals and households. In the context of a recovery society it is important to distinguish between the universal versus the particular; shocks and recovery processes are particular rather than general experiences and it is the particular that matters in understanding differential shocks and recovery outcomes and related inequalities. Any attempts to engender some form of future pandemic preparedness are doomed to fail if they ignore the complexity and subtleties of everyday ordinary living, and of Perec's infra-ordinary.

The Right for Recoveries

Recoveries and future pandemic and crisis preparedness must account for infra-ordinary dynamics, which includes diverse uses of spaces, to accommodate basic needs, the necessity to constantly adapt and improvise to face daily crisis and ensure coping and survival, for the most vulnerable, but also for all (Bryson et al., 2020; Bryson and Vanchan, 2020). Such everyday dynamics are critically important, particularly as the cost-of-living crisis, which commenced in late 2021, intensified pressures on a large proportion of the global population. The cost-of-living crisis complicated pandemic recovery processes as households experienced a fall in real disposable incomes. One consequence is that more households are experiencing food and energy poverty, and this then further enhances their vulnerability and ability to respond to all types of shock. There is here a fundamental question for a recovery society to consider which revolves around the 'right' for recoveries and resiliency and how it is challenged not only by deeply fragmented and unequal societies but also by a myriad of economic, social, and urban fragments and cohorts (McFarlane, 2018). Such a right complicates any policy interventions intended to facilitate

recovery processes. This right for recoveries is a spatial process and engages with Lefebvre's (1991) theorisation regarding the ongoing production of space.

Lefebvre in *The Production of Space* (1991: 342) describes space as 'homogenous yet at the same time broken up into fragments'. Space is at the origins of transformation processes that characterise cities and societies, but is also a place of conflicts and a central object of political struggle (Brenner, 2000). Whereas it has an operational and instrumental role, it also allows for emancipative actions within which infra-ordinary dynamics sit. Indeed, 'everyday life is traversed by great rhythms that are both cosmic and vital, such as the days and nights or the months and seasons. As a result, the everyday revolved around a conflictual unity between these biological rhythms and the repetitive process associated with homogenous time' (Lefebvre and Regulier, 1999: 4). The 'real' rhythms of the everyday are very different from more standard rhythms, particularly when they are complicated by additional shocks, disruptions, and crisis. Adaptations and improvisations are part of mitigation and resilience processes; they are also constitutive of those real rhythms, but a return to 'normal' has made their importance fade away or adaptations are forgotten as they have become part of the infra-ordinary (Bryson et al., 2020). Households and places experience shocks in very different ways and this impacts on recovery processes. A paradigm shift is required in approaches to recovery that acknowledge that recovery processes are like place – co-constitutive. The implication is that there needs to be an appreciation of the right of recovery for all, and that different households and places will require different degrees of support and will experience different recovery journeys. Some might never recover and the shock may enhance a negative spiral that intensifies pre-existing vulnerabilities. Again, this highlights the importance between recovery as a universal versus particular process. The right to recovery is fully entangled with the infra-ordinary dynamics of the everyday and the prospect of trying to account for the most vulnerable. This right resonates with Harvey's (2013) argument that access to urban resources is a right and that a denial of access, or inequalities of access, requires reactions, protest, and denouncement (Harvey, 2013). Lefebvre's everyday analysis thus features in individuals' experience and responses towards 'the conditions of uneven investment' (Douglas, 2018: 9) and explains uneven recovery processes.

Fragmented Recoveries

Spatial fragmentation characterises spaces with high concentrations of people, activities, and flows. They are for McFarlane (2018) spatial products of capitalist production and a testimony of highly unequal contemporary societies. Fragments are marginal material bits and pieces and are 'lived as individ-

uals, social and political struggles' (McFarlane, 2021: 4). They testify to the severe discrepancies and inequalities that exist in cities (Healey, 2003). Even if fragments are vital elements in the experience and politics of urban life (McFarlane, 2018), responses to the pandemic and recovery trajectories that characterise most countries have barely accounted for their importance. The idea of fragments connects with the idea of residuals, in other words 'leftovers'; for Lefebvre, this feeds into revolutionary potential (Buckley and Strauss, 2016; McFarlane, 2018) and the rights for those to be granted recoveries. McFarlane (2018: 1011) in his critical reading of cities considers fragments as 'generative spaces that can challenge or transform processes of fragmentation', embedded into 'political instantiations' which include various forms of 'maintenance, improvisation, incremental improvement'. There is much to learn from this interpretation of fragments and how this can be applied to a more diverse but also inclusive approach to recoveries and particularly *fragmented recoveries*. Societal and space-based fragmentation must underpin all recovery processes and must be central to all initiatives intended to enhance household or place-based adaptability as part of a shock and this includes any initiatives intended to enhance pandemic preparedness within the context of a risk society.

PREPAREDNESS AND PROACTIVE ADAPTABILITY

Unpreparedness as a Social and Urban Condition

Back in 2020, *The Lancet Countdown* argued that 'over the next 5 years, considerable financial, social, and political investment will be required to continue to protect populations and health systems from the worst effects of COVID-19, to safely restart and restructure national and local economies, and to rebuild in a way that prepares for future economic and public health shocks' (Watts et al., 2020: 132). This report was published prior to the Russia–Ukraine war along with the current cost-of-living and related energy crises. This five-year time frame now seems to have been optimistic. Such a need for preparedness relies on acknowledging that recoveries are not only required from a specific shock but from bundles of perpetual shocks. This requires an approach which explores how societies, cities, and economies respond to disruptions and particularly embrace adaptations and improvisations not solely as 'reactive' measures but as 'proactive' strategies (Bryson and Vanchan, 2020).

While the COVID-19 crisis highlighted existing path-dependent socio-economic and health inequalities along with urban and political dysfunctions, it also revealed unprecedented challenges which until then had not been at the forefront of policy and academic thinking. One of them, a major one, was that cities – as nodes of concentrations of people in very dense set-

tings – were effectively inapt and unprepared (Sartorio et al., 2021) to easily adapt to virus transmissions and correlatively to support new forms of social interactions (social distancing), mobilities, and everyday living (including activities related to educating, playing/exercising/ accessing, and purchasing food and goods) (Andres et al., 2022c). Indeed, until COVID-19, pandemic risks were not included in contemporary planning and urban thinking (Allam and Jones, 2020). This is explained by the highly path-dependent nature of urban development models, encouraged by other agendas (sustainability, climate change etc.) and the neoliberal planning process which focused on land use intensification and an increase in urban density (Webster, 2021). The consequences of this approach to urban development and the management of cities were harsh as COVID-19 exposed both the weaknesses of this type of approach and highlighted new forms of household, place, and building vulnerability. Urban intensification based on densification results in smaller residential units that are unable to accommodate online working and schooling and also reduces access to green infrastructure. It also means that the urban realm returns to a type of medieval layout based on a new form of high-density urban living. This means that open spaces (sidewalks, streets) are not wide enough to support social distancing and service facilities (hospital, schools etc.) are not designed flexibly as the focus is on the optimisation of provision (Hubbard et al., 2021; Andres et al., 2022c). The post-pandemic urban planning recovery agenda is a return to the pre-pandemic focus on urban agglomerations and an increase in urban density. The driver behind this process is the land, planning, and development nexus that is motivated by a concern with property development and investment returns rather than a concern with creating healthy, resilient, and sustainable cities (Bryson, 1997).

Adaptability and Responsiveness

Planning cities for pandemic preparedness requires responsiveness and agility (Bryson et al., 2021b). This is a wicked problem; visions and thinking about planning and managing cities primarily rest upon regulations and artificially imposed permanence (Bishop and Williams, 2012). Cities, in North America and Europe, have as a result been characterised by a dominant model constructed upon very rigid and non-adaptable uses of urban spaces; this is translated into a predominance of single functional uses requiring very time-consuming regulatory processes to enact any transformations. On the contrary, Asian or Eastern perceptions are more attuned to valorising the spiritual and the less permanent. That said, temporary, tactical, and more organic transformations have characterised cities for several decades, but these are outside mainstream planning thinking and policy (Bryson et al., 2023).

The pandemic changed the approach to urban adaptability, but ongoing recovery processes seem to be shifting away from recognising that adaptability is essential for liveability. Unless challenged, the built environment, both indoors and outdoors, will be incapable of coping with new emergency health regulations, including social distancing, but also other crises (for example more regular and intense heatwaves with an increase in temperatures related to climate warming). The rigidity of the built environment, of regulatory planning systems, has had detrimental impacts on urban residents' long-term (mental) health and wellbeing and will continue to have. This again is path dependent and has intersectional underpinnings: deprived neighbourhoods are generally characterised by limited access to green and open spaces, including playgrounds and parks, resulting in residents having reduced opportunities for exercise and social interactions. There is a spiral of place-based vulnerability in which opportunities for active living are constrained reducing exercise and limiting the ability for individuals to configure healthy lifestyles. Similarly, rigidity and the constraints of a very dense urban fabric have and will continue to impact on local economies as this imposes rigidity preventing proactive adaptability.

Proactive Adaptability

Prompt, temporary, and reactive adaptations of the built environment during the pandemic were both an emergency response, but also an (anticipatory) recovery solution. Such adaptability did not only serve health and economic goals but benefited communities more widely, including those in less affluent areas (for example in Queens, NYC, see Andres et al., 2022b). Adaptability resonated with various dynamics of immediate and longer-term recoveries and resilience, particularly those enmeshed in infra-ordinary dynamics.

The return to some form of pre-pandemic 'normality' that is characterising recovery trajectories that are observed in many countries does not seem to take time to reflect and draw lessons from what happened during the pandemic. This new 'normal' that is emerging is effectively characterised by significant turbulences (economic crisis, social and political discontent, and a pressing net-zero/climate change agenda) that are shifting the agenda towards a health crisis. There is a very high risk, which is already observed in many cities, that little is being done to prepare cities for future pandemics which cannot be disconnected – in terms of responses – from other crises (like climate change with an increase in extreme weather events – severe heatwaves and droughts). A key gap in the approach that has emerged to mitigation as a response to risk is the requirement for the development of sophisticated approaches to adaptive planning. During the COVID-19 pandemic the response was based on reactive adaptability rather than proactive adaptability. *Reactive adaptability* refers to

emergency and not properly planned adaptability, or adaptability that is not grounded in foresight and pre-planning. *Proactive adaptability* encompasses a more agile but planned strategy of both prompt and longer-term adaptation and must become central to the recovery society. This approach is at the forefront of future place-focused preparedness or contingency planning. Lessons must be learnt by countries and cities regarding the identification of innovative ways to engage with configuring more proactive adaptable approaches to planning and managing the urban realm. Nevertheless, proactive adaptability is not just for cities, but also applies to non-city spaces, the rural realm, public service provision and contingency planning, and private sector organisations.

Proactive adaptability is required as part of the solution to intersectional challenges that societies are and will continue to face. Part of the task that must be undertaken is to combine a recognition of the infra-ordinary and fragmentation with conceptualisations of and approaches to proactive adaptability. There are tensions here between competing institutional logics that foreground optimisation and accountability against flexibility and organisational slack (Andres et al., 2022a). To date this is far from being recognised, particularly from a policy perspective, and it is concerning that all types of place and communities are ill-prepared to respond to future pandemics and other types of shock. There needs to be an increased recognition of the importance of adaptability as a central feature of a recovery society.

It is important to accept that there will be more pandemics and the key question is not if there will be another pandemic, but when the next pandemic will occur. Of course, the next pandemic might have already commenced. In any case, the most important shock facing this planet is already ongoing and this is anthropogenic climate change. Other shocks are occurring related to territorial conflict. Such conflicts contribute to climate change and a major territorial conflict would have long-lasting impacts that would alter life on this planet as we know it. Climate change also increases the possibility of more pandemics. Pandemic preparedness is also about understanding behavioural change and individual, household, and organisational improvisation in response to shocks of different durations and intensities.

IMPROVISATION AND BEHAVIOURAL CHANGE

Concepts of fragmentation and vulnerability highlight geographical and societal inequalities that underpin different types of shock and related impacts and recovery processes. There are shocks in which the focus is on behavioural change rather than on the destruction of the extant infrastructure. The COVID-19 pandemic shock and recovery focused on behavioural change with some minor implications for the built environment despite claims that lessons would need to be learnt to plan for post-pandemic cities to reduce pathogen

transmission pathways (Andres et al., 2022c). An alternative form of shock is a disaster that affects the built environment and destroys and disturbs all types of infrastructure including housing. Infrastructure destruction alters the environment within which social behaviour occurs. This alteration in social behaviour may be transitory or permanent. The point is that social behaviour is structured by the environment which people inhabit and any alteration in that environment will produce some form of behavioural response and these responses are a feature of a recovery society. This process also works in the opposite direction with alterations in social behaviour impacting on the ways in which people interact with the existing built environment. There are two important processes to consider here – physical destruction of the built environment and behavioural change as part of any recovery process to a shock.

Shocks, Time Compression, and the Built Environment

A flood, large-scale fire, earthquake, or war destroys capital that has been fixed into the built environment. This type of disaster destroys an existing financialisation fix. A financialisation fix:

combines a development solution for a specific site with a financial model creating a locally embedded designed structure. This ‘fix’ is a solution that locks-out alternative solutions for this plot or area. This means that the spatial structure of a city reflects an accumulation of different place-based financialisation fixes. These fixes represent different ways in which locally embedded assets – land and property – are converted into financial assets. (Bryson et al., 2017: 458)

The normal process is that a financialisation fix will be unravelled in response to building or infrastructure obsolescence (Bryson, 1997). This might be a form of financial obsolescence with the existing structure remaining functionally but not financially viable. A disaster affecting the built environment may result in the rapid and unexpected loss of land-based assets with each asset having been constructed around a financialisation fix. In effect, this type of built environment destruction is an:

extreme, time-compress case of the normal process of capital depletion and replacement ... [and] this loss, in turn, triggers a compression in time of the normal rates for capital replacement and thus, capital expenditures. (Olshansky et al., 2012: 173)

Time compression is an important direct impact of a shock and has important implications for recovery processes. In fact, time compression of infrastructure and built environment destruction, and related and unrelated forced behavioural change that is based on mitigation and/or adaptation, is the defining feature of shocks. This is about the rapid and unplanned acceleration of

change and recovery processes. These changes may have occurred without the shock, or the changes may be shock induced. According to Olshansky et al. the process of 'time compression explains most of what we know that distinguishes post-disaster recovery processes from similar processes in normal times' (Olshansky et al., 2012: 173), but the emphasis here is on shocks that destroy infrastructure assets.

There are two types of disaster, or shock-related time compression. On the one side, there is the rapid, unexpected, and unplanned destruction of the built environment. This time compression change process also applies to forced behavioural adaption, for example lockdowns during peak COVID-19 periods (Bryson et al., 2021b). On the other side, there is time compression as it relates to recovery processes. A country, region, group, or individual will try to adjust rapidly to the shock and to speed up regeneration processes. Rapid built environment destruction is often associated with rapid replacement at a speed that is much greater than replacement processes that are unrelated to disaster or shock recovery processes. The unplanned destruction of built environment assets provides an unexpected opportunity for change, temporary adaptations, and improvement. Nevertheless, there is a tension between ensuring recovery and reconstruction is rapid based on compressed time horizons and recovery processes that are more deliberative. This tension can be overcome by 'doing some things immediately with little forethought, more things a little later with a little more forethought, and some things only after a great deal of forethought' (Olshansky et al., 2012: 176).

Time compression and shocks also apply to other types of shocks, including climate change. Anthropomorphic climate change is an acceleration of climate fluctuations and some of the societal and habitat challenges come from the fact that 'when compressed in time, some parts of the system cannot adjust fast enough and are likely to be compressed at different rates' (Olshansky et al., 2012: 177). This is an important point in that time compression related to shocks and recovery processes will involve processes that are compressed and recover at different rates. Thus, a shock will result in differential destruction and disruption and recovery processes will involve different types and speeds of regenerative process. The outcome is not an example of resilience or some return to an earlier state, but the emergence of some type of state that provides a way forward for a territory and society. In this context, theories of system change show that there are several levels of change. In general, systems can cope, adapt, or transform in relation to the built environment and use of space. The extent to which systems are capable of reducing stress and absorbing shocks reflects their resilience and ability to adjust and adapt.

Practice Theory, Behavioural Change, and Improvisation

Adaptability, flexibility, and an ability to improvise are central to recovery processes. The emphasis placed on plasticity in neuroscience debates here is important in understanding recovery processes. Neuroplasticity describes the ability of neural networks in the brain to change through growth and reorganisation and this reorganisation might be the result of some trauma or brain damage (Bryson et al., 2021c). This is an ongoing and rapid process in which the brain responds to both trauma and to the environment in which it is situated. There is an ongoing process of adaptation within the brain based on learning. The brain is in a continual state of change and adaptation and the extent of this plasticity is such that the brain alters as we think in real time, and as it engages with the environment (Pitts-Taylor, 2016). Brains experience different types of trauma and neuroplasticity engages as soon as a shock is experienced. Recovery commences with the shock. The more damage that occurs from a shock then the more complex the recovery process will be.

Recovery processes depend on the nature, scale, and duration of a shock. There may be no need for any recovery, or recovery might be impossible. Shocks that involve humanity challenge or stop existing social practices. Recovery processes may involve alterations in social practices. Social practice is defined as the set of routines, conventions, patterns of behaviour, and habits that underlie everyday living. Social practice is the interface between individuals and the environments they inhabit, and this includes consumer and other types of behaviour required to support everyday living. Social practice theory, or practice theory, focuses on the interactions between individual agency and structure (Bourdieu, 1977). This is a critical debate in sociology that is central to understanding the construction and maintenance of social order.

Individual agency reflects the ability of an individual to control their own destiny, but individuals cannot be isolated from the structures that they inhabit or engage with. Individual agency contributes to the ways in which a recovery society responds to shock but set within existing structures. During the 1970s, Michel de Certeau (1984) and Anthony Giddens (1986) developed social practice theory by exploring people in place to develop a theoretical solution to understanding the ways in which agency is linked to structure. Giddens' structuration theory was an important contribution to practice theory based on the identification of the duality of structure, or the inseparability of individual actors from the structures that they engage with. Individual agents within a recovery society are simultaneously constrained and enabled by structures, but structures evolve, form, transform, and are recreated through the actions of individual agents.

A shock challenges established practice and forces individuals and groups of individuals to adapt and alter structure. These alterations to structure may

be permanent or temporary and may occur implicitly or explicitly. Every individual and group of individuals will respond to an overarching shock like COVID-19 and will begin to adapt. Billions of individual adaptive decisions will be made and the totality of these decisions, or the accumulation of all these individual adaptations, might lead to systemic change. All these decisions are made in the context of bounded rationality which in turn fosters pragmatic responses, often ideologically underpinned, based on asymmetric information or knowledge, the implication being that some decisions will be wrong and will lead to perverse consequences and in some cases increased mortality and morbidity. It is important that the analysis of recovery processes distinguishes between temporary and permanent change with some of the temporary being intended to limit damage from occurring during the peak of a shock. In other words, adaptability and agility are important. It is also important to appreciate that mitigations and adaptations may produce both negative and positive impacts. Recovery processes, including those based on improvisation, that occur during each period of a shock – alert phase, peak shock phase, transition phase, and intershock phase – will reflect a combination of effective and less effective interventions intended to reduce the extent of the damage that occurs during each of these phases.

Structuration theory (Giddens, 1986) highlights the interactions that exist between structure and individual agency. In some accounts the interactions between structure and agency is described as ‘the artful balance of structure and improvisation’ (Sawyer, 2011: 1). Improvisation is a critical response to a shock, but improvisation never occurs in isolation from existing structures (Thomas and Bryson, 2021). There is an improvisation duality in which structures enable some types of improvisation reflecting forms of path dependency, but improvisation also has the potential to challenge and change established structures (Rusten and Bryson, 2010). The COVID-19 pandemic required continual improvisation, or a cascade of improvisations, based on an ever-evolving information and knowledge base. This cascade of improvisation within existing structures was critical and occurred in all parts of society. Different households, businesses, and economic sectors improvised in different ways, but within the constraints imposed by structures imposed by government that were intended to maintain social order by reducing the extent, duration, and degree of pandemic impacts. The ongoing maintenance, construction, and reproduction of social order is critical during a shock and the post-shock recovery period.

There is a very underdeveloped literature on improvisation as a form of behavioural adaptation. This is unfortunate as improvisation plays a critical role in innovation processes and in all mitigation and adaptation processes that emerge in response to a perceived or actual shock. The failure to develop a convincing theory of improvisation prevents social scientists and policy-

makers from appreciating that developing improvised solutions in real time is a core process that underpins societal change and transformation and contributes to the ongoing maintenance of social order. Improvisation should be central to debates on path dependency and attempts to break out from some form of path dependency and to all discussions of evolutionary economic geography or literatures that emphasise different forms of change, adaptability, or change limiting processes.

One recent development in the improvisation literature has identified that ‘residents inhabiting a place have the potential to apply their own lived experience as part of a place-bounded patching process based on adaptive improvisation intended to produce better outcomes for people’ (Bryson et al., 2023). Urban patching occurs in response to some form of infrastructure rupture. This is a citizen-led form of localised improvisation that engages with the ongoing debates on temporary urbanism (Andres et al., 2021) and alterity (Bryson et al., 2018). Urban patching is a form of place-based buffering, or bricolage, that attempts to develop some form of improvisation to dampen the impacts of some localised infrastructure rupture. This type of patching is a highly variegated process ‘given differences in the links between people, need, place, and public service provision’ (Bryson et al., 2023).

The recovery phase after the peak shock phase will also experience a combination of different degrees of positive or negative regenerative or recovery events or interventions. The problem here is avoiding policy development and implementation, and other mitigations and adaptations by other agents, that are too rigid and which do not adapt to alterations that occur during each of the shock phases and which might also not recognise that adjustment is required. Plan continuation bias is a common cause of airline accidents and results from the tendency of decision-makers to continue with an original course of action that is no longer appropriate as a mitigation strategy to avoid or reduce negative consequences (Clearfield and Tilcsik, 2018). Plan continuation bias is one form of cognitive bias that is a form of cognitive fixation that is influenced by context or situational dynamics and the continual drip-feeding of uncertain and incomplete information (Decker, 2014). One danger is that an initial reading of a shock may result in an overarching assessment and plan that might lock decision-makers into a particular blend of mitigation and adjustment interventions. During a shock event circumstances might change, and this includes greater understanding of the event, but also innovations might occur, for example, in vaccines and medical technologies, that would challenge the initial plan creating new recovery pathways. With plan continuation bias the closer decision-makers are to perceiving that they are achieving their goal then the more probable it is that plan continuation bias will occur.

During the alert, peak, and transition phase different forms of plan continuation bias occur as individuals, groups, and governments try to develop

solutions to minimise damage during peak shock periods and to accelerate regenerative or recovery processes. All this involves accessing information and coming to an informed appraisal of the required interventions. For COVID-19, governments had undertaken different degrees of pandemic preparedness, but no one government was really prepared for this pandemic (Bryson et al., 2021b). In addition, key signs were ignored during the alert phase; appropriate intervention during the initial alert phase would have contained COVID-19 and an epidemic rather than a pandemic would have occurred.

It is important that all decision-makers appreciate the dangers of plan continuation bias. An example is China's implementation of a COVID-19 zero-tolerance approach (Bryson et al., 2021a) that was only relaxed in December 2022. This was a different approach to that developed by other countries and was focused on maintaining social order by trying to isolate Chinese citizens from the negative impacts of the pandemic. Other governments focused on encouraging herd immunity to develop through vaccination programmes and controlled population exposure to the virus. The Chinese zero-tolerance approach prevented herd immunity from developing. Nevertheless, the Chinese approach developed in response to the local context, and this includes governance, place, and the nature, extent, and adaptability of the health care system.

An aviation accident tends to be extremely rapid with limited time for pilots to read the situation and adjust to rapid alterations in circumstances. The COVID-19 pandemic was a very different type of shock given its long gestation and duration. Thus, there were many opportunities for decision-makers to be challenged over mitigation and adaptation initiatives and this type of challenge represents an important avoidance check on plan continuation bias. UK politicians and officials, for example, were enmeshed in critical commentary coming from the media, academics, companies, and citizen groups. Every decision, and intervention, was subjected to critical and challenging appraisal. Being at the centre of this critical dialogue is difficult as every action a decision-maker takes is challenged. The outcome, however, is that plan continuation bias is difficult in this circumstance as decision-makers are constantly challenged to adapt and improvise. China's constraint on freedom of the media, and on free speech, is a fundamental weakness within its approach to governance. The problem is that no one is permitted to challenge political decisions, and this absence of challenge prevents policy adaptation and improvisation from occurring. In fact, changing a policy is considered a sign of weakness. In the UK, the media takes much delight when a government in power engages in policy U-turns. These types of political U-turns are perceived to be an indicator of weak governance or as a form of reactionary rather than proactive and adaptive governance. Nevertheless, policy U-turns, in response to critical challenge, are an important internal survival mechanism

for democracies. The absence of policy appraisal processes based on freedom of expression and of information is a key constraint on effective policy formulation and adjustment by autocracies that do not celebrate and encourage open policy and political dialogues to occur.

CONCLUSION

Life on planet earth is precarious with everyday living being an ongoing exercise in navigating precarity. Precarity is central to Beck's new paradigm of risk society (Beck, 1992), but the response to precarity is configured by a recovery society. Precarity is intensified by vulnerability and intersectionality is central to vulnerability. Any place, individual, household, and nation can rapidly experience a spiralling process of creative destruction that intensifies existing vulnerabilities and shifts the boundaries that exist between the advantaged and the vulnerable. The outcome is that more people become vulnerable. This spiralling process has important implications for the ways in which people and places respond to and experience all types of shock. To a greater extent, the juxtaposition of shocks and recoveries that societies are now facing implies that we are shifting from a risk society to a recovery society, where diverse and multiple recovery processes are part of the everyday socio-economic, environmental, and human condition.

The pandemic has resulted in what can be called the COVID Generation. This cohort is fragmented with different groups experiencing different forms of COVID impact on their future life chances. Nevertheless, the COVID Generation is also the cohort that will experience some of the worst shocks related to climate change. *Living with Pandemics* (2021) was dedicated to this COVID Generation. We want to conclude this book by returning first to the COVID Generation to reiterate how important it is for research, but more importantly for policy to hear their voices and acknowledge their needs and role in shaping recoveries and building resilience. Pandemic preparedness and preparing to live with climate change must be central to a process that places proactive adaptability as a central part of the infra-ordinary. Nevertheless, there are many challenges to overcome including reducing the number of people who experience different forms of vulnerability for various health, socio-economic, or neurodiverse reasons.

The COVID Generation can be defined as the generation of young people, up to 20 years old, whose lives have been – for at least one fourth of their existence – characterised by living *during* a pandemic. Those children and young people were either at a very early age and just starting to interact with others or were starting primary, secondary, or university education and learning practical skills that would then shape their future careers and life chances. The existence of a digital divide, combined with differences in the capabilities

of parents and carers to support learning from home, have contributed to intensifying existing inequalities. The digital divide was compounded by food and energy poverty and access to living space that would support learning and working from home. It is clear that young people have been disproportionately affected socially and economically by the pandemic (Cortés-Morales et al., 2021). UNICEF (2020) estimated that 62,864 million secondary school students were affected by COVID-19-related school closures. While catching-up programmes are now in place in most countries, some children, particularly those from the most vulnerable and financially poor households, will not be able to catch up.

Many young people had to live with long periods of restrictions on their movements and this included reduced opportunities for safe play, leisure, and recreation. One of their basic human rights as stated in the United Nations Convention on the Rights of the Child was effectively ignored and denied with long-term (mental) health consequences. Moreover, for young people, social connectedness and social identity are more prominent concerns than for older age groups, as their coping skills are less well developed. Again, social connectedness and their ability to grow with others through non-virtual encounters was severely disrupted with long-term consequences, which for many are still not fully known. New and ongoing economic pressures mean that feelings of loneliness and a lack of hope for a better future are increasing amongst this generation.

During the pandemic younger age cohorts were considered to be less at risk in terms of the impacts of the virus and were not at the forefront of policy interventions. More concerning, they are even less accounted for in ‘recovery’ type measures and policies that have focused on some return to normality. The COVID Generation is an invisible policy problem, but it is this cohort that will face a world characterised by more crises including new pandemics and the climate emergency. It is this COVID Generation that will be at the forefront of mitigating future shocks and the ways in which the recovery society responds. More attention needs to be given to enhancing this cohort’s capabilities to respond to shock as part of an inclusive approach to configure more equitable forms of resilience.

Equitable forms of resilience, and any preparedness for future major crises, are extremely complex. They rely on the fact that there are known shocks, and unknown ones. While known shocks are not completely predictable, they are however recognised by science and by policy; as a result, they are linked to data, strategies, and emergency plans. Climate change is one of those shocks and even the intensity of climate-change disasters is not fully known and predictable. What the pandemic taught us is that there are forgotten and for many nations ‘unknown shocks’ where little or no preparedness is available and survival and recovery interventions require emergency mitigating improv-

isations. Pandemic episodes are not new for some countries and some places have developed emergency plans.

For the recovery society, there are two dangers. On the one hand, there are ‘known’ shocks in which ineffective preparation has occurred or in which the anticipated shock is very different to that which occurs. On the other hand, there are unknown shocks. Many of these will be trivial and not considered as shocks. A shock is only defined as a shock when it is perceived to be associated with some form of negative disruption. There is an added complexity in that everyday living is becoming more complex and households and nations are becoming increasingly reliant on complex infrastructure systems. Any failure or disruption to these systems has the potential to disrupt everyday living. One consequence is that there is a need to develop more sophisticated approaches to understanding and implementing recovery processes. Central to this approach must be a research agenda on understanding different pathways towards enhancing proactive adaptability as a policy priority in the context of the recovery society. A core research question should focus on understanding the variegated nature of shock and recovery impacts and this includes exploring recovery from what, by whom, for what purpose and end point? Recovery needs to move away from any attempt to return to a pre-existing state or even to build back better. Recovery might require a return to a simpler state, and this includes cities that are planned around carbon-light local lifestyles configured around liveability, wellbeing and equity. Recovery, as a process, is always a pathway to some possible futures but this future has many alternative and diverse pathways.

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